COMMUNITY BASED HEALTH INSURANCE UPTAKE AND UTILISATION OF HEALTHCARE IN ETHIOPIA.

By

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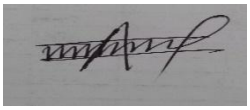
I declare that the above dissertation is my own research work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.



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Dedication

This research work is dedicated to my beloved wife, Elili Gurmu Beka, and my dear children, Yomi, Fenan, Ebise, and Kena, whose constant encouragement, patience, and unwavering support sustained me throughout this challenging journey, even during times of uncertainty and insecurity. Your love and belief in me gave me the strength to persevere.

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COMMUNITY BASED HEALTH INSURANCE UPTAKE AND UTILISATION OF HEALTHCARE IN ETHIOPIA

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ABSTRACT

Background: Community-Based Health Insurance (CBHI) is widely recognized as a key strategy for improving healthcare access and financial protection among low-income populations. In Ethiopia, despite sustained efforts to expand CBHI coverage, enrolment remains below the national target of 80%. By 2020, only 49% of eligible households enrolled in Shaggar City, Oromia Region, Ethiopia**.** This limited coverage continues to expose many households to out-of-pocket healthcare costs, delays in seeking care, and poor health outcomes, thereby constraining broader socioeconomic development.

Purpose: This study aimed to investigate the factors influencing CBHI uptake and healthcare utilization and to develop sustainable, evidence-based intervention strategies to enhance enrolment, renewal, and effective service use.

Methods: A convergent mixed-methods design, guided by the Socio-Ecological Model (SEM), was employed across six sub-cities of Shaggar City, Oromia Region. The quantitative component involved a cross-sectional survey of 406 households, analyzed using SPSS (version 26) through descriptive statistics and multivariable logistic regression. The qualitative component comprised in-depth interviews with health leaders, CBHI officials, experts, healthcare providers, and community representatives, and was analyzed thematically. Findings from both strands were integrated and further refined using the APEASE framework (Affordability, Practicability, Effectiveness, Acceptability, Safety, and Equity).

Results: CBHI enrolment showed a substantial improvement over time. While national and earlier evidence indicated that only 49% of eligible households were enrolled by 2020, the findings of this study revealed that enrolment had increased to 98% among eligible households in the study area by 2025. Despite this significant progress in coverage, both CBHI uptake and healthcare utilization were influenced by interconnected factors operating at multiple levels. Key determinants included individual awareness, perceived quality of healthcare services, household economic status, community trust, and institutional capacity. Qualitative insights further enriched these findings by highlighting persistent challenges related to service quality, limited access to reliable information, and gaps in system responsiveness. Drawing on the integrated evidence, the study developed the Comprehensive Integrated CBHI Uptake and Utilization (CICU) strategy, which focuses on strengthening awareness, improving service delivery, and enhancing sustained community engagement.

Conclusion: This study makes a meaningful contribution to the field of health financing by offering an empirically grounded and theoretically informed framework for strengthening the implementation of Community-Based Health Insurance. The proposed Comprehensive Integrated CBHI Uptake and Utilization (CICU) strategy provides practical and context-sensitive guidance for policymakers and practitioners to enhance enrolment, improve service utilization, and address system-level challenges. By promoting more equitable and sustained access to quality healthcare, the study also supports Ethiopia's ongoing efforts toward achieving Universal Health Coverage (UHC) and Sustainable Development Goal 3 (SDG 3).

Keywords: Community-Based Health Insurance, CBHI uptake, healthcare utilization, socio-ecological model, health financing, Shaggar City, Oromia Region, Ethiopia

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List of acronyms and abbreviations

APEASE	Affordable, Practical, Effective, Acceptable, Safe, and Equitable criteria
BCC	Behaviour Change Communication
CBHI	Community-Based Health Insurance
CHCs	Community Health Centers
CHPS	Community-Based Health Planning and Services
CICU	Comprehensive Integrated CBHI Uptake and Utilization
EHIA	Ethiopian Health Insurance Agency
EHIS	Ethiopian Health Insurance Service
FMOH	Federal Ministry of Health
GDP	Gross Domestic Product
HEP	Health Extension Program
HEW	Health Extension Worker
HMIS	Health Management Information System
IDIs	In-Depth Interviews
IEC	Information, Education, and Communication
IMF	International Monetary Fund
KIIs	Key Informant Interviews
LMICs	Low- and Middle-Income Countries
M&E	Monitoring and Evaluation
OOP	Out-of-Pocket
PHCU	Primary Healthcare Unit
PSNP	Productive Safety Net Programme
RBF	Results-Based Financing
REC	Research Ethics Committee
SDGs	Sustainable Development Goals
SEM	Social Ecological Model
SMS	Short Message Service
SPSS	Statistical Package for Social Sciences
SSA	Sub-Saharan Africa
UHC	Universal Health Coverage

UNISA	University of South Africa
WHO	World Health Organization

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 Introduction

Community-Based Health Insurance (CBHI) is a voluntary health financing mechanism in which community members pool financial resources to protect themselves against the high costs of healthcare. The scheme was developed as a global strategy to enhance healthcare access and provide financial risk protection, particularly for low-income households and vulnerable populations who are often excluded from formal insurance systems (Abdulganiyu & Muhammad, 2018:21). Within this context, CBHI has become an important instrument for advancing Universal Health Coverage (UHC), as it reduces reliance on out-of-pocket payments and promotes equitable utilisation of health services, especially in low- and middle-income countries (Umeh & Feeley, 2017:311;WHO:2020).

Despite its global recognition, the effectiveness of CBHI varies significantly across countries and contexts. Evidence shows that while CBHI schemes can increase healthcare utilization by lowering financial barriers, they continue to face persistent challenges related to enrolment, sustainability, and service quality (Mussa, Palermo, Angeles, Kibur & Otchere 2023:12). Globally, OOP expenditure still accounts for approximately 32% of total health spending, indicating substantial gaps in financial protection (WHO, 2015). Furthermore, about 400 million people lack access to essential health services, and nearly 100 million people are pushed into poverty annually due to healthcare costs (WHO, 2016). These figures highlight the urgency of strengthening prepayment mechanisms such as CBHI.

In low- and middle-income countries (LMICs), healthcare financing systems remain heavily dependent on OOP payments, which are often regressive and disproportionately affect poorer households. In Sub-Saharan Africa, OOP expenditure accounts for over

60% of total health spending, while in Ethiopia it has historically reached as high as 78%, significantly limiting healthcare utilization and increasing financial vulnerability (World Bank, 2017). CBHI schemes are designed to address these challenges through risk pooling and prepayment systems, thereby improving equity in healthcare access (Artignan & Bellanger 2021:583; Eze, Ilechukwu & Lawani 2023:37).

In Sub-Saharan Africa, countries such as Rwanda and Ghana have demonstrated relatively successful CBHI implementation models. For example, Rwanda's *Mutuelles de Santé* has achieved high population coverage due to strong government commitment and institutional support (Woldemichael 2020:1). These experiences highlight the importance of policy support, trust, governance, and service quality in ensuring the success of CBHI schemes, while also highlighting the critical role of system responsiveness in shaping their effectiveness within the Ethiopian context.

In Ethiopia, CBHI was introduced in 2011 as part of national health financing reforms aimed at achieving UHC. Since its introduction, the program has expanded significantly across regions and woredas. However, despite this expansion, enrolment and sustained utilization remain below expectations. National enrolment reached only about 49% by 2020, far below the government target of 80% (Fetene, Mengistu & Aschalew 2023:13; Merga, Balis, Bekele and Fekadu 2022:6). Although some reports indicate improvements in enrolment rates approaching higher levels in recent years, disparities persist across regions and communities.

While existing studies in Ethiopia have primarily focused on enrolment levels or isolated determinants, limited research has examined integrated strategies that address both CBHI uptake and healthcare utilization simultaneously. This represents a critical knowledge gap. Therefore, this study focuses on Shaggar City, Oromia Region, to explore the combined determinants of CBHI enrolment and healthcare utilization and to propose context-specific strategies for improvement (Alemayehu, Dessie, Medhin, Birhanu, Hotchkiss, Teklu & Kiros 2023:11).

1.2 Background of the study

Healthcare systems in many LMICs continue to face significant challenges in providing affordable and quality healthcare due to weak financing systems and limited public resources (Garedew, Sinkie, Handalo, Salgedo, Kehali, Kebene, Waldemarium & Mengesha 2020:46). As a result, CBHI schemes have emerged as a strategic response to address financial barriers and improve access to essential health services.

Globally, out-of-pocket health expenditure remains high, accounting for approximately 32% of total health spending (WHO, 2015). This burden is even greater in Sub-Saharan Africa, where OOP payments account for over 60% of healthcare financing, and in Ethiopia, where it reaches approximately 78% (World Bank, 2017). Such high financial burden limits healthcare utilization and pushes households into poverty, reinforcing the importance of risk pooling mechanisms like CBHI.

From a global policy perspective, improving financial protection is central to achieving Sustainable Development Goal 3 (SDG 3), which emphasizes universal health coverage. However, millions of people worldwide still lack access to essential healthcare services, and many households experience severe financial hardship due to healthcare costs (WHO, 2016). These challenges highlight the urgent need for effective health financing reforms.

In many LMICs, healthcare utilization is constrained not only by financial barriers but also by poor service quality, lack of trust, and absence of prepayment mechanisms (Ashagrie, Biks & Belew 2020:6). Although CBHI schemes aim to address these issues, their effectiveness is often undermined by low enrolment and weak institutional capacity.

Across Africa, evidence indicates persistent challenges affecting CBHI uptake, largely driven by affordability constraints, low levels of trust, and limited awareness. In Nigeria,

for example, out-of-pocket (OOP) expenditure accounts for approximately 69% of total health spending, while participation in CBHI remains low due to financial barriers and lack of confidence in insurance systems (Ogbodo, 2023:5; Akwaowo, Umoh, Udo, Motilewa, Dan, Akpan, Ekpin, Umoh & Asanga 2023:10). Similar patterns are observed in Burkina Faso and the Democratic Republic of Congo, where low enrolment and limited awareness continue to hinder the effectiveness of CBHI schemes (Bocoum, Grimm, Hartwig & Zongo 2019:102; Laokri, Soelaeman & Hotchkiss 2018:5). These findings collectively highlight that both financial and institutional barriers play a critical role in shaping CBHI uptake and utilisation across the region.

In Ethiopia, CBHI was introduced to reduce financial barriers and improve access to healthcare services. However, enrolment remains uneven across regions. For example, enrolment rates have been reported as low as 12.8% in Southern Ethiopia, 25% in Oromia, and 27.5% in parts of Western Ethiopia (Nageso,Tefera & Gutema 2020:6; FMOH, 2016:120, Negash, Dessie & Gobena 2019:5). These variations highlight the influence of local socio-economic, institutional, and contextual factors.

Evidence also shows that although CBHI improves healthcare utilization among enrolled members, challenges such as underutilization of services, limited awareness, and variability in service quality continue to undermine its effectiveness (Merga, Balis, Bekele & Fekadu 2022:6). These challenges are closely linked to structural, financial, and informational barriers within the health system.

Importantly, low CBHI uptake and poor healthcare utilization have broader implications for sustainable development. They directly hinder progress toward SDG 3 (Good Health and Well-being) and indirectly contribute to SDG 1 (No Poverty) and SDG 10 (Reduced Inequalities) by increasing financial vulnerability and limiting equitable access to healthcare (Bayked, Toleha, Zewdie, Mekonen, Workneh & Kahissay 2024:9). Therefore, addressing these challenges is essential for strengthening health systems performance and achieving universal health coverage.

1.3 Statement of the research problem

Despite the introduction of Community-Based Health Insurance (CBHI) in Ethiopia in 2011 as a key health financing reform aimed at improving healthcare access, utilisation, and financial risk protection, its performance remains below national expectations. Although the government set an ambitious enrolment target of 80%, only about 49% of eligible households were enrolled by 2020 (Fetene, Mengistu & Aschalew 2023:13; Merga, Balis, Bekele and Fekadu 2022:6). This substantial gap reflects persistent implementation challenges and suggests that existing approaches have been insufficient to simultaneously improve enrolment and effective utilisation of healthcare services.

The problem is further compounded by significant regional and local disparities. Enrolment rates vary widely across the country, ranging from as low as 12.8% in Southern Ethiopia to approximately 25% in Oromia and 27.5% in parts of Western Ethiopia (Nageso,Tefera & Gutema 2020:6; Negash, Dessie & Gobena 2019:5; FMOH 2016:120). These variations indicate that CBHI performance is strongly shaped by local socio-economic, institutional, and contextual factors. In rapidly growing areas such as Shaggar City in the Oromia Region, households continue to face financial, structural, and service-related barriers to accessing healthcare despite the presence of CBHI. This reveals a critical disconnect between national policy intentions and local-level realities, underscoring the need for context-specific investigation.

Furthermore, Ethiopia continues to rely heavily on out-of-pocket (OOP) health financing, which accounted for approximately 31% of total health expenditure in 2016/17 and remains substantial in recent years (NHA 2022:16; FMOH 2016:120). This reliance exposes households to financial hardship, discourages timely healthcare seeking, and exacerbates socio-economic inequalities. These challenges persist despite the existence of CBHI, raising concerns about its effectiveness in delivering financial protection and improving healthcare utilisation in practice.

Evidence from other low- and middle-income countries (LMICs) and Sub-Saharan Africa reinforce the complexity of the problem. For example, CBHI enrolment remains around 25% in Nepal, while retention rates in India decline to approximately 20% within two years (Panda et al. 2016:1442;Subedi 2018:56-58). Similarly, countries such as Nigeria, Cameroon, and Zimbabwe continue to experience high reliance on OOP payments and low insurance participation due to affordability constraints, limited trust, and service quality concerns (Jude et al. 2018:3; Yusuf et al. 2019:2; Muchabaiwa et al. 2019:5). These experiences demonstrate that focusing on enrolment alone is insufficient; rather, comprehensive approaches addressing both demand- and supply-side factors are essential for improving utilisation and sustainability.

Although CBHI has been widely studied in Ethiopia, existing research has largely concentrated on enrolment rates, renewal patterns, or isolated determinants. Consequently, limited evidence exists on the combined and interacting factors influencing both CBHI uptake and healthcare utilisation at the community level, particularly in emerging urban settings such as Shaggar City. Furthermore, insufficient attention has been given to developing integrated, context-specific strategies that simultaneously address enrolment, utilisation, and system responsiveness. This represents a critical gap in both empirical knowledge and policy practice.

Moreover, low CBHI enrolment and utilisation have important implications for the sustainability of the health system. Limited participation reduces the financial pool necessary to support healthcare services, while low utilisation and renewal rates weaken the long-term viability of the scheme (Jembere 2018:18). If these challenges remain unaddressed, they risk perpetuating financial barriers to care, increasing household vulnerability, and slowing progress toward Universal Health Coverage (UHC).

Thus, the central problem is that, despite the implementation of CBHI in Ethiopia, there is insufficient context-specific and integrated evidence on the factors influencing both insurance uptake and healthcare utilisation, particularly in Shaggar City, limiting the effectiveness of policy and program interventions.

Addressing this gap is essential for improving the performance and sustainability of CBHI. Therefore, this study focuses on Shaggar City, Oromia Region, with the aim of identifying the combined determinants of CBHI uptake and healthcare utilisation and developing comprehensive, context-sensitive strategies to improve both outcomes. In doing so, the study contributes to generating new knowledge and provides practical insights to inform policy reforms and strengthen progress toward universal health coverage in Ethiopia.

1.4 Rationale of the study

The previous studies that were conducted in Ethiopia particularly in Oromia Shaggar primarily focused on specific aspects such as enrolment, renewal, withdrawal patterns, and selected determinants of participation (Deresse, Eshete, Mulatu & Dessalegn 2023:10; Kebede 2024:620; Geferso & Sharo 2022:10). While these studies provide valuable insights, the evidence base remains fragmented and largely centred on isolated outcomes rather than the integrated functioning of the scheme.

A critical limitation of the existing literature is the lack of integrated analysis of CBHI uptake and healthcare utilisation. Most studies treat these as separate phenomena, with limited attention to how behavioural, socio-economic, institutional, and health system factors interact to influence both enrolment and actual use of healthcare services. Consequently, there is insufficient understanding of how CBHI operates in practice beyond initial enrolment, particularly in terms of sustained utilisation and overall programme effectiveness.

This gap becomes more pronounced when considering local implementation contexts. In areas such as Shaggar City in the Oromia Region, households continue to face

financial constraints, service quality concerns, and systemic challenges despite the presence of CBHI. However, there is limited context-specific evidence explaining the combined determinants of both CBHI uptake and healthcare utilisation in this setting. Existing national and regional studies do not adequately capture these local dynamics, thereby limiting their relevance for designing targeted, context-responsive interventions.

The persistence of low enrolment and inconsistent utilisation further suggests that current strategies are not sufficiently responsive to the interconnected nature of these challenges. Without a comprehensive understanding of how multiple factors interact across community, institutional, and health system levels, CBHI schemes risk underperforming in achieving their intended goals of financial protection and equitable access to healthcare.

Therefore, this study is justified by the need to move beyond fragmented evidence and address a clearly defined research gap. While previous studies have examined CBHI enrolment in Ethiopia, limited evidence exists on integrated strategies that simultaneously address both insurance uptake and healthcare utilisation within a unified framework. Addressing this gap is essential for developing more effective and sustainable interventions.

Moreover, strengthening both CBHI uptake and healthcare utilisation is critical for reducing out-of-pocket expenditure, improving access to essential health services, and accelerating Ethiopia's progress toward UHC. This study is particularly important for vulnerable populations who continue to face barriers to accessing healthcare due to financial and systemic constraints.

Accordingly, this study is necessary not only to fill a theoretical and empirical gap but also to respond to a pressing practical problem in Shaggar City. By generating context-specific evidence on the combined determinants of CBHI uptake and healthcare utilisation, the study aims to inform the development of an integrated, evidence-based strategy to improve programme performance.

In doing so, the study contributes beyond existing CBHI research in Ethiopia by shifting the focus from isolated analyses of enrolment to a more comprehensive understanding of CBHI functioning. It also strengthens the link between research and policy by providing actionable insights for health system planning and implementation at both

local and national levels. Ultimately, the study supports efforts to enhance financial risk protection, improve healthcare utilisation, and advance Universal Health Coverage in Ethiopia.

1.5 Significance of the study

Study significance is an important factor in research and must contribute meaningfully to the body of knowledge, practice and research (Polit & Beck 2012:77). This study is significant as it addresses the persistent challenge of low CBHI uptake and inconsistent healthcare utilisation by filling a key gap in the literature limited integrated evidence linking insurance enrolment with actual service use.

Theoretically, it contributes to health financing literature by analyzing the combined determinants of CBHI uptake and healthcare utilisation within a unified framework, offering a more holistic understanding of how behavioural, socio-economic, institutional, and health system factors jointly influence both outcomes.

Practically and from a policy perspective, the study provides context-specific evidence from Shaggar City to inform more effective CBHI interventions, particularly in improving enrolment, service delivery, and system responsiveness, thereby supporting progress toward Universal Health Coverage.

It also offers actionable insights for health managers to enhance the accessibility, quality, and effective use of CBHI services, with relevance for vulnerable and low-income populations facing financial barriers to healthcare.
Overall, the study strengthens health system performance by generating evidence that bridges research and practice and supports the development of more effective, context-responsive CBHI strategies in Ethiopia.

1.6 Purpose of the study

The main purpose of this study was to examine the factors influencing Community-Based Health Insurance (CBHI) uptake and healthcare utilisation in Ethiopia, with a

specific focus on Shaggar City, Oromia Region. The study sought to address a critical gap in existing literature by moving beyond fragmented analyses of enrolment alone and instead exploring the integrated determinants of both uptake and utilisation.

Based on empirical evidence, the study further aimed to develop a comprehensive, context-sensitive intervention strategy to enhance CBHI enrolment, improve healthcare utilisation, and strengthen financial risk protection among eligible populations. Ultimately, the study contributes to health system strengthening and supports Ethiopia's progress toward achieving Universal Health Coverage (UHC) through evidence-based policy and programmatic recommendations.

1.7 Research Objectives

Phase 1 : Assessing the implementation, uptake, and utilisation of CBHI Scheme

- To investigate the extent of CBHI uptake and healthcare utilization among households in Shaggar, Oromia.
- To identify determinants of CBHI uptake and healthcare utilisation among households in Shaggar City.
- To assess the organization and implementation of the CBHI system among health leaders, CBHI officials, CBHI experts, healthcare providers, health extension workers, and community leaders in Shaggar, Oromia

Phase 2: **Development of intervention strategies**

- To develop targeted intervention strategies to improve CBHI uptake and healthcare utilization in Shaggar, Oromia.

Phase 3: **Validate the developed intervention strategies**

- To validate the developed intervention strategies

1.8 Research Questions

- The following questions were used to guide the study:
- What is the extent of CBHI uptake and healthcare utilization among households in Shaggar, Oromia?
- What factors influence CBHI uptake among households in Shaggar City?
- How is the CBHI system organized and implemented by health leaders, CBHI officials, experts, healthcare providers, health extension workers, and community leaders in Shaggar, Oromia?
- What challenges do health leaders, CBHI officials, experts, healthcare providers, health extension workers, and community leaders face in implementing the CBHI system in Shaggar, Oromia?
- What intervention strategies can be developed to improve CBHI uptake and healthcare utilization in Shaggar, Oromia?

1.9 Assumptions, Delimitations, and Scope of the Study

To ensure conceptual clarity and methodological rigor, this study is guided by clearly defined assumptions, delimitations, and scope. These elements establish the boundaries of the research and support accurate interpretation of the findings.

1.9.1 Assumptions

This study assumes that participants provided honest, accurate, and complete responses regarding their Community-Based Health Insurance (CBHI) enrolment status and healthcare utilisation experiences. It further assumes that both quantitative and qualitative data collected reflect the actual perceptions, behaviours, and lived experiences of respondents within the study setting.

In addition, the study assumes that CBHI implementation in Shaggar City operates within the broader national policy and institutional framework of Ethiopia's health financing system. This assumption allows the findings to be interpreted within the wider context of CBHI implementation across the country.

1.9.2 Delimitations

This study is deliberately delimited to households in Shaggar City, Oromia Region, Ethiopia. The focus is specifically on Community-Based Health Insurance, with emphasis on the combined determinants of CBHI uptake and healthcare utilisation.

To maintain analytical depth and contextual relevance, the study excludes other forms of health insurance, such as private or employer-based schemes. It also does not extend beyond the study area. These boundaries were intentionally set to enable an in-depth, context-specific examination of CBHI implementation challenges and opportunities in a rapidly urbanising setting.

1.9.3 Scope

The scope of the study is defined by both conceptual and geographical boundaries. Conceptually, the study focuses on the integrated determinants of CBHI uptake and healthcare utilisation, addressing a key gap in literature where these outcomes are often analysed separately.

Geographically, the study is confined to Shaggar City in Oromia Region, Ethiopia. The area was selected due to persistent challenges in CBHI enrolment and utilisation despite ongoing national health financing reforms aimed at achieving universal coverage.

1.10 Concepts and Operational definitions

A conceptual definition provides a theoretical explanation of a concept within a study, describing it in an abstract manner to establish a research foundation without focusing on measurement. It represents a broader understanding of the concept, capturing its essence and meaning in a non-specific way (Polit & Beck 2021:780). In contrast, an operational definition offers a clear, precise, and measurable description of how a concept or variable is defined and assessed within a specific study. It outlines the

methods or criteria used for measurement, ensuring consistency in data collection and interpretation.

1.10.1 Access to health services

Refers to the ability of individuals, particularly those enrolled in Community-Based Health Insurance schemes, to afford, utilize, and benefit from covered healthcare services when needed, without facing significant financial barriers. Factors influencing access include service availability, affordability, geographical proximity, acceptability, and quality of care (Tefera & Ayele 2022:805; Mussa, Palermo, Angeles, Kibur & Otchere 2023:12; Atnafu & Gebremedin 2020:9; Yenet, Nibret &Tegegne 2023:444; Cyr, Etchin, Guthrie & Benneyan 2019:3). In this study, access to health services measured by the proportion of CBHI-enrolled individuals who report using healthcare services when needed, the average distance to the nearest health facility, waiting time, affordability of services, and patient satisfaction scores.

1.10.2 Community-Based Health Insurance

Refers to a health financing mechanism were individuals, particularly from low-income or rural communities, voluntarily pool resources through premiums to fund healthcare services. Its goal is to improve access to essential health services, reduce financial barriers, protect members from catastrophic health expenses, and promote financial protection (Jembere 2018:5; Negash, Dessie & Gobena 2019:17; Alemayehu, Dessie, Medhin, Birhanu, Hotchkiss, Teklu & Kiros 2023:11). For this study, CBHI defined by the presence of a structured insurance program where individuals pay regular premiums for health coverage, the percentage of the population enrolled, and the scope of benefits covered under the scheme.

1.10.3 Community-Based Health Insurance uptake

Community-Based Health Insurance uptake is the proportion of individuals or households join in a Community-Based Health Insurance scheme, reflecting their willingness and ability to participate, influenced by determinants such as awareness,

affordability, perceived benefits, and trust in the system (Mirach, Demissie & Biks 2019:7; Fite, Roba, Merga, Tefera, Beha & Gurmessa 2021:8). In this study, CBHI uptake assessed by the enrollment rate in CBHI schemes, changes in membership over time, and factors influencing enrollment decisions, such as awareness level, affordability, and perceived quality of services.

1.10.4 Determinant factors

Refer to the various influences on individuals' choices to join and participate in Community-Based Health Insurance programs and access healthcare services. These factors include socio-economic status, awareness, trust in the system, affordability, perceived benefits, healthcare service availability, quality of care, and geographical accessibility (Atnafu & Gebremedin 2020:9; Dror, Hossain, Majumdar, Koehlmoos, John & Panda 2016:25). In this study, determinant factors identified through surveys and interviews, assessing socio-economic status, awareness of CBHI, trust in the system, affordability of premiums, service availability, quality of care, and geographical accessibility.

1.10.5 Financial risk protection

Refers to the ability of Community-Based Health Insurance schemes to protect individuals and households from catastrophic healthcare costs by pooling resources, reducing out-of-pocket expenses, and ensuring affordable, equitable access to necessary health services, especially for low-income populations (Geferso & Sharo 2022:2). For this study, financial risk protection evaluated based on the reduction in out-of-pocket healthcare expenses, the proportion of households incurring catastrophic health expenditures, and members' perceptions of financial security after CBHI enrollment.

1.10.6 Healthcare Utilization

Refers to the extent to which individuals, particularly those insured under CBHI, access and use healthcare services when needed, including outpatient visits, inpatient care,

and preventive services (Terefa, Geta, Shama & Desisa 2024:10, Atnafu, Tilahun & Alemu 2018:3). In this study, healthcare utilization measured by the number of outpatient visits, inpatient admissions, use of preventive services, and frequency of healthcare-seeking behaviour among CBHI members.

1.10.7 Organization and implementation of CBHI

Involve governance, management, premium collection, and benefit packages for effectiveness and sustainability. Strong governance, local coordination, and community involvement enhance trust and responsiveness, while transparency improves enrollment and satisfaction (Gida 2020:35; Fadlallah, Jardali, Hemadi, Morsi, Samra, Ahmad, Arif, Hishi, AbouHaidar & Akl 2018:10; Namyalo, Mutatina, Byakika, Walimbwa, Kato, Basaza 2023:6; Jembere 2018:4). In this study, the organization and implementation of CBHI assessed through indicators such as the effectiveness of premium collection, governance structure, community participation, claim processing efficiency, and satisfaction levels among beneficiaries and healthcare providers.

1.10.8 Out-of-pocket payment (OOP)

Refers to the direct payment made by individuals at the time of receiving healthcare services, covering costs that are not reimbursed by insurance or other health financing mechanisms (Miljetaig,Defaye & Wakim 2019:2). In the study, out-of-pocket payment quantified by the average amount individuals spend on healthcare per visit, the percentage of healthcare costs covered by insurance, and the frequency of OOP payments for insured vs. uninsured individuals.

1.10.9 The Social Ecological Model

Refer to examine the multiple levels influencing enrollment and service use, including individual, interpersonal, organizational, community, and policy factors (Ma, Chan & Loke 2017:3). In the study, Social ecological model applied in analysing multi-level influences on CBHI enrollment and healthcare utilization through structured surveys and

qualitative assessments at the individual, interpersonal, organizational, community, and policy levels.

1.10.10 Universal Health Coverage (UHC)

Refers to ensure access to essential healthcare services for all, particularly low-income and rural populations, by pooling resources, reducing out-of-pocket payments, and promoting equitable, affordable care, aiming for financial protection and improved health outcomes (WHO 2019:7; Demissie & Negeri 2020:141; Negash, Dessie & Gobena 2019:13). In this study, universal health coverage measured by the share of people who receive essential health services, the extent of financial protection they enjoy, and how fairly healthcare is distributed among different socio-economic groups.

1.11 Theoretical foundations of the study

This section describes the pragmatism research paradigm and the Social Ecological Model theoretical framework used and followed in this study.

1.11.1 Research paradigm

Pragmatism is a research paradigm that prioritizes practical problem-solving and emphasizes the use of methods that are most effective in addressing the research questions, rather than adherence to a single philosophical tradition (Creswell & Plano 2018:46). It focuses on real-world applications, methodological flexibility, and the production of knowledge that can inform policy and practice. In the context of this study on Community-Based Health Insurance uptake and healthcare utilization, pragmatism is particularly appropriate because the phenomenon under investigation is complex, context-dependent, and influenced by both measurable outcomes and lived experiences. The paradigm allows for the integration of quantitative data, such as enrollment status, renewal patterns, and healthcare utilization rates, with qualitative insights drawn from stakeholders' perspectives on barriers, facilitators, and implementation challenges. By combining these complementary forms of evidence, the

pragmatist approach supports a comprehensive understanding of CBHI implementation and informed strategies to enhance healthcare access. Also, triangulation of findings enhances the credibility and validity of the results, enables the identification of gaps between policy design and practice, and facilitates the development of actionable recommendations aimed at strengthening CBHI implementation and improving equitable access to healthcare services. Further details on the research paradigm were provided in Chapter 3.

1.11.2 Theoretical framework

A conceptual framework deepens understanding of the phenomenon under study and is crucial for knowledge on the phenomenon (Polit & Beck 2017:264). It offers a foundation or structure that guides the development of the study and assists the researcher to link the findings of the study to the body of knowledge (Creswell 2014:13).

This study adopted the Social Ecological Model (SEM). The model consists of person focused and Environment focused interventions designed to promote health, with reference to how the environment and the people influence one another. This model provides a comprehensive framework for understanding how multiple levels of influence impact community-based health insurance uptake and healthcare utilization. According to this model (Ma, Chan & Loke 2017:3), CBHI uptake and healthcare utilization is affected by multiple levels of factors across different levels, including individual, interpersonal, community, organizational, and policy influences. The researcher chose this model because it holds important concepts that could determine CBHI uptake and healthcare utilization among enrolled households at community level. Further details were provided under Chapters two and three.

1.12 Overview of research methodology and design

Research designs are procedures for collecting, analysing, interpreting, and reporting data in research studies. Research designs are useful because they help guide the methods decisions that researchers must make during their studies and set the logic by

which researchers make interpretations at the end of their projects (Creswell & Plano 2018:105).

This study used convergent design mixed method, in which the researcher collects and analyses two separate databases quantitative and qualitative and then merges the two databases for the purpose of understanding the complex dynamics of CBHI uptake and healthcare utilization (Creswell & Plano 2018:165).

The study, conducted in three phases and guided by the Social Ecological Model, aimed to investigate the uptake and utilization of Community-Based Health Insurance in Ethiopia.

Phase one was further divided into two sub-phases (Phase 1a and Phase 1b):

Phase 1a: Quantitative Approach

Phase 1a employed a quantitative cross-sectional survey to assess the extent of CBHI uptake, healthcare utilization, and their determinants among households. Data were collected from 406 households via in-person interviews conducted with structured questionnaires. The survey focused on key areas, including awareness and knowledge of CBHI, enrolment status, service utilization patterns, quality of care, premium payment, affordability, financial protection, and the types of services accessed. Socio-economic characteristics were also measured to identify factors influencing CBHI uptake and healthcare utilization. The gathered data were processed and examined using the Statistical Package for the Social Sciences (SPSS), version 26, providing a detailed quantitative perspective on the study's objectives.

Phase 1b: Qualitative Approach

Phase 1b adopted a qualitative approach to explore the organization and implementation of the CBHI system in Shaggar.

Data were collected via in-depth interviews with 28 key informants, comprising six health leaders, six CBHI officials, four CBHI experts, four healthcare providers, four HEWs, and four community leaders. These interviews explored themes such as perceptions of CBHI uptake, enrolment procedures, benefit packages and coverage, service utilization patterns, quality of healthcare services, premium collection methods, financial sustainability, implementation challenges, and the perceived impact of CBHI. Thematic analysis was employed to extract meaningful insights, ensuring a systematic and rigorous interpretation of the qualitative data. By integrating findings from both the quantitative and qualitative strands of Phase 1, the study provided a holistic understanding of the operational and organizational dynamics of CBHI.

Phase 2: Development of Intervention Strategies

Building on the findings from Phase 1a and 1b, Phase 2 adopted a pragmatic approach to develop evidence-based intervention strategies aimed at improving CBHI uptake and healthcare utilization. A stakeholders' workshop was used through interactive, participatory, and evidence-based approaches to ensure the development of effective and feasible CBHI uptake and healthcare utilization strategies.

Phase 3: Validation of Intervention Strategies

In this phase, the developed intervention strategies were validated by a team of experts using a checklist based on the APEASE criteria (Affordable, Practical, Effective, Acceptable, Safe, and Equitable). This validation process ensured the feasibility, relevance, and sustainability of the proposed strategies, offering actionable solutions to enhance CBHI uptake and healthcare utilization.

1.13 Scope of the study

This study was conducted in Shaggar City, Oromia, Ethiopia, focusing on eight public healthcare centers across six sub-cities. While the geographical scope was limited to Shaggar City, the findings are generalizable due to the comprehensive and rigorous methodological approach employed.

The study focused on CBHI uptake and healthcare utilization, highlighting how these are shaped by a range of interconnected factors operating across multiple levels, including individual, interpersonal, community, organizational, and policy dimensions.

1.14 Structure of the thesis

The thesis is organized into nine chapters:

Chapter 1: Overview of the study

This chapter introduces the study by outlining the background, problem statement, significance, purpose, objectives, research questions, and key concepts.

Chapter 2: Literature Review

This chapter examines the status of CBHI uptake and healthcare utilization at global, national, and local levels. It explores the influence of socio-demographic, technical, and organizational determinants on CBHI uptake and healthcare utilization. A comprehensive discussion of the literature relevant to the study's topic is also presented.

Chapter 3: Research methodology

This chapter outlines the research methodology, detailing the study design and context, the target population, sampling methods, research tools, procedures for data collection and analysis, strategies to ensure trustworthiness, and ethical considerations. The investigation employed a convergent mixed-methods approach conducted over three phases.

Chapter 4: Quantitative Results

This chapter presents the findings from Phase 1a of the study, based on quantitative data from a cross-sectional survey involving 406 households.

Chapter 5: Qualitative Results

Presents findings from Phase 1b based on in-depth interviews with 28 participants.

Chapter 6: Integration of Findings

This chapter integrates the findings from Phases 1a and 1b to provide a comprehensive and holistic understanding of CBHI uptake, healthcare utilization, and their determinants.

Chapter 7: **Discussion of Findings**

The chapter discusses the findings in relation to the research objectives and existing literature, interpreting the results through relevant theoretical and conceptual frameworks, and identifying implications for policy, practice, and further research.

Chapter 8: Strategy Development and Validation

This chapter outlines the development of intervention strategies aimed at improving CBHI uptake and healthcare utilization. The strategies were informed by findings from both the quantitative and qualitative phases and refined through a stakeholder workshop. Validation was conducted using a quantitative checklist with CBHI experts to assess alignment with the APEASE criteria.

Chapter 9: Recommendations, Conclusion, and Limitations

This chapter summarizes the overall conclusions of the study and provides recommendations for policy, practice, and future research. It also outlines the limitations encountered during the study.

1.15. Summary

This chapter has presented an overall picture of the study. It covered the introduction, background, problem statement, significance of the study, research purpose, the objectives of the study, and research questions. The chapter also discussed the thesis structure at the end of this chapter. The next chapter of this study reviews the literature, which supports this study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter presents a comprehensive and integrative review of literature on Community-Based Health Insurance (CBHI) uptake and healthcare utilization. It synthesizes empirical, theoretical, and policy-based evidence obtained from peer-reviewed journals, books, and global health reports. The review is guided by an integrative approach, which allows the combination of quantitative findings, qualitative insights, and mixed-methods evidence to better understand the complex and multidimensional nature of CBHI implementation (Dela & Gross 2017:7). Rather than isolating findings by methodological orientation, the chapter builds a coherent synthesis of socio-demographic, behavioural, institutional, cultural, and economic determinants that shape CBHI enrollment, renewal, and utilization patterns. This synthesis explicitly addresses the fragmented nature of prior studies by emphasizing the interaction of determinants across multiple levels rather than treating them as independent factors.

The review further situates CBHI evidence within global, regional, and Ethiopian contexts, thereby identifying both universal patterns and context-specific challenges. This approach is consistent with the convergent mixed-methods design of the study, which requires triangulation of diverse forms of evidence to generate a comprehensive understanding of health insurance dynamics (Morgan, Adei, Duah & Mensah 2022:10). The chapter is also theoretically grounded in the Social Ecological Model (SEM), which conceptualizes CBHI uptake and utilization as outcomes of interacting influences operating across multiple levels, including individual, interpersonal, community, organizational, and policy environments (Ma, Chan & Loke, 2017:3). This systems-based framing strengthens the analytical foundation by shifting from single-level behavioural explanations to multi-level structural interpretation.

2.1.1 Justification for Using an Integrative Literature Review

An integrative literature review approach was selected because CBHI is a complex health financing mechanism that cannot be fully understood through a single methodological lens. This approach enables the inclusion and synthesis of diverse evidence types, including statistical associations, lived experiences, and policy analyses, thereby offering a more complete understanding of the phenomenon (Dela & Gross 2017:7). It is particularly appropriate for CBHI research because it captures both demand-side and supply-side factors influencing enrollment and utilization. This approach is justified by the need to integrate fragmented empirical evidence into a unified explanatory framework that reflects real-world complexity.

Moreover, this approach aligns closely with the SEM framework because it facilitates the integration of evidence across multiple levels of influence. By combining findings from individual behavior, social relationships, institutional arrangements, and policy environments, the integrative review provides a strong analytical foundation for identifying the complex drivers of CBHI uptake and healthcare utilization.

2.1.2 Problem Formulation

Although CBHI has been widely promoted as a key strategy for achieving Universal Health Coverage (UHC), its effectiveness remains constrained by persistent challenges such as low enrollment, irregular renewal, and inconsistent healthcare utilization. These challenges are particularly evident in low-income countries, including Ethiopia, where financial hardship, limited trust in health systems, and institutional inefficiencies continue to hinder participation.

Existing studies often analyse CBHI determinants in fragmented ways, either focusing on quantitative predictors or qualitative experiences. However, such separation limits the understanding of how multi-level factors interact dynamically. A key limitation in existing literature is the absence of an integrated explanation of how individual, community, organizational, and policy-level determinants interact to influence CBHI uptake and utilization outcomes.

Guided by the SEM framework, this review addresses this gap by synthesizing evidence across all ecological levels to capture the interconnected nature of individual decision-making, community influence, health system performance, and policy environments.

2.1.3 Literature Search

A comprehensive literature search was conducted using major databases including PubMed, Google Scholar, and Web of Science. The search was guided by key terms such as “community-based health insurance,” “CBHI uptake,” “healthcare utilization,” “insurance enrollment determinants,” and “health financing in low-income countries.” The review included empirical qualitative, quantitative, and mixed-methods studies focusing on CBHI enrollment, renewal, and utilization. Non-empirical studies, opinion papers, and irrelevant publications were excluded. From an initial pool of more than 6,000 studies, 32 articles were finally selected after systematic screening based on relevance and quality criteria.

2.1.4 Data Evaluation and Analysis

The selected studies were critically appraised for methodological rigor, conceptual relevance, and contextual applicability. The final dataset included quantitative, qualitative, and mixed-methods studies, which were then synthesized thematically using the Social Ecological Model as an analytical framework.

At the individual level, socio-demographic factors such as income, education, and employment status consistently influenced CBHI enrollment and renewal decisions. Individuals with higher awareness and stronger perceived benefits of insurance were more likely to enroll and remain in the scheme (Bairagi & Munot 2019:14). This highlights that knowledge and economic capacity are foundational determinants of insurance participation.

At interpersonal and community levels, social relationships, trust, peer influence, and cultural norms were found to significantly shape enrollment behavior. Community

endorsement and shared experiences were particularly influential in increasing willingness to participate, highlighting the importance of social capital in shaping health insurance decisions (Leavy 2017:229).

At the organizational level, the quality of healthcare services, availability of medicines, provider attitudes, and accessibility of health facilities were major determinants of both enrollment and utilization. Poor service delivery and negative provider interactions consistently reduced trust in CBHI schemes. This indicates that health system performance directly influences demand for insurance services.

At the policy level, government subsidies, regulatory frameworks, and financing structures played a critical role in shaping CBHI performance. Strong political commitment and financial support improved enrollment and sustainability, while weak governance structures undermined scheme effectiveness. Across all levels, financial barriers remained a persistent challenge. However, flexible payment systems and targeted subsidies were shown to significantly improve enrollment continuity and uptake.

2.1.5 Presentation of Results

Results from the reviewed studies were systematically presented using a thematic synthesis approach to clearly highlight areas of convergence within literature**.** Both quantitative and qualitative evidence were integrated to provide a comprehensive understanding of Community-Based Health Insurance (CBHI) uptake and healthcare utilization. Quantitative findings on enrollment and service utilization were complemented by qualitative insights into community attitudes, trust dynamics, and systemic challenges, thereby offering a more holistic and context-sensitive interpretation of CBHI performance (Creswell & Creswell, 2018:31).

The synthesized literature demonstrates that CBHI uptake and healthcare utilization are shaped by dynamic and interdependent interactions across multiple levels of the Social Ecological Model (SEM). Individual decisions do not occur in isolation but are influenced

by trust in institutions, social relationships, service quality, and policy environments. These factors interact in a reinforcing system, where improvements at one level strengthen outcomes at other levels, while weaknesses in any component can undermine overall system performance. For instance, improved service quality enhances trust in healthcare providers, which in turn promotes enrollment and utilization, while strong policy support contributes to financial sustainability and equity. Conversely, poor service delivery or weak governance reduces trust and discourages participation. This interconnected dynamic confirms that CBHI outcomes are produced through multi-level interactions rather than isolated determinants.

The thematic synthesis also revealed key household-level factors influencing CBHI uptake, including socioeconomic characteristics such as income, education, and awareness, as well as health-seeking behaviour and patterns of service utilization. The review highlights CBHI's contribution to financial protection, particularly through reducing out-of-pocket healthcare expenditures. In addition, stakeholder perspectives emphasized critical implementation challenges, including governance constraints, trust deficits, sustainability concerns, and provider perceptions of service quality. These findings demonstrate the need to address both demand-side (household-level) and supply-side (health system-level) factors in an integrated manner. Policy and institutional factors were also identified as significant determinants of CBHI effectiveness (Gray & Grove, 2019:214).

Based on the synthesized evidence, a conceptual framework was developed to clearly identify priority intervention areas, including community engagement, health education, strengthening of healthcare facilities, trust-building mechanisms, and financial support systems. These interventions are essential for improving CBHI uptake and enhancing healthcare utilization, highlighting the need for coordinated efforts across multiple levels of the health system.

This integrative review provides a robust foundation for the convergent mixed-methods design of the current study by explicitly demonstrating how quantitative and qualitative evidence are integrated to generate a multidimensional understanding of CBHI

dynamics. It informs subsequent research phases and supports policy and programmatic efforts aimed at improving healthcare access in low-resource settings.

Furthermore, the integration of quantitative findings with qualitative stakeholder perspectives allows for the development of practical and contextually relevant recommendations to enhance CBHI coverage and utilization. It also explicitly identifies important gaps in the literature, particularly the limited integration of mixed-methods evidence, inadequate examination of interactions between health system and community-level factors, and insufficient attention to long-term sustainability and context-specific implementation challenges, especially within the Ethiopian context (Schmidt & Brown, 2015:95).

Overall, this integrative review provides a structured and evidence-based understanding of CBHI uptake and healthcare utilization. It goes beyond descriptive reporting by offering critical synthesis and deeper analytical interpretation of findings across diverse contexts. It identifies key determinants, highlights implementation challenges, and reveals important knowledge gaps. Additionally, it examines CBHI implementation across diverse socio-economic and institutional settings, thereby enhancing the relevance of the findings for informing future research, policy development, and practice in similar low-resource settings (Tibebu, 2020:2).

2.2 The Concept of Community Based Health Insurance

Community-Based Health Insurance (CBHI) is widely recognized as a prepayment and risk-pooling health financing mechanism designed to improve access to healthcare services, particularly among informal sector workers and low-income populations. By replacing or reducing reliance on out-of-pocket payments at the point of service, CBHI plays a critical role in protecting households from catastrophic health expenditures and promoting equity in healthcare access (Getaneh, Bayked, Workneh & Kahissay 2023:7; Geferso & Sharo, 2022:2).

CBHI operates through collective community participation, where members contribute financially to a shared pool of resources that is used to cover healthcare costs when needed. This participatory structure involves communities not only in financial contributions but also in governance, resource allocation, and oversight of healthcare services. Such engagement enhances community ownership, transparency, accountability, and long-term sustainability of the scheme (Mussa, Palermo, Angeles, Kibur & Otchere 2023:12; Alemayehu, Dessie, Medhin, Birhanu, Hotchkiss, Teklu & Kiros 2023:11).

Beyond its financing function, CBHI is increasingly viewed as a strategic instrument for strengthening health systems and advancing Universal Health Coverage (UHC). It is designed to reduce reliance on costly coping strategies such as borrowing or selling assets during illness episodes, while simultaneously improving access to and utilization of essential healthcare services among insured members (Getaneh, Bayked, Workneh & Kahissay 2023:7).

In many low- and middle-income countries, healthcare financing is still largely dominated by out-of-pocket payments at the point of service, which often occur during periods of vulnerability such as illness or economic shock. This financing approach disproportionately affects poor households and limits timely access to healthcare services. In this context, CBHI provides an important alternative by offering financial risk protection, reducing direct medical expenditures, and improving both the accessibility and quality of healthcare services (Geferso & Sharo, 2022:2).

Furthermore, CBHI is distinguished by its community-driven design, which integrates households into key operational functions such as risk pooling, fund mobilization, service purchasing, and financial oversight. This active involvement strengthens trust in the system and increases willingness to enroll and remain in the scheme, thereby improving both sustainability and effectiveness of the program (Mussa et al., 2023:12; Alemayehu et al., 2023:11).

Overall, CBHI represents not only a financial mechanism but also a social solidarity-based health financing model that links community participation with health system strengthening. Its effectiveness lies in its ability to combine financial protection with

improved healthcare access, particularly for populations that are most vulnerable to economic and health-related shocks.

2.3. Global Perspectives on CBHI and Healthcare Utilization

Globally, health financing systems in high-income countries are predominantly organized around universal health coverage (UHC) systems or comprehensive social health insurance models, rather than Community-Based Health Insurance (CBHI) schemes. However, despite structural differences, many of these systems still reflect core CBHI principles such as solidarity, risk pooling, and financial protection, which remain central to ensuring equitable access to healthcare services (WHO 2019:7; Habte,Tamene, Ejajo, Dessu, Endale, Gizachew & Sulamo 2022:16).

In countries such as Germany, Japan, and the Netherlands, healthcare systems are primarily funded through mandatory social insurance contributions shared between employers, employees, and governments. These systems emphasize mutual responsibility and redistribution of health risks, ensuring that individuals are protected from catastrophic health expenditures while maintaining universal access to care. Although not labelled as CBHI, these models closely resemble CBHI principles in their emphasis on collective financing and equity-oriented service provision.

In contrast, the United States operates a fragmented health financing system, combining public insurance programs (such as Medicare and Medicaid), private insurance, employer-based coverage, and out-of-pocket payments. According to the National Academies of Sciences, Engineering, and Medicine, public insurance covers specific population groups such as the elderly, low-income households, and veterans, while private insurance remains the dominant source of coverage. In 2015, approximately 37% of the population benefited from public insurance programs at some point (National Academies,2018:40). However, despite this mixed system, financial barriers to healthcare access remain significant, particularly among uninsured and low-income populations, where cost continues to limit timely utilization of services (National Academies, 2018:23).

Similarly, in Canada, healthcare delivery is based on a publicly funded universal system, where services are financed through taxation and delivered at the provincial level. Notably, Community Health Centers (CHCs) operate at the local level and reflect CBHI-like principles through their emphasis on community governance, accessibility, and equity-oriented primary healthcare delivery. These centers demonstrate how community-level participation can enhance responsiveness and inclusiveness within a universal health system.

Across these high-income settings, a common pattern emerges although CBHI as a formal model is less prevalent, the underlying principles of risk pooling, solidarity, and equitable access to healthcare remain central to health system design. This highlights the global relevance of CBHI principles beyond low-income contexts and underscores their importance in addressing financial barriers to healthcare utilization.

2.4 Community Based Health Insurance in Sub-Saharan countries

In Sub-Saharan Africa, Community-Based Health Insurance (CBHI) has been widely adopted as a key health financing strategy aimed at reducing out-of-pocket health expenditures and improving access to essential healthcare services among low-income and informal sector populations. The primary goal of CBHI in the region is to enhance financial risk protection and healthcare utilization through community-level resource pooling, thereby reducing the economic burden of illness on vulnerable households (Mussa, Palermo, Angeles, Kibur & Otchere 2023:12; Yusuf,Kanma,Ladi & Eze 2019:2-3).

Despite its promising role, evidence indicates that CBHI schemes across SSA have contributed to improved healthcare utilization; however, their long-term sustainability remains constrained by persistent structural and operational challenges. These include low enrolment rates, weak governance systems, limited financial sustainability, inadequate service quality, and insufficient government support, all of which continue to undermine program effectiveness (Eze, Ilechukwu, Lawani 2023:37; Demissie & Negeri, 2020:141).

A defining characteristic of the region’s health financing landscape is the heavy reliance on out-of-pocket (OOP) payments, which remain the dominant form of healthcare

financing in many countries. For example, in Nigeria, approximately 69% of total health expenditure is paid directly by households, exposing families to catastrophic health expenditures and limiting access to timely care (Yusuf 2019:2). Similarly, in countries such as Zimbabwe and Cameroon, high OOP spending has been associated with increased financial vulnerability, pushing low-income households further into poverty and worsening health inequalities (Muchabaiwa et al., 2019:5; Jude, Atanga & Falang 2018:3).

In this context, CBHI has emerged as an important alternative financing mechanism designed to reduce reliance on direct payments at the point of service and improve equity in healthcare access. However, its effectiveness is often constrained by low awareness, weak institutional capacity, poor management structures, and limited community trust, which hinder both enrolment and retention in many settings (Babatunde, Oyedeji, Omoniwa & Adenuga 2016:281; Amaka, Meveilleoux, Christian, Betrand, Silvia, Chinekwu, Daniella, Bede & Chinyere 2024:9).

Among Sub-Saharan Africa countries, Rwanda is widely recognized as a successful model of CBHI implementation, achieving coverage rates exceeding 85% of the population. This success has been attributed to strong political commitment, mandatory enrolment strategies, effective governance structures, and continuous monitoring and evaluation systems. As a result, Rwanda has significantly reduced out-of-pocket expenditures and improved access to healthcare services, offering a practical model for other low- and middle-income countries striving toward Universal Health Coverage (Woldemichael 2020:4; IMF 2019:6; Shigute, Mebratie, Sparrow, Alemu & Bedi 2020:14).

In contrast, countries such as Nigeria and Zimbabwe continue to face major implementation challenges, including weak institutional frameworks, limited community engagement, and low enrolment coverage, which collectively hinder the effectiveness and sustainability of CBHI schemes. These variations highlight the importance of strong governance, political commitment, and community participation in determining CBHI performance across contexts.

More broadly, healthcare financing in low- and middle-income countries remains a critical determinant of access, equity, and quality of care. CBHI schemes are designed as community-level prepayment and risk-pooling mechanisms that reduce financial barriers and improve service utilization. However, their impact is often limited by systemic weaknesses such as inadequate awareness, inefficient administration, and insufficient government financing, which restrict scalability and long-term sustainability (Ko, Kim, Yoon & Kim 2018:60; Amaka et al., 2024:9).

Globally, health expenditure patterns reveal significant disparities across income groups. High-income countries allocate a substantially higher proportion of GDP to healthcare due to advanced infrastructure, technological investment, and stronger fiscal capacity. For instance, the United States spends approximately 17–18% of its GDP on health, whereas low-income countries such as Ethiopia allocate around 3–6% of GDP, with recent estimates showing a decline to approximately 3.2% in 2021 (World Bank 2023:2 ; WHO 2022:2).

Empirical evidence further suggests that increased health expenditure is associated with improved economic performance, with studies indicating that a 1% increase in health spending contributes to approximately 0.097% growth in economic output (Beylik, Cirakli, Cetin, Ecevit & Senol 2022:9). This reinforces the importance of strengthening health financing mechanisms such as CBHI in resource-limited settings.

In Sub-Saharan Africa, where healthcare financing is still heavily dependent on external aid and out-of-pocket payments, CBHI is increasingly recognized as a promising strategy to bridge financing gaps. By providing prepaid, community-based risk pooling mechanisms, CBHI reduces financial shocks during illness and enhances access to essential healthcare services, particularly for vulnerable populations (Bayked, Kahissay & Workneh 2021:459; Jembere 2018b:13).

2. 5 Community Based Health Insurance in Ethiopia

In Ethiopia, Community-Based Health Insurance (CBHI) constitutes a central pillar of health financing reform, designed to improve equity in access to healthcare services, reduce catastrophic health expenditures, and expand financial protection for households, particularly those in the informal and rural sectors. The scheme is

positioned as a key strategy for achieving Universal Health Coverage (UHC) by promoting risk pooling, resource mobilization, and equitable access to essential healthcare services ((FMOH 2022:21; Jembere 2018:5).

CBHI in Ethiopia is grounded in the principle of community-level risk pooling, where households with similar socioeconomic and geographic characteristics contribute to a shared fund. This collective arrangement promotes solidarity, shared responsibility, and financial redistribution, thereby enabling access to healthcare services regardless of income status. The scheme also strengthens health financing by encouraging cost-sharing between government and citizens, while simultaneously enhancing social inclusion within the healthcare system (Getachew et al., 2020:5; FMOH , 2019:25).
The establishment of CBHI in Ethiopia was primarily a policy response to long-standing healthcare financing constraints, including a narrow tax base, limited formal employment, and heavy dependence on out-of-pocket (OOP) payments. These structural challenges are common in many low-income countries, where OOP expenditures often dominate healthcare financing and expose households to financial hardship and inequitable access to care (Atnafu & Alemu 2018:6).

In Ethiopia, OOP payments accounted for approximately 33.1% of total health expenditure in 2020, significantly exceeding the global recommended threshold of 20%, indicating persistent financial vulnerability within the health system care (FMOH, 2022:21). This high reliance on direct payments highlights the urgent need for effective financial risk protection mechanisms, particularly for rural and low-income populations.

CBHI addresses these challenges by improving affordability, access, and utilization of healthcare services, particularly among vulnerable populations. Empirical evidence shows that insured households are significantly more likely to utilize healthcare services compared to uninsured individuals, demonstrating the scheme’s positive impact on health-seeking behavior and service utilization (Jembere, 2018:5; Tibebu, 2020:2). Furthermore, CBHI has been shown to reduce catastrophic health expenditures and improve financial protection, especially in rural communities where income instability is high (Alemayehu et al., 2023:11).

Despite these achievements, Ethiopia's healthcare financing system remains constrained by low public health expenditure, limited fiscal space, and heavy dependence on external aid. Health expenditure declined from 5.47% of GDP in 2010 to approximately 3.2% in 2021, raising concerns about the sustainability of health system improvements and long-term financing stability (World Bank, 2023:2). Although international donors continue to play a significant role in financing priority health programs such as HIV/AIDS, malaria, and maternal and child health, this dependence underscores the need for stronger domestic resource mobilization (USAID, 2021; WHO, 2021).

In response, the Ethiopian government has introduced several health financing reforms, including CBHI expansion, Results-Based Financing (RBF), and increased efforts to enhance public spending on health. Among these, CBHI remains a flagship intervention targeting rural and informal sector populations by reducing financial barriers and promoting equitable access to services (Demissie & Negeri, 2020:141). Strengthening CBHI through larger risk pools, improved governance, and increased government support is essential for improving both its effectiveness and long-term sustainability (Siraw, Zewude & Meshesha 2024:9). However, despite policy reforms and gradual expansion, significant challenges remain. Weak health financing structures continue to constrain improvements in service accessibility, quality, and utilization, particularly in rural and underserved areas. The absence of fully sustainable financing mechanisms further exacerbates inequities and contributes to low facility-based service utilization and persistent disease burden (Jembere, 2018).

strengthening Ethiopia's health financing system requires a multi-pronged strategy, including expanding CBHI coverage, reducing dependence on external funding, and prioritizing sustainable domestic financing mechanisms. Such efforts are essential for improving health outcomes, reducing inequities, and enhancing the resilience of the healthcare system in line with UHC goals (Demissie & Negeri 2020:141; Siraw et al., 2024:9).

2.6 Organization and implementation of CBHI schemes

The organization and implementation of Community-Based Health Insurance (CBHI) schemes involve a complex interaction of structural, institutional, and operational components, including governance arrangements, management systems, premium collection mechanisms, benefit package design, and service delivery structures. These elements collectively determine the effectiveness, sustainability, and acceptability of CBHI schemes.

The effectiveness of CBHI schemes is largely determined by governance structures, premium collection mechanisms, benefit package design, and service delivery arrangements, with community participation playing a central role in strengthening trust, ownership, and long-term enrollment and retention (Gida 2020:35).

A well-functioning CBHI system typically combines local and central governance structures to ensure coordination, accountability, and responsiveness. Community involvement in governance often through local leaders or elected representatives, enhances trust and ensures that schemes reflect local health needs and priorities**.** Evidence shows that transparent management practices and strong accountability systems significantly improve enrolment rates and member satisfaction (Gida, 2020:35; Fadlallah et al., 2018:10; Namyalo et al., 2023:6).

In Ethiopia, CBHI implementation is decentralized and aligned with existing local administrative structures. Premium collection is strategically synchronized with agricultural production cycles, allowing households to contribute after harvest seasons when financial liquidity is higher. Local administrative bodies and health extension workers play a critical role in mobilization, enrollment, and premium collection. In addition, government subsidies targeting poor households often through social protection and health extension programs are essential mechanisms for ensuring equity and financial inclusion (Hussien & Azage 2021:373; Kado, Merga, Adem, Dessie & Geda 2020:614, Nageso,Tefera & Gutema 2020:11).

The design of benefit packages is another critical determinant of CBHI performance. A well-structured benefit package that aligns with population health needs increases scheme attractiveness and encourages enrollment. However, a persistent challenge lies

in balancing affordability with comprehensive service coverage, as overly limited benefit packages often result in dissatisfaction and reduced utilization. This has been observed in several African contexts, including Nigeria and Tanzania. (Alemayehu et al., 2023:11; Amaka et al., 2024:62; Kigume & Maluka, 2021:6).

In Ethiopia, CBHI benefit packages typically cover outpatient and inpatient services at public health facilities, while excluding services such as cosmetic procedures and overseas treatment. Members are required to utilize designated health centers, with referral systems in place for higher-level care when necessary (Demissie & Negeri 2020:3). Despite these arrangements, CBHI schemes continue to face significant implementation challenges. Health system constraints such as poor service quality, shortages of essential medicines, inadequate diagnostic capacity, negative provider attitudes, and ambulance shortages substantially limit service utilization and reduce member satisfaction (Demeke 2021:14). Furthermore, limited risk pooling capacity and financial sustainability challenges remain major structural constraints. These issues highlight the importance of continuous monitoring and evaluation to identify gaps in enrolment, resource mobilization, and service delivery, and to implement corrective interventions (Fetene, Mengistu & Aschalew 2023:13; Hailie, Hassen &Temesgen 2021:7).

Globally, CBHI models vary across countries but share a common goal of improving financial access to healthcare among low-income populations through risk pooling and community participation. In many African contexts, schemes are initiated by community structures or informal sector organizations and operate on voluntary, non-profit principles supported by member contributions and government subsidies.

For example, India's SEWA scheme achieved high enrolment through strong community networks, particularly women-led groups that enhanced awareness, trust, and participation (Thomas, Sivaram, Shroff, Mahal & Desai 2022:9). In contrast, Nigeria's CBHI experience highlights challenges such as weak integration between formal and informal systems and limited beneficiary participation in scheme design (Odeyemi 2014:9).

In Ethiopia, CBHI was initially introduced as a pilot program and later scaled up as part of broader national health financing reforms. The scheme emphasizes community

participation in decision-making, with kebele-level voting determining adoption. Enrollment is voluntary at the household level, while the financial structure combines member contributions with substantial government subsidies.

Government support covers up to 25% of premiums and fully subsidizes the poorest 10% of households, while administrative costs are fully borne by the government, reflecting strong stewardship and commitment to the sustainability scheme (Demissie & Negeri 2020:3; EHIA, 2015:49).

To achieve universal health coverage, Ethiopia formally adopted the CBHI policy in 2013 as part of broader health financing reforms aimed at improving access, equity, and quality of care. This policy emphasizes collaboration between government and communities, with a strong focus on increasing awareness and ensuring inclusive participation.

However, sustainable implementation remains dependent on continuous reforms in resource mobilization, enrollment renewal systems, reimbursement mechanisms, and overall governance strengthening to address persistent operational challenges (Negash, Dessie & Gobena 2019a:3;Jembere 2018:4; USAID 2021:7).

2.7 Community-Based Health Insurance Uptake

Community-Based Health Insurance (CBHI) uptake refers to the proportion of individuals or households who are enrolled in CBHI schemes, including both first-time enrollment and renewal of membership. Enrolled members are typically provided with identification cards or numbers that enable them to access healthcare services in line with scheme entitlements.

CBHI uptake is influenced by a combination of economic, behavioural, and health system factors, including affordability, awareness, perceived benefits, trust in healthcare systems, and satisfaction with service delivery (Mirach, Demissie & Biks 2019:7; Fite, Roba, Merga, Tefera, Beha & Gurmessa 2021:8).

From a broader perspective, CBHI uptake is not only a measure of enrollment but also reflects the extent to which households are willing and able to participate in risk-pooling arrangements. It is therefore shaped by both demand-side factors (such as income, knowledge, and perceptions) and supply-side factors (such as service quality and institutional trust).

Evidence from different countries demonstrates considerable variation in CBHI enrollment and participation. In Nigeria, studies indicate very low awareness and understanding of CBHI schemes, with approximately 80% of respondents reporting no prior knowledge and only a small proportion demonstrating adequate understanding. This highlights that limited awareness and poor communication strategies remain major barriers to CBHI uptake in some settings (Yosuf, Akinyemi, Okafor & Eze 2019:3).

In Uganda, CBHI implementation in rural communities reported an enrollment rate of approximately 30%, demonstrating moderate uptake in low-income settings. Importantly, insured households were found to utilize outpatient services more than twice as often as uninsured households, indicating that CBHI has a positive effect on improving access to healthcare services once enrollment is achieved (Kakama, Namyalo & Basaza 2020:8; Haven, Dobson, Yusuf, Kellermann & Mutahunga 2018:4).

In Ethiopia, CBHI uptake shows mixed and regionally varied outcomes. For instance, studies report a 48.8% enrollment rate in some rural settings, where CBHI membership was also associated with increased utilization of modern family planning services (Kassie & Tefera 2021:4). Similarly, a study conducted in West Gojjam reported a higher household enrollment rate of 58%, reflecting moderate success in scaling up the scheme (Mirach, Demissie & Biks 2019:6).

In addition, willingness to enroll has been reported to be significantly higher than actual enrollment in some districts. For example, in Siraro district of West Arsi Zone, willingness to join CBHI reached 73.6%, indicating strong potential demand that is not fully translated into actual participation (Ebrahim, Yonas & Kaso 2019:139). This pattern suggests the presence of a persistent gap between intention and behavior.

This gap between willingness and actual enrollment highlights the influence of structural and behavioural constraints such as affordability challenges, limited awareness, perceived low service quality, and trust deficits in the health system.

Overall, the evidence suggests that improving CBHI uptake requires a multidimensional approach that addresses both awareness and behavioural factors at the household level, as well as structural and institutional barriers within the health system. Sustained community education, improved service delivery, strengthened trust in healthcare providers, and affordable premium structures are essential strategies for increasing enrollment and ensuring long-term participation in CBHI schemes across diverse contexts.

2.8 Community Based Health Insurance Utilization

CBHI utilization refers to the extent to which insured individuals or households access healthcare services after enrollment. It is a key indicator of the effectiveness of health insurance schemes, reflecting whether financial coverage translates into actual service use and improved health outcomes (Terefa, Geta, Shama & Desisa 2024:10).

Evidence from low- and middle-income countries (LMICs) consistently shows that CBHI increases healthcare utilization by reducing financial barriers to care. Insured households are significantly more likely to seek healthcare services compared to uninsured populations, highlighting CBHI's role in improving access, especially for informal sector workers (Eze, Ilechukwu, Lawani 2023:37; Atnafu et al., 2018:3).

In Uganda, CBHI schemes have been associated with increased healthcare utilization and reduced under-five mortality, demonstrating their broader public health impact (Haven, Dobson, Yusuf, Kellermann, Mutahunga, Stewart & Wilkinson 2018:8). Similarly, in Rwanda, CBHI has substantially reduced out-of-pocket (OOP) health expenditures, with insured households spending significantly less on healthcare compared to pre-implementation levels (IMF 2019:6). These financial protection effects are also observed in the Democratic Republic of Congo and Bangladesh, where insured households consistently incur lower medical costs than uninsured groups (Laokri,

Soelaeman & Hotchkiss 2018:5; Khana, Ahmeda, Sultana, Sarker, Chakrovorty, Rahman, Islam, Rehnberg & Niessen 2020:5).

Beyond financial protection, CBHI also improves service utilization patterns. For example, studies in Bangladesh and Pakistan show higher healthcare utilization rates among insured populations compared to uninsured groups, along with improved engagement in healthcare decision-making processes (Ahmed , Sarker & Sultana 2018:6; Ariffin & Arshad 2020:6-8). In Rwanda, insured mothers were twice as likely to use modern healthcare services, particularly maternal health services, compared to uninsured women (Management Sciences for Health, 2016:5).

Evidence from Indonesia further confirms that public and community-based insurance schemes increase both outpatient and inpatient service utilization (Erlangga, Ali & Bloor 2019:5). Across Africa and Asia, CBHI schemes have also been shown to improve access to skilled healthcare providers among informal sector workers (Tull, 2018:4).

In Ethiopia, CBHI has significantly increased healthcare utilization among insured households. Studies show that insured individuals are three times more likely to seek healthcare services compared to uninsured individuals (Demissie & Negeri, 2020:8).

Additionally, utilization increases by 30-41% in outpatient visits and 45-64% in visit frequency, while healthcare costs per visit decrease substantially (Mebratie & Bedi, 2019:116-117).

Despite these positive outcomes, utilization is not universal. In some regions of Ethiopia, utilization remains low around 27.5% in certain areas mainly due to limited awareness, affordability concerns, and service quality issues (Negash, Dessie & Gobena 2019:17). Similarly, weak knowledge of CBHI and administrative challenges continue to limit full benefit realization (Atnafu & Gebremedin 2020:4). Overall, CBHI demonstrates strong potential to improve healthcare utilization, financial protection, and equity. However, its effectiveness depends on addressing demand-side barriers (awareness, trust, affordability) and supply-side constraints (service quality, infrastructure, and provider responsiveness). Strengthening these areas is essential for enhancing CBHI performance and advancing universal health coverage goals in

Ethiopia and similar settings (Shigute, Mebratie, Sparrow, Alemu & Bedi 2020:13; Tefera, 2022:805).

2.9 Ethiopian health care system

The Ethiopian healthcare system is organized into a three-tier structure comprising primary, secondary, and tertiary levels of care, designed to ensure a hierarchical and efficient referral system across the country. This structure forms the backbone of service delivery and plays a central role in the implementation and effectiveness of Community-Based Health Insurance schemes (WHO 2017:10).

At the core of the system is the Primary Healthcare Unit (PHCU), which includes health posts, health centers, and primary hospitals. This level is the main point of contact for most citizens and the primary service delivery platform for CBHI members. Health posts typically serve 3,000–5,000 people, focusing mainly on preventive and basic curative services. Health centers serve a wider population of 25,000–40,000 people, providing outpatient care, maternal health services, and basic diagnostics. Primary hospitals, which cover approximately 100,000 people, offer more advanced services including emergency surgical care, caesarean sections, and blood transfusion services (Debie, Khatri & Assefa 2022:2).

Above the primary level, secondary healthcare is provided through general hospitals, which function as referral centers for primary hospitals and typically serve populations of around 1.5 million people. At the highest level, tertiary hospitals, including specialized and university hospitals, deliver advanced and specialized medical services for populations of up to 5 million people (Debie et al., 2022:2).

The effectiveness of CBHI is closely linked to the functionality and capacity of this healthcare system, particularly at the primary level where most insured households seek care. By reducing financial barriers at the point of service, CBHI increases access and encourages greater utilization of healthcare services. However, the system's performance is highly dependent on the availability, quality, and responsiveness of health facilities.

Despite its structured design, the Ethiopian healthcare system continues to face significant challenges. These include inadequate infrastructure, shortages of trained

health professionals, uneven geographic distribution of services, and limited availability of essential medicines and diagnostic tools. Such constraints weaken service delivery at the primary care level, where CBHI members predominantly receive care, thereby affecting overall satisfaction and utilization outcomes. Aligning CBHI implementation with the capacity of each level of the healthcare system is essential for ensuring equitable access, improving service quality, and achieving better health outcomes. Strengthening primary healthcare remains particularly critical, as it serves as the foundation for both CBHI effectiveness and the broader goal of universal health coverage in Ethiopia.

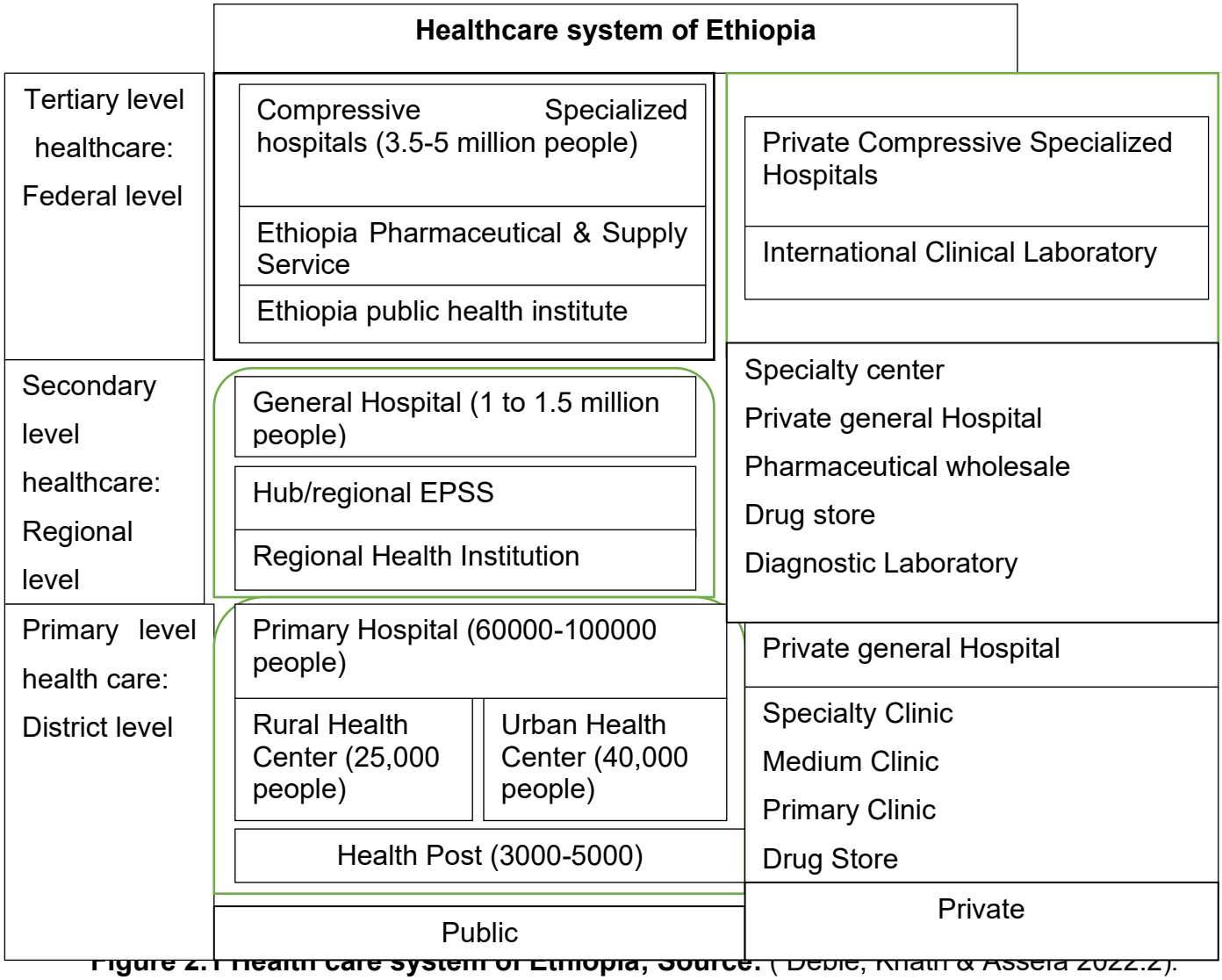

Figure 2: Health care system of Ethiopia, Source: (Debie, Khath & Assefa 2022:2).

2.10 Determinant factors of community-based health insurance uptake

The uptake of Community-Based Health Insurance (CBHI) is influenced by a complex and interrelated set of socio-economic, institutional, cultural, and health system factors operating at multiple levels. These determinants collectively shape individuals' decisions to enroll, renew membership, or opt out of insurance schemes, thereby affecting overall coverage and sustainability (Demissie & Negeri 2020:141; Atnafu & Gebremedin 2020:9).

2.10.1 Service availability and accessibility

Access to healthcare services is strongly determined by the availability of functional health facilities, essential services, and skilled health professionals. Communities with well-equipped facilities and adequate human resources are more likely to participate in CBHI schemes due to improved service reliability and accessibility (Yenet, Nibret &Tegegne 2023:444; Cyr, Etchin, Guthrie & Benneyan 2019:3).

However, geographical barriers remain a major constraint, particularly in rural and remote areas where long distances to health facilities discourage healthcare seeking and reduce CBHI enrollment. Limited transport infrastructure further exacerbates this challenge, weakening both access and utilization.

2.10.2 Affordability and financial barriers

Affordability is one of the most influential determinants of CBHI uptake. CBHI schemes are designed to reduce out-of-pocket (OOP) expenditures through risk pooling and prepayment mechanisms, thereby protecting households from catastrophic health spending (Azuogu & Eze 2018:4).

Despite this benefit, irregular and seasonal income patterns, especially among rural households, often limit the ability to pay premiums consistently. In settings such as Nepal and similar low-income contexts, financial instability and limited government subsidy coverage continue to constrain enrollment and retention (Ko, Kim, Yoon & Kim 2018:52).

2.10.3 Quality of care and trust in the system

The perceived and actual quality of healthcare services plays a critical role in shaping CBHI enrollment decisions. High-quality, respectful, and timely care enhances trust in the health system and encourages sustained participation (Yenet et al., 2023:444).

Conversely, poor service quality including long waiting times, drug shortages, and negative provider attitudes significantly discourages enrollment and renewal. In Ethiopia, such systemic challenges have been repeatedly identified as key barriers to CBHI uptake and continued utilization (Akafu, Daba, Tesfaye, Teshome & Akafu 2023:104).

2.10.4 Socio-demographic and economic determinants

CBHI uptake is also influenced by individual and household-level socio-demographic characteristics. Factors such as education level, household size, income status, and health condition significantly affect enrollment decisions (Fite et al., 2021:8; Abdilwohab et al., 2021:14).

Higher education is generally associated with better awareness and understanding of insurance benefits, while larger households and families with chronic illness are more likely to enroll due to higher perceived healthcare needs. In contrast, low income, limited awareness, and poor understanding of insurance mechanisms contribute to low enrollment and high dropout rates in several contexts, including Cameroon, Uganda, and Ethiopia (Jude et al., 2018:9; Mukangendo et al., 2018:8; Kaso et al., 2022:9).

2.10.5 Institutional and policy challenges

Institutional weaknesses such as inefficient management systems, inadequate legal frameworks, and high administrative costs significantly hinder CBHI implementation. In many settings, weak governance reduces operational efficiency and affects public confidence in insurance schemes.

For example, reforms in Senegal emphasizing improved risk pooling and integrated management systems have shown potential in addressing such constraints (Daff, Diouf, Diop, Mano, Nakamura, Sy, Tobe, Togawa & Ngom 2020:103). Similarly, experiences

from India and Nepal highlight persistent challenges related to premium collection, low renewal rates, and financial sustainability, underscoring the need for stronger institutional support and long-term financing strategies (Panda, Chakraborty, Raza & Bedi 2016:1442; Subedi 2018:56-58).

2.10.6 Barriers to uptake in developing countries

In many developing countries, CBHI implementation faces additional behavioural and cultural challenges. These include low trust in insurance schemes, adverse selection, moral hazard concerns, and high dropout rates, all of which weaken equity and sustainability (Dror et al., 2016:25).

Cultural beliefs, limited understanding of insurance principles, and dissatisfaction with benefit packages further reduce willingness to enroll. In Ethiopia, evidence emphasizes that improving trust, strengthening managerial capacity, and enhancing service quality are essential to overcoming these barriers (Eseta & Sinkie, 2022:12; Habte et al., 2022:16).

2.10.7 Lessons from global experiences

Global experience provides important lessons for improving CBHI uptake. In Rwanda, reforms focusing on premium affordability and flexible payment systems have significantly improved enrollment and retention, demonstrating the importance of financial accessibility (Mukangendo, Nzayirambaho, Hitimana & Yamuragiye 2018:8).

In Bangladesh, perceived quality of healthcare services emerged as a key determinant of enrollment, highlighting the strong link between service quality and insurance uptake (Sarker, Sultana & Ahmed 2018:7-10). Similarly, in Uganda, access to information, awareness creation, and positive perceptions of CBHI were critical drivers of enrollment and renewal (Rukundo, Mussa, Nshakira, Gerber & Braun 2019: 604).

2.11 Intervention strategies to improve CBHI uptake and healthcare utilization

Improving the performance of Community-Based Health Insurance requires integrated, multi-sectoral interventions that address demand-side, supply-side, institutional, and technological barriers simultaneously. Evidence shows that no single intervention is sufficient; rather, sustained improvements depend on coordinated actions across

awareness creation, financing mechanisms, service delivery strengthening, governance reforms, and digital innovation (Debie, Khatri & Assefa 2022:13; Eseta & Sinkie, 2022:12).

2.11.1 Awareness and education campaigns

Community-based awareness creation is a foundational strategy for improving CBHI enrollment and utilization. Studies consistently show that limited understanding of CBHI benefits contributes significantly to low uptake, particularly in rural and low-literacy populations (Getahun, Teklesilassie, Habtemichael, Abebe & Getahun 2022:4).

Culturally sensitive education campaigns delivered through community meetings, radio programs, and social media platforms can significantly improve knowledge and correct misconceptions about insurance schemes (Giedion Alfonso & Diaz 2013:126; Alobele 2023:37).In addition, training community health workers and engaging trusted local figures such as religious and community leaders helps build trust and reduce skepticism, thereby improving participation (Guthrie, Tsegaye, Rankin, Walson, & Alemie 2021:8; Workneh, Biks & Woreta 2017:358).

2.11.2 Innovative financing mechanisms

Financial constraints remain one of the most persistent barriers to CBHI uptake. To address this, flexible and pro-poor financing mechanisms such as installment-based premium payments and targeted subsidies for low-income households have been shown to increase enrollment (James & Acharya, 2024:10).

In addition, digital and mobile-based payment systems simplify premium collection, reduce administrative burdens, and improve accessibility for informal sector households, thereby strengthening enrollment continuity (Fadlallah et al., 2018:8,12).

2.11.3 Enhancing healthcare service quality

The perceived quality of healthcare services strongly influences both enrollment and continued utilization of CBHI schemes. Improving infrastructure, ensuring the availability of essential medicines, reducing waiting times, and addressing negative provider attitudes are critical for strengthening trust in the system (Geta et al., 2024:13).

Furthermore, expanding benefit packages to include preventive care and chronic disease management enhances the attractiveness of CBHI schemes and improves long-term health outcomes (Worede et al., 2023:12; MOH, 2023:61; James & Acharya, 2024:2). Continuous supervision and quality monitoring are also essential to ensure responsiveness to members' needs.

2.11.4 Building community trust and engagement

Trust is a central determinant of CBHI success and sustainability. Strengthening trust requires transparent governance, inclusive participation, and consistent communication with community members (Eseta & Sinkie, 2022:12).

Effective engagement of community leaders and local institutions helps address skepticism and improve acceptance of CBHI schemes. Moreover, timely claims processing, grievance handling systems, and feedback mechanisms enhance transparency and reinforce confidence in the system (Worede et al., 2023:12).

2.11. 5 Strengthening policy and institutional support

Strong policy and institutional frameworks are essential for scaling and sustaining CBHI programs. Government-led strategies such as mandatory enrollment, premium subsidies, and tax incentives have been shown to improve coverage and equity (Mulat et al., 2022:11; Debie et al., 2022:13).

Integration of CBHI with broader national health financing systems and universal health coverage (UHC) strategies further strengthens sustainability, coordination, and long-term system efficiency (Debie, Khatri & Assefa 2022:13).

2.11. 6 Targeted Interventions for vulnerable populations

Equity-focused strategies are essential to ensure CBHI inclusiveness. Vulnerable populations, including women, rural households, and informal workers, often face structural barriers such as limited financial autonomy and poor access to information (Eze et al., 2023:37).

Targeted outreach programs, tailored communication strategies, and community-based enrollment drives are therefore necessary to ensure equitable participation and reduce disparities in coverage (Mulat et al., 2022:5).

2.11.7 Leveraging technology

Digital innovation is increasingly recognized as a transformative tool for improving CBHI systems. Mobile platforms facilitate enrollment, premium payments, claims processing, and communication, thereby reducing administrative costs and delays (MOH, 2024:7).

In addition, SMS reminders and mobile applications enhance member engagement by providing timely information on premium deadlines, benefit packages, and service availability, ultimately improving utilization rates and continuity of coverage (Daraje, 2023:1395).

2.11.8 Monitoring and evaluation frameworks

Continuous monitoring and evaluation (M&E) systems are essential for ensuring CBHI effectiveness and accountability. Data-driven approaches enable policymakers to identify implementation gaps, assess performance, and design evidence-based interventions for improvement (Roy & Sarkar, 2018:67).

Pilot testing and phased implementation of new strategies also allow for contextual adaptation before scaling, ensuring that interventions remain effective and responsive to local needs.

2.12 Theoretical framework of the study

This study is guided by the Social Ecological Model (SEM), which explains health behavior as a product of dynamic, reciprocal interactions across multiple levels of influence, including the individual, interpersonal, community, organizational, and policy environments (Ma, Chan & Loke, 2017:3). The model emphasizes that health-related decisions, such as Community-Based Health Insurance (CBHI) uptake and healthcare utilization, are not shaped by a single factor but by interconnected systems that continuously influence one another.

At the individual level, knowledge, awareness, beliefs, and attitudes influence decision-making regarding CBHI enrollment and healthcare-seeking behavior. At the interpersonal level, family members, peers, and social networks shape perceptions, trust, and shared decisions about participation in insurance schemes. At the community level, social norms, cultural values, and collective trust in health systems strongly determine participation and renewal behaviors.

At the organizational level, the quality of healthcare services, availability of resources, provider attitudes, and institutional capacity directly influence satisfaction and sustained utilization of services. At the policy level, governance structures, health financing mechanisms, regulatory frameworks, and government commitment determine the overall sustainability, equity, and effectiveness of CBHI implementation.

Importantly, the SEM highlights that these levels do not operate independently; rather, they interact in a reinforcing system where changes at one level influence outcomes at all others. For example, improved service quality strengthens trust at the community level, which in turn enhances enrollment and utilization, while weak governance or poor service delivery can reduce trust and negatively affect participation.

The Social Ecological Model is particularly appropriate for this study because it aligns with the complex and multi-layered nature of CBHI uptake and healthcare utilization in real-world settings. It provides a comprehensive system-based lens for understanding how individual behavior is shaped by broader environmental and structural factors.

A conceptual framework is essential in guiding research, as it provides a structured foundation for organizing ideas, linking variables, and interpreting findings within a broader body of knowledge (Polit & Beck, 2017:264; Creswell, 2014:13). In this study, SEM serves as both a theoretical and analytical framework, guiding the identification of determinants of CBHI uptake and healthcare utilization across multiple levels.

The model adopts both person-focused and environment-focused dimensions, recognizing that individuals continuously interact with their surrounding environment in shaping health behaviors. According to Ma, Chan & Loke (2017:3) CBHI uptake and utilization are influenced by a combination of individual, interpersonal, community, organizational, and policy-level factors, which must be understood together rather than in isolation.

The researcher selected the SEM because it provides a comprehensive, multi-level framework capable of explaining complex health behaviors such as insurance enrollment, renewal, and healthcare utilization at the community level. It also supports the design of targeted, multi-level interventions, which are essential for improving CBHI performance.

A key assumption of the SEM is that individuals and their environments are mutually reinforcing, meaning that individuals shape their environment while simultaneously being shaped by it. The model also recognizes that the environment is structured into multiple interacting layers, including individual, interpersonal, community, organizational, and policy domains.

Therefore, applying the SEM in this study allows for a holistic understanding of CBHI dynamics and supports the development of integrated interventions across all levels of influence, ultimately contributing to improved uptake and healthcare utilization.

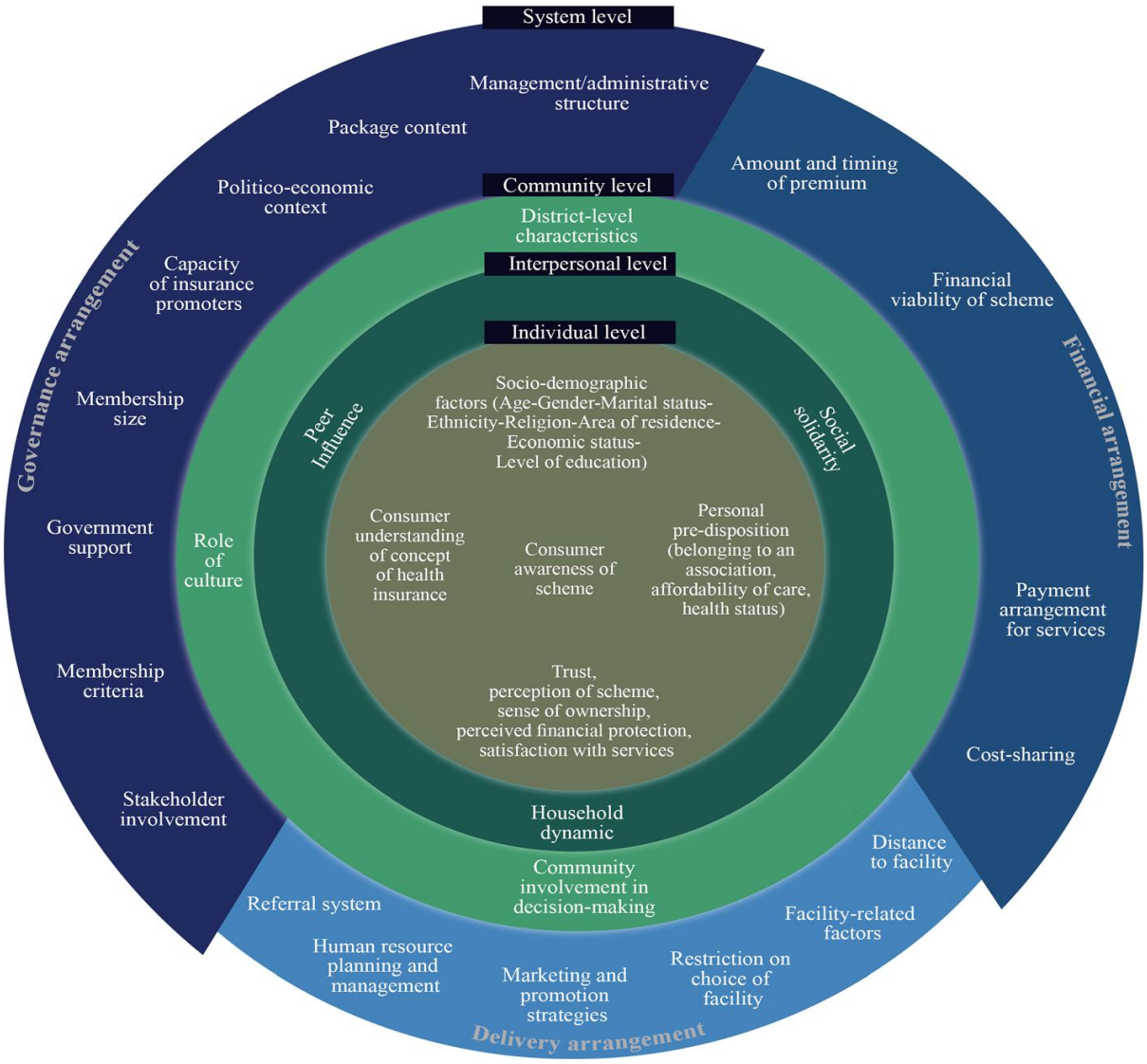

Figure 2.2 Socioecological model framework adapted from (Ma, Chan & Loke 2017:3).

The model illuminates the need to act in all domains to improve health behaviour and sustain service utilization.

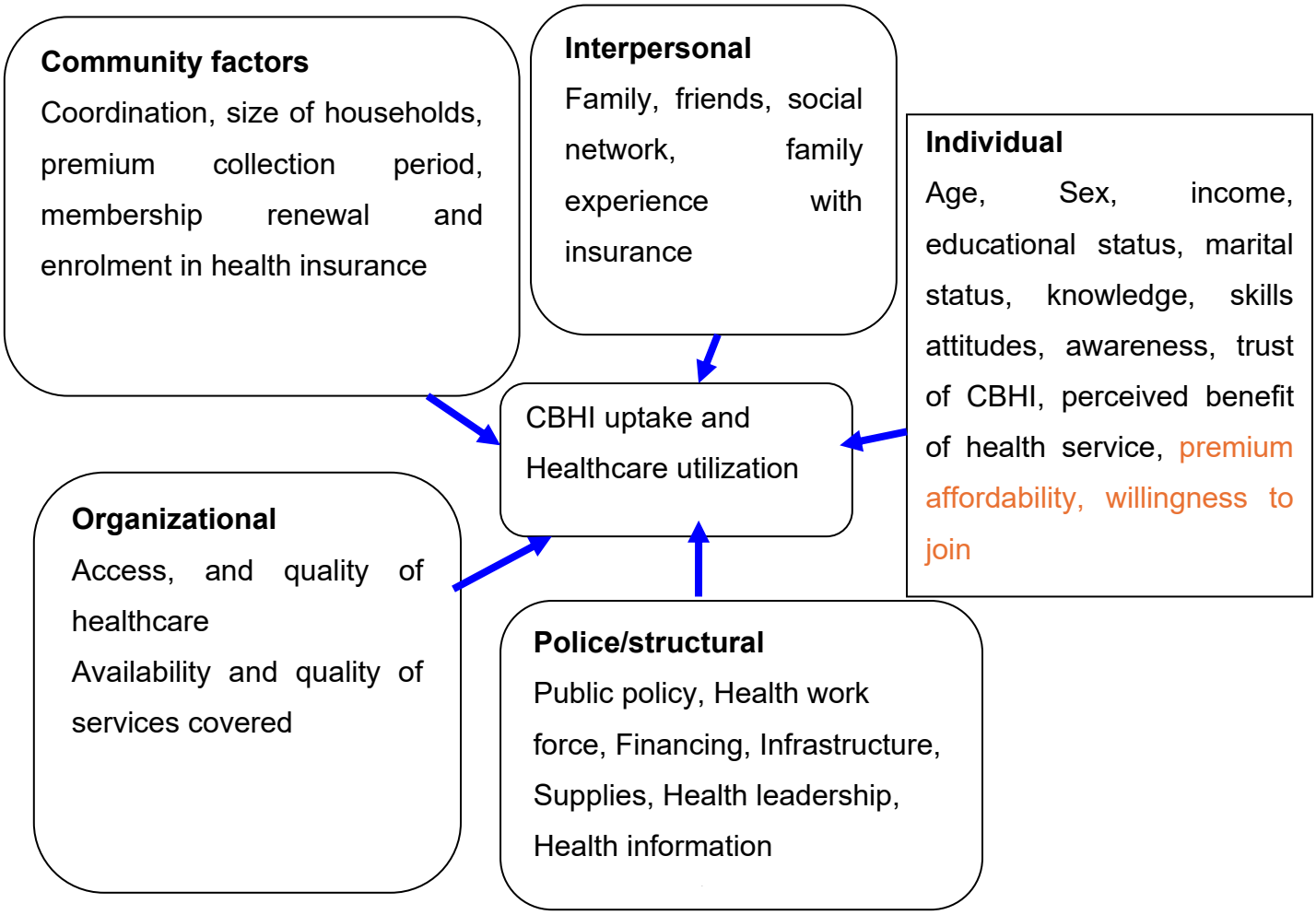

Figure 2.3 Theoretical framework of the study adapted by researcher 2023
Socioecological Model (SEM) framework to CBHI uptake and healthcare utilization

2.12.1 Individual level

This level focuses on the internal determinants of individual behavior, which include knowledge, attitudes, beliefs, and skills related to health risks, insurance awareness, perceived benefits of Community-Based Health Insurance, and healthcare services. It also incorporates personal perceptions such as willingness to join CBHI and perceived premium affordability, which influence an individual's decision-making regarding enrollment. In addition, this level encompasses key socioeconomic and demographic

characteristics, including education, age, gender, income status, and health condition. Collectively, these factors play a significant role in shaping both CBHI enrollment decisions and healthcare-seeking behavior (Atnafu & Alemu 2023:7; Ntube, Edokat & Nkiemdem 2023:10; Bayked, Kahissay, Workneh 2021:465; Fadlallah, Jardali, Hemadi, Morsi, Samra, Ahmad, Arif, Hishi, AbouHaidar & Akl 2018:4).

2.12.2 Interpersonal Level

This level involves external influences arising from close social relationships, including family members, friends, and peers. Social norms, shared beliefs, and group identity significantly shape individual behavior. Such influences may either encourage or discourage enrollment in CBHI schemes. Additionally, the role of community health workers in promoting awareness through education and outreach activities is also critical at this level (Fadlallah, Jardali, Hemadi, Morsi, Samra, Ahmad, Arif, Hishi, AbouHaidar & Akl 2018:8; Atnafu & Alemu 2023:7; Kebede 2024:619).

2.12.3 Community level

This reflects broader social and cultural contexts, including community norms, values, and beliefs regarding insurance and healthcare utilization. Collective trust, social cohesion, and the involvement of traditional or local leaders may enhance participation in CBHI schemes by fostering shared responsibility and mutual support within the community (Fadlallah, Jardali, Hemadi, Morsi, Samra, Ahmad, Arif, Hishi, AbouHaidar & Akl 2018:9; Yitayew, Adem & Tibebu 2020:3037).

2.12.4 Organizational level

Addressing health system-related factors, including the availability, accessibility, and quality of healthcare services covered under CBHI. It also includes the operational efficiency of CBHI schemes, such as premium collection mechanisms, claims processing systems, and the degree of trust in insurance management structures, all of which significantly influence service utilization and enrollment decisions (Moyehodie,

Fenta, Mulugeta, Agegn, Yismaw, Biresaw, Muluneh, Masresha & Dagnaw 2022:10; Atnafu & Alemu 2023:7; Fadlallah, Jardali, Hemadi, Morsi, Samra, Ahmad, Arif, Hishi, AbouHaidar & Akl 2018:10).

2.12. 5 Policy/Structural Level

This level encompasses macro-level determinants such as government policies that promote or regulate CBHI implementation. It includes regulatory frameworks that ensure affordability, transparency, and accountability, as well as financial support mechanisms such as subsidies for low-income populations to improve CBHI coverage and equity in access to healthcare services (Atnafu & Alemu 2023:7; Fadlallah, Jardali, Hemadi, Morsi, Samra, Ahmad, Arif, Hishi, AbouHaidar & Akl 2018:11).

2.13 Gaps in knowledge

Despite the growing body of evidence on Community-Based Health Insurance (CBHI), important conceptual, empirical, and implementation gaps remain, limiting its effectiveness in achieving universal health coverage (UHC), particularly in low- and middle-income countries (LMICs) (Eze, Ilechukwu & Lawani, 2023:37).

One of the major gaps relates to regional disparities in CBHI uptake and utilization, which remain insufficiently explained across different socio-economic, cultural, and institutional contexts. Evidence shows significant variation in enrollment rates, such as 27.5% in West Ethiopia, 73.6% in Siraro district, and 30% in rural Uganda, indicating strong contextual differences that are not yet fully understood (Negash, Dessie & Gobena, 2019:17; Ebrahim, Yonas & Kaso, 2019:139; Kakama, Namyalo & Basaza, 2020:8). However, limited comparative studies exist to explain why such disparities occur and which context-specific interventions are most effective.

Another critical gap concerns affordability and financial protection mechanisms, particularly for the poorest and most vulnerable populations. Although CBHI reduces out-of-pocket expenditure, it often fails to fully address financial barriers for low-income households. Importantly, innovative financing mechanisms such as installment-based payment systems, flexible premium collection, and targeted subsidies remain

underexplored, despite their potential to improve equity (Ko, Kim, Yoon & Kim, 2018:60). This highlights a need for more evidence on how financial innovations influence enrollment and retention in resource-constrained settings.

Furthermore, low awareness and limited understanding of CBHI schemes remain persistent barriers, especially in rural and low-literacy populations. Although awareness campaigns are widely recommended, there is insufficient empirical evidence on the effectiveness of culturally tailored communication strategies in improving long-term enrollment and retention (Yosuf, Akinyemi, Okafor & Eze, 2019:3).

In addition, healthcare service quality and its long-term influence on CBHI sustainability remain under-investigated. While poor service delivery, long waiting times, and provider attitudes are known barriers, there is limited longitudinal evidence on how improvements in service quality translate into sustained enrollment and reduced dropout rates (Akafu, Daba, Tesfaye, Teshome & Akafu, 2023:104).

Another important gap relates to trust dynamics and dropout behavior, which are central to CBHI performance. Although trust is widely recognized as a key determinant of participation, the socio-cultural and institutional factors that shape trust formation and erosion are not sufficiently understood, particularly in underserved and rural communities (Dror et al., 2016:25; Sheikh et al., 2022:11).

Similarly, financial sustainability and scalability of CBHI schemes in low-resource settings remain uncertain. While countries such as Rwanda demonstrate strong performance, there is limited evidence on whether similar models can be sustained in contexts with weaker institutional capacity. Moreover, the long-term impact of government subsidies, premium adjustments, and donor dependency on scheme viability is not well established (Woldemichael, 2020:4; IMF, 2019:6; Shigute et al., 2020:14).

Another underexplored area is the broader impact of CBHI on health and socio-economic outcomes, including maternal and child health, chronic disease management, poverty reduction, and household productivity. Although some evidence exists, there is still limited rigorous evaluation of CBHI’s wider development effects beyond healthcare

utilization (Haven, Dobson, Yusuf, Kellermann, Mutahunga, Stewart & Wilkinson 2018:8).

Finally, digital innovation and technological solutions remain insufficiently integrated into CBHI research and practice. Mobile-based payment systems, digital enrollment platforms, and SMS reminder systems have strong potential to improve efficiency and coverage, particularly among informal sector workers, yet their scalability, effectiveness, and sustainability remain largely under-researched.

2.14 Summary

This chapter has provided a comprehensive synthesis of global, regional (African), and Ethiopian literature on Community-Based Health Insurance (CBHI) uptake and healthcare utilization. The review demonstrated that CBHI performance is shaped by complex and interrelated determinants operating across multiple levels, including individual, interpersonal, community, organizational, and policy domains.

Guided by the Social Ecological Model (SEM**)**, the chapter emphasized that CBHI outcomes cannot be explained by single-level factors alone. Instead, they emerge from dynamic interactions between socio-economic conditions, health system capacity, institutional arrangements, and policy environments, highlighting the need for integrated and multi-level interventions to improve enrollment, enhance service utilization, and ensure long-term sustainability of CBHI schemes.

The chapter further examined the conceptual foundations of CBHI, its role in advancing Universal Health Coverage (UHC), and its contribution to financial risk protection and improved healthcare access. It also reviewed the organizational structure and implementation mechanisms of CBHI schemes, particularly within the Ethiopian health system, emphasizing governance arrangements, premium collection strategies, benefit packages, and service delivery systems.

In addition, the review identified key gaps in knowledge, particularly in relation to regional disparities in uptake, affordability constraints, trust dynamics, service quality,

financial sustainability, and the limited integration of digital health innovations. These gaps highlight areas requiring further empirical investigation to strengthen CBHI effectiveness in resource-limited settings.

Finally, the chapter synthesized the determinants of CBHI uptake and utilization, including socio-demographic, economic, cultural, institutional, and health system-related factors. Overall, the literature underscores that improving CBHI performance requires coordinated interventions across all levels of the health system.

The next chapter presents the research methodology, detailing the study design, setting, population, sampling procedures, data collection methods, and analytical approaches used in this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter presented the literature review of the study. The current chapter outlines an overview of the research methodology of the study. This section aims to describe the methods chosen to implement in each phase, and it covers study setting, population and sampling, study design, methods of data collection to data analysis, validity, reliability, and ethical considerations associated with the study.

3.2 Study setting

A study setting referred to the location where a researcher collected data on the phenomenon under investigation. It was a physical, social, and cultural site where the study was conducted and data was gathered (Polit & Beck 2017:743). This study was conducted in Shaggar City, a metropolitan area in the Oromia Regional State, Ethiopia, surrounding Finfinnee, the country's capital. As a rapidly growing urban center, Shaggar served as a gateway to Finfinnee and an emerging economic hub. Its increasing population, expanding economic activities, and rising demand for healthcare services made it a critical location for studying Community-Based Health Insurance uptake and healthcare utilization.

Administratively, Shaggar City comprised twelve sub-cities and thirty-six districts, with an extensive network of public and private healthcare facilities. The public healthcare system included twelve sub-cities' health offices, twenty-nine public healthcare facilities, and two public hospitals, employing approximately 4,260 health workers. Additionally, the private healthcare sector consisted of one general hospital, multiple specialty clinics, pharmacies, and traditional medicine centers, providing alternative healthcare options.

However, beyond the structural description, the broader health system context in Ethiopia remains characterized by resource constraints despite ongoing reforms. The doctor-to-population ratio is approximately 1 per 10,000 to 20,000, and the nurse-to-population ratio ranges from 1 per 2,000 to 5,000, both below global benchmarks, prompting the expansion of health extension workers. The healthcare system follows a tiered structure, with a health post serving 3,000–5,000 people, a health center 25,000–40,000, and a primary hospital 60,000–100,000; Above the primary level, secondary healthcare is provided through general hospitals, which function as referral centers for primary hospitals and typically serve populations of around 1.5 million people. At the highest level, tertiary hospitals, including specialized and university hospitals, deliver advanced and specialized medical services for populations of up to 5 million people (Debie et al., 2022:2). However, facility capacity is often limited by overcrowding, inadequate equipment, and workforce shortages. In addition, service efficiency remains a challenge, with patient waiting times in public facilities frequently exceeding one to three hours. These constraints particularly workforce shortages, limited facility capacity, and prolonged waiting times are critical contextual factors that influence access to care, as well as the uptake of Community-Based Health Insurance and healthcare utilization.

Despite this strong healthcare infrastructure, CBHI uptake remained low, warranting further investigation into the factors influencing enrollment and healthcare utilization.
This study focused on six sub-cities of Shaggar City: Nonno, Burrayyu, Gujee, Furi, Sabeta, and Gelan Guddaa. These sub-cities were selected due to their diverse urban and peri-urban communities, varying socioeconomic conditions, and low CBHI enrollment rates. According to the Shaggar City Health Office Report (2023), CBHI uptake in these sub-cities was as follows: Nonno 32%, Burrayyu 34%, Gujee 29%, Furi 31%, Sabeta 34%, and Gelan Guddaa 28%. These figures indicated that less than one-third of the population was enrolled in CBHI, despite the high potential for utilization. This underscored the need to explore barriers to enrollment, healthcare access challenges, and the effectiveness of CBHI implementation.

The selected sub-cities had a diverse population, including urban and peri-urban residents engaged in various occupations such as small-scale trade, daily labour,

government employment, and subsistence farming. Income disparities significantly influenced individuals' ability to afford healthcare services and insurance premiums. Moreover, education levels and awareness of CBHI policies played a crucial role in enrolment and utilization rates.

Healthcare services in these sub-cities were provided through public health centers, private clinics, hospitals, and community pharmacies. Although CBHI-affiliated facilities offered essential services, several challenges persisted, including limited awareness and trust in the system, concerns over the quality of CBHI-covered services, affordability of CBHI premiums, and delays in reimbursement and operational inefficiencies. The CBHI scheme in Oromia aimed to enhance equitable healthcare access, but low enrollment rates suggested significant barriers that needed to be addressed.

These sub-cities were selected as they provided a representative sample of different socioeconomic conditions and healthcare access challenges within Shaggar City. Studying CBHI uptake and healthcare utilization in these areas provided insights into factors influencing CBHI enrollment and utilization in urban and peri-urban settings. The findings contributed to policy recommendations for strengthening CBHI and healthcare service delivery in Oromia.

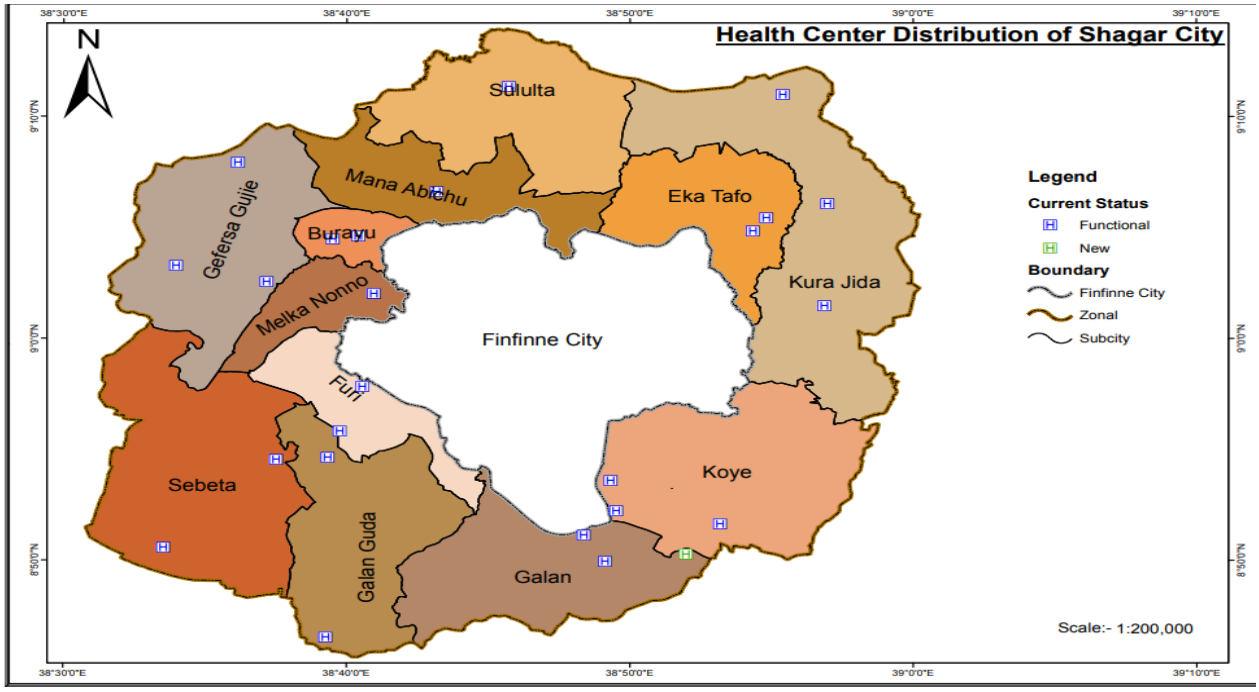

Fig 3.1 Map of Shaggar City. Source: Shaggar City Administration (2023)

3.3 Study design and conceptual framework

This study was guided by the Socio-Ecological Model (SEM), which provides a framework for understanding how individual, interpersonal, community, and policy-level factors influence health behaviors and decision-making. The SEM informed the design, implementation, and evaluation of the study, particularly in assessing the organization, uptake, and utilization of Community-Based Health Insurance in Shaggar, Oromia.
The study was conducted in three sequential phases, as summarized in Table 3.1.

Phase one was divided into two sub-phases aimed at assessing the status of CBHI implementation, uptake, and healthcare utilization. Phase 1a employed a quantitative approach to collect statistical data on membership, renewal patterns, and service utilization. Phase 1b utilized a qualitative approach to obtain in-depth insights from key stakeholders, including health leaders, CBHI officials, healthcare providers, community leaders, and health extension workers.

Phase two involved the development of intervention strategies. These strategies were designed based on the findings from Phase 1a and 1b to address identified gaps in CBHI uptake and healthcare utilization.

In Phase three, the proposed intervention strategies were validated by a panel of experts using a checklist based on the APEASE criteria: Affordable, Practical, Effective, Acceptable, Safe, and Equitable to ensure that the strategies were feasible, effective, and suitable for the target community.

This structured, phased approach, guided by the SEM, provided a systematic framework for assessing CBHI and the development of contextually relevant interventions.

Table 3.1: Study design and conceptual framework

Phases	Approach	objectives	Population	data collection
phase1: The implementation, uptake, and utilization of CBHI	phase1a: Quantitative	To investigate the extent of CBHI uptake, healthcare utilization, and their determinants among households in Shaggar, Oromia.	Heads of households	Questionnaire
	Phase1b: Qualitative	To assess the organization and implementation of the CBHI system in Shaggar, Oromia	Health leaders, CBHI officials, CBHI experts, healthcare providers, health extension workers, and community leaders.	In depth-interview

Phase 2: Development of intervention strategies	Stakeholders workshop	To develop intervention strategies aimed at improving CBHI uptake and healthcare utilization in Shaggar, Oromia.	Sub-city CBHI managers, health leaders, healthcare providers, and health extension workers	
Phase 3: Validate the developed intervention strategies	Expert-driven, structured validation	To validate the developed intervention strategies	Sub-city CBHI experts	Check list based APEAS

3.4. Research paradigm

Understanding the factors that influence Community-Based Health Insurance uptake and healthcare utilization requires a research approach capable of capturing both measurable trends and the perspectives of stakeholders. Health financing and access are shaped by complex socio-economic, cultural, and institutional contexts; thus, selecting an appropriate research paradigm is essential for generating meaningful and actionable insights. This study adopted a pragmatic research paradigm, which aligns with convergent mixed methods designed to comprehensively examine the challenges and opportunities in CBHI implementation in Shaggar, Oromia.

A research paradigm represents a worldview or overarching perspective that shapes how a researcher conceptualizes reality, determines what constitutes valid knowledge, and guides the choice of appropriate methods (Creswell & Plano 2018:46, Terrell 2016:68). It encompasses basic assumptions, theoretical perspectives, and methodological principles that frame the research process. Pragmatism is particularly suited to complex public health issues because it emphasizes practical solutions and methodological flexibility, integrating quantitative and qualitative approaches according to their utility in addressing the research problem. Rather than assuming a single

absolute truth, pragmatism recognizes that reality is both measurable through empirical observation and interpreted through contextual experiences. Within this paradigm, the study draws on four interrelated assumptions: etiology, epistemology, axiology, and methodology which collectively guide the research design and execution.

3.4.1 Etiological assumptions

From an etiological perspective, CBHI uptake and healthcare utilization are understood as outcomes of a dynamic interaction of multiple factors. These include household income, awareness and understanding of the insurance scheme, trust in the system, prior healthcare experiences, perceived service quality, and perceived financial risk. Utilization is further influenced by financial protection, accessibility of services, responsiveness of healthcare providers, and socio-cultural acceptability. This perspective reflects the pragmatic assumption that both quantifiable patterns and lived experiences are essential for understanding why households choose to enroll in CBHI and seek healthcare.

3.4.2 Epistemological assumptions

From an epistemological standpoint, knowledge about CBHI uptake and healthcare utilization is derived from both quantitative and qualitative sources. Quantitative data reveals measurable trends such as enrollment rates, renewal patterns, and levels of service utilization. Qualitative findings, on the other hand, capture the perceptions, motivations, and lived experiences of stakeholders, including community members, health leaders, CBHI officials, and healthcare providers. The integration of these sources provides a richer, more contextually grounded understanding of the factors driving health-related behaviors (Patricia, 2017:258; Kivunja & Kuyini, 2017:27).

3.4.3 Axiological assumptions

The study's axiological assumptions acknowledge the influence of researcher values on the research process. These include fairness, equity, and cultural sensitivity, which guided the study's ethical conduct and overall approach. Ethical considerations such as obtaining informed consent, maintaining confidentiality, and minimizing bias were integrated throughout the research process. Consistent with pragmatism, the study emphasizes generating findings that are ethically sound, socially meaningful, and practically useful for strengthening CBHI systems and improving equitable access to healthcare (Khatri, 2020:4).

3.4.4 Methodological assumptions

From a methodological perspective, the study employs a mixed-methods design that integrates quantitative and qualitative approaches to achieve a comprehensive understanding of CBHI uptake and healthcare utilization. The quantitative component captures measurable trends, such as enrollment and service use patterns, while the qualitative component explores contextual and experiential factors through in-depth interviews. By integrating findings at the interpretation stage, the study combines numerical evidence with lived experiences, producing robust, actionable insights that inform the development of contextually relevant interventions. This methodological approach reflects the pragmatic focus on flexibility, triangulation, and practical relevance in addressing complex public health challenges (Creswell & Plano 2018:46)

3.5 Approach and study design

3.5.1 Study Approach:

The research approach outlines the plan and procedures guiding the study, including assumptions about the research design, data collection, analysis, and interpretation (Edmonds & Kennedy 2017:48; Creswell & Creswell 2018:50). In this study, a mixed-methods approach was employed to provide a comprehensive understanding of

Community-Based Health Insurance uptake and healthcare utilization. A mixed-methods approach was deliberately adopted to enable both the quantitative assessment of determinants influencing CBHI uptake and healthcare utilization, and the qualitative exploration of community perceptions, institutional experiences, and contextual barriers affecting programme implementation and service use (Creswell & Creswell 2018:50). This explicit justification strengthens the rationale for combining methods and reflects the complex and multi-dimensional nature of CBHI, where quantitative measures alone cannot fully explain behavioural patterns and system-level challenges, while qualitative insights alone may lack generalizability.

3.5.1.1 Quantitative approach

The quantitative approach focused on the systematic collection and analysis of numerical data related to key CBHI indicators, including enrolment rates, healthcare utilization, and financial sustainability. Structured questionnaires were used to ensure consistency in data collection and to facilitate statistical analysis of relationships between variables. To enhance methodological rigor, the reliability of the survey instrument was assessed using Cronbach's alpha coefficient, with a threshold of 0.70 and above indicating acceptable internal consistency, while multivariable logistic regression analysis was applied to identify independent determinants of CBHI enrolment and healthcare utilization, controlling for potential confounding variables (Babbie 2016:106; Creswell & Creswell 2018:155). These procedures strengthened the accuracy, consistency, and credibility of the quantitative findings.

3.5.1.2 Qualitative approach

The qualitative approach was used to generate in-depth insights into the experiences and perspectives of key stakeholders, including health leaders, CBHI officials, CBHI experts, healthcare providers, health extension workers, community leaders, and community members. This approach enabled the exploration of operational challenges, administrative practices, service delivery issues, and community perceptions related to

CBHI implementation and utilization. To ensure trustworthiness, credibility was enhanced through triangulation of quantitative and qualitative findings and independent coding of qualitative data, while dependability was supported through maintaining a detailed audit trail of data collection and analysis processes, and confirmability was ensured through reflexive practices and documentation of analytical decisions (Creswell & Poth 2018:259). These strategies ensured that the qualitative findings were rigorous, transparent, and grounded in participants lived experiences.

3.5.1.3 Integration of findings

In the convergent mixed-methods design, quantitative and qualitative data were collected concurrently, analysed separately, and integrated during interpretation (Creswell & Plano Clark 2018:76). This integration strengthened the study through methodological triangulation, where findings from one method were used to validate, complement, and explain results from the other, thereby enhancing credibility and overall validity. The integration also facilitated the identification of convergences and divergences in findings, such as instances where high enrolment levels did not correspond with expected healthcare utilization due to dissatisfaction with service quality. This comprehensive approach improved the depth and explanatory power of the study.

3.5.2 Study design:

A study design provides the conceptual framework guiding data collection, analysis, and interpretation (Gray & Grove 2019:246; Creswell & Creswell 2018:60). This study adopted a convergent parallel mixed-methods design, in which quantitative and qualitative data were collected simultaneously, analysed independently, and then merged to generate comprehensive conclusions (Creswell & Plano 2018:76). This design was specifically selected to ensure both rigorous quantitative measurement of CBHI uptake and healthcare utilization and an in-depth qualitative understanding of contextual realities, stakeholder experiences, and implementation challenges. By

integrating both strands, the study produced more robust and actionable findings, supporting evidence-based recommendations for improving CBHI implementation and sustainability (Creswell & Plano 2018:98).

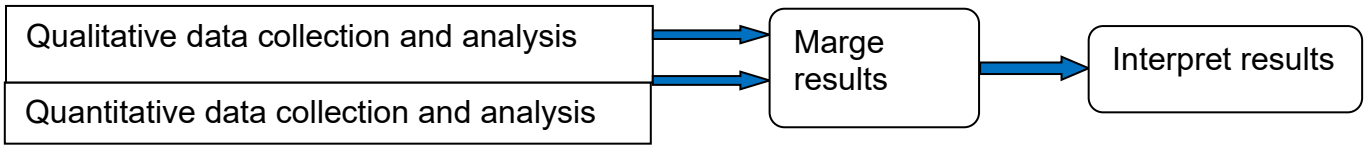

Figure3.2: Convergent parallel mixed methods design. Source: Creswell and Plano (2018:76).

3.6 Phase1a: Quantitative Phase

This phase addressed the objective:

- To investigate the extent of CBHI uptake, healthcare utilization, and their determinants among households in Shaggar, Oromia.

3.6.1 Study design

This phase employed a cross-sectional descriptive quantitative design within the broader mixed-methods framework to assess CBHI uptake, healthcare utilization, and associated determinants among households. The cross-sectional design allowed for data collection at a single point in time, providing a snapshot of enrolment status, healthcare utilization patterns, and socio-demographic characteristics. According to Stockemer (2019:31), such designs are effective for analysing population-level trends, while Babbie (2016:106) highlights their usefulness in examining relationships between variables.

Data was collected using structured questionnaires to ensure a standardized approach. To strengthen validity and reliability, the study applied Cronbach's alpha to assess internal consistency of measurement scales and employed multivariable logistic regression to identify independent predictors of CBHI enrolment and healthcare utilization while controlling confounding factors (Edmonds & Kennedy 2017:135). These procedures enhanced the robustness and generalizability of the findings, ensuring their relevance for policy and programmatic decision-making.

3.6.2 Study population

A study population refers to the entire group from which a sample is drawn to answer research questions (Gray & Grove 2019:293). It includes individuals or entities sharing a common characteristic of interest (Stockemer 2019:57; Leavy 2017:76; Bairagi & Munot 2019:90). In this study, the target population consisted of heads of households in the Shaggar districts, where CBHI has been implemented.

3.6.3 Study sampling

Sampling is the process by which a researcher selects a subset of individuals or units from a larger population to represent the whole. It offers several scientific advantages, including flexibility, faster generalization, greater accuracy, cost-effectiveness, and improved research efficiency (Babbie 2016:206; Pandey & Mishra, 2015:43-44). A key initial step in sampling is identifying the study element, which may be a person, group, or object of interest (Leavy 2017:76).

In this study, a multistage random sampling technique was employed to select participants from the sub-cities of Shaggar where Community-Based Health Insurance had been implemented. This method, rooted in probability theory, ensures that every element in the population has a known and non-zero chance of being selected (Daniels & Minot 2020:19; Leavy 2017:79). The use of this technique was justified by its ability to enhance the precision, representativeness, and efficiency of the sampling process (Taherdoost 2020:5). The sampling process involved the following stages:

First Stage: Six sub-cities were randomly selected from the total of twelve sub-cities in Shaggar using simple random sampling, specifically the lottery method. These sub-cities served as the primary sampling units. The sampling frame was created by identifying all sub-cities where CBHI had been implemented, ensuring geographic and administrative diversity.

Second Stage: From each of the six selected sub-cities, two districts were randomly selected, resulting in twelve secondary sampling units. An updated list of households was obtained from the family folder system maintained at the district level, which served as a standardized and reliable sampling frame for household selection.

Third Stage: Within each selected district, systematic random sampling was used to select households. The number of households sampled per district was determined using Population Proportionate to Sample Size (PPS), ensuring fair and proportional representation across districts as shown in table 3.2
From each selected household, the head of household was identified and included as the final respondent. These heads of households were the main study elements in assessing CBHI uptake and healthcare utilization.

To further enhance the accuracy of representation, stratification was applied by categorizing study subjects as household heads. This approach helped reduce human bias and ensured that specific strata within the population were proportionally represented without over-representation (Daniels & Minot 2020:19).

Since all study units were selected using probabilistic methods, the findings drawn from the data are statistically valid and generalizable to the broader study population.

Stage 1: Sub-city Selection

From twelve sub-cities, six sub cities randomly selected (Lottery Method)

Stage 2: District Selection

From each sub-city, 2 districts randomly selected

Total: 12 districts (Secondary Sampling Units)

Stage 3: Household Selection

Use family folder system for household lists

Systematic random sampling within each district

Proportional allocation using PPS

Finally, 406 head of households selected as main study elements as shown in table 3.2

3.6.4. Inclusion and Exclusion Criteria

Inclusion criteria

- Districts where CBHI was implemented
- Head of household who was mentally and physically capable of providing information.
- Households eligible for CBHI enrolment, head of household/spouse ≥18 years

Exclusion criteria

- Households that recently moved into the area.
- All heads of households who were not able to give consent.
- Head of household/spouse ≤18 years.
- Households refusing consent to participate.

3.6.5 Sample size

Sample size refers to the number of participants selected to accurately represent the overall population or "universe." An optimal sample size should strike a balance between efficiency, representativeness, reliability, and flexibility (Stockemer 2019:58). Determining an appropriate sample size involves several key statistical considerations (Pruzan 2017:243; Creswell 2014:205; Smith, 2019).

These considerations include the population size, which represents the total number of individuals meeting the study's inclusion criteria, and the margin of error (or confidence interval), which indicates the acceptable range within which the sample mean may deviate from the true population mean typically set at ±5%. The confidence level reflects the probability that the population parameter lies within the confidence interval; common levels include 90%, 95%, and 99%, with 95% being the most frequently used in social and health sciences research.

Another factor is the standard deviation, which accounts for the expected variation in responses. A conservative estimate of 0.5 is often used to ensure a sufficiently large sample size. Lastly, the non-response rate anticipates the proportion of selected

individuals who may not participate or provide usable data. For this study, a 10% non-response rate was included in the calculation.

The sample size for this study was determined using the single population proportion formula, based on the following assumptions: a 95% confidence level, a 5% margin of error, an expected population proportion of 80%, as stated in the Federal Ministry of Health's Health Sector Transformation Plan II (2021:109), and a 10% non-response rate. The calculation followed the methodology recommended by Saunders (2014:155), as shown below:

$$n = \frac{Z^2 P^* (1-P)}{d^2}$$

Where: -

n = is the sample size required.

Z = is the desired confidence level (1.96 for 95%)

p = is estimated proportion of the population (prevalence or target rate)

d = is margin of error (precision)

Step 1: Initial sample size without design effect or non-response

$$n = n = \frac{(1.96)^2 0.8^* (1-0.8)}{(0.05)^2} = \frac{3.8416^* 0.8 ^*0.2}{0.0025} = 246$$

Step 2: Adjust for design effect

n=246*1.5=369

Step 3: Adjust for non-response (10%)

n=369 *10% +369 =36.9 +369 =406

Therefore, the final sample size was determined to be 406, which is considered a satisfactory approximation for the purposes of this study.

Table 3.2: Proportional sample size of household's head

Sub-cities	population	HHs	Proportional allocation using PPS
Burayyu	295326	61526	87
Furi	259820	54129	76

G/Gujee	202240	42133	60
G/Guddaa	152094	31686	45
M/Nonno	326642	68050	96
Sabeta	143757	29949	42
Shaggar	1379880	287475	406

3.6.6 Data collection instrument

Data collection instruments are essential tools researchers use to gather information, with common methods including interviews, questionnaires, documentary analysis, and observation (Bairagi & Munot 2019:36). In survey research, a structured questionnaire administered through face-to-face interviews is particularly effective, especially in contexts with low literacy levels, ensuring structured and reliable data collection (Patricia 2017:100). For this study, data were collected using an interview-led structured questionnaire administered to household heads. Adapted from the Ethiopian Health Insurance Service (EHIS 2021:39-40) and similar studies, the questionnaire was specifically designed to assess CBHI uptake and healthcare utilization at the household level. It covered four key areas: socio-demographic characteristics, including age, gender, household income, and education level; CBHI uptake and healthcare utilization, examining enrolment status, duration of enrolment, reasons for enrolment, frequency of healthcare visits, types of services accessed, and satisfaction with healthcare services; health insurance financial sustainability, addressing the economic sustainability of CBHI; and influencing factors, such as socio-economic conditions, healthcare accessibility, perceived quality of care, and barriers to enrolment or utilization.

3.6.7 Pre-test

A pre-test was a preliminary evaluation of a data collection instrument, such as a questionnaire or interview guide, conducted before the main study. Its purpose was to identify and address potential issues to ensure clarity, accuracy, and relevance in data collection (Bairagi & Munot 2019:90). Through this process, the study examined

ambiguous wording, complex phrasing, logical gaps, and unclear response options, making necessary adjustments to enhance the instrument's reliability and validity.

In this study, the pre-test was conducted in Shaggar sub-cities on a small sample representing 5% of the study population, ensuring similarity to the main study's target group. Participants were asked to sign consent forms before taking part in the process. The evaluation focused on key aspects of the questionnaire, including clarity and relevance, ensuring that questions on CBHI enrolment, healthcare utilization, and influencing factors were understandable and applicable. Response options for closed-ended questions were reviewed to ensure all possible answers were covered, particularly regarding enrolment status, reasons for enrolment, healthcare usage patterns, and socio-economic factors. The questionnaire's flow and length were tested to minimize respondent fatigue and enhance response quality. Additionally, key variables were refined to capture accurate data on CBHI uptake, healthcare visits, and satisfaction with services, essential for analysing healthcare utilization and CBHI enrolment determinants.

Data from the pre-test were collected in one day and analysed. Findings were presented to the supervisors, who provided feedback for further refinement. The questionnaire was then revised and improved accordingly. To maintain study integrity, participants from the pre-test were excluded from the main study, and the collected pre-test data were discarded.

3.6.8 Data collection process

In this study, data collection commenced after obtaining ethical clearance from the University of South Africa (UNISA), Department of Public Health, and its Research Ethics Committee, along with approval letters from the Oromia Regional Health Bureau and Shaggar City Health Offices. Permission was also secured from the Shaggar Health Office. The data were collected from March to May 2025 to assess CBHI uptake, healthcare utilization, and influencing factors among heads of households in Shaggar

City. A pre-study site visit was conducted to familiarize participants with the study and address any concerns. During an introductory meeting, the researcher explained the study's purpose, assured confidentiality, and encouraged honest responses. Participants received an information sheet and consent form, ensuring voluntary participation. Informed consent was obtained before data collection. Data were collected through face-to-face interviews conducted by six trained health extension workers, supervised by two public health officers. The data collectors had over two years of experience in Oromia and were proficient in Afan Oromo and English. To ensure linguistic accuracy, the questionnaire was translated from English to Afan Oromo and back translated.

To enhance data quality, a two-day training session was conducted at the Shaggar Health Office by the principal investigator and the Shaggar research directorate. Training covered respondent approach techniques, questionnaire administration, informed consent procedures, and mitigation strategies. Data collection took place in the early mornings and afternoons to accommodate respondents' schedules and minimize non-response rates. The principal investigator reviewed completed questionnaires daily for accuracy, completeness, and consistency.

3.6.9 Data management

Data management in this study followed a systematic approach encompassing the collection, storage, organization, protection, and analysis of data to ensure its accuracy, integrity, accessibility, and usability for informed decision-making (Bairagi & Munot 2019:204; Creswell & Plano, 2018:382). Effective data management was critical in maintaining data quality, safeguarding confidentiality, and facilitating accurate analysis. This process involved practices such as data governance, secure storage, quality assurance, adherence to security protocols, and thorough data analysis to ensure efficient processing and support informed decisions.

For this study, both paper-based and digital data management strategies were employed to guarantee data security and accuracy. Paper-based records were stored in a locked shelf, accessible solely to the researcher and designated assistants, while digital records were stored in a secure system with restricted access. To enhance security, both the computer and data files were password-protected. Prior to data analysis, the collected data were verified for completeness and accuracy, then entered SPSS Version 26, following a structured data entry protocol to ensure consistency and reliability.

Structured questionnaire responses were meticulously recorded and input into secure statistical software systems, such as SPSS or Excel, to maintain data accuracy and consistency. Additionally, service providers' records related to premium payments, service utilization, and reimbursements were collected for supplementary analysis. A data cleaning procedure was implemented to identify and correct errors, inconsistencies, and missing data. Responses that were unclear regarding CBHI enrollment or healthcare utilization were flagged for review, and regular quality assurance checks were conducted to validate data entries, reconcile discrepancies, and update outdated information.

For analytical purposes, data responses were systematically coded. For instance, CBHI uptake was coded as "1" for enrolled and "0" for not enrolled, while healthcare utilization was categorized by the frequency and type of services accessed. Data security was rigorously prioritized, with both physical and electronic databases being secured through encryption, access controls, and adherence to data protection regulations. Routine data backups were performed to prevent data loss and maintain data integrity.

The final cleaned dataset was formatted for statistical analysis. Descriptive statistics, regression analysis, and other relevant statistical tests were applied to assess CBHI uptake, claims frequency, healthcare utilization trends, and financial sustainability. To promote effective collaboration among CBHI stakeholders, data were shared with CBHI

administrators, healthcare providers, and policymakers, while ensuring that confidentiality and data security were upheld throughout the process.

3.6.10 Data analysis

Quantitative data analysis involves the use of statistical methods to describe, summarize, and compare data by converting it into numerical form for statistical interpretation (Babbie 2016:412; Bairagi & Munot 2019:378). This process includes editing, coding, data cleaning, and statistical adjustments to ensure accuracy and reliability. The study employed descriptive, bivariate, and multivariate analyses to examine CBHI uptake and healthcare utilization (Bairagi & Munot 2019:414; Creswell 2014:209; Babbie 2016:430). Before analysis, the researcher ensured logical consistency and completeness of the data, which were entered and cleaned using SPSS Version 26 (Stockemer 2019:73).

Descriptive (Univariate) analysis focused on examining single variables to describe the study population. This included calculating frequencies and percentages for key variables, as well as computing mean ages and standard deviations separately for cases and controls (Babbie 2016:416; Grove & Gray 2019:378). To ensure data completeness and consistency, frequency tests were run for each variable.

Bivariate analysis was used to assess relationships between two variables, typically an outcome variable and a predictor variable. In health research, these associations are commonly tested using statistical significance, determined by p-values (Babbie 2016:425; Bairagi & Munot, 2019:181). In this study, the chi-square test of independence was applied to evaluate relationships between independent and dependent variables (Grove & Gray 2019:402). Additionally, binary logistic regression was used to measure the strength and significance of these associations.

Multivariate analysis involved the use of multivariate logistic regression, a statistical model that examines the combined effects of multiple factors on a dichotomous

dependent variable (Bairagi & Munot, 2019:402). This approach helped control for potential confounders related to socio-demographic, service, structural, and individual factors affecting CBHI uptake and healthcare utilization. Only variables with a p-value ≤ 0.05 from the bivariate analysis were included in the multivariate model. Logistic regression assumptions were tested, and the effects of independent variables were measured using odds ratios (ORs). A p-value < 0.05 was considered statistically significant, identifying key predictors of CBHI uptake and healthcare utilization.

3.6.11 Rigour of the Study: Validity and Reliability

Ensuring rigour in research is fundamental for producing findings that are accurate, consistent, and trustworthy (Grove & Gray 2019:58). In this study on Community-Based Health Insurance (CBHI) uptake and healthcare utilization among heads of households, rigour was ensured through validity and reliability, which are key indicators of research quality (Cohen, Manion & Morrison 2018:201). In response to methodological expectations, particular attention was given to clearly defining not only the types of validity but also the statistical parameters and indices used to establish them, especially for construct validity.

3.6.11.1. Validity

Validity refers to the extent to which the study truly measures CBHI uptake and healthcare utilization as intended, reflecting the real characteristics of the population under study (Babbie 2016:148; Edmonds & Kennedy 2017:29). To strengthen methodological rigor, this study applied multiple forms of validity, namely content validity, construct validity, face validity, internal validity, and external validity.

3.6.11.1.1 Content validity

Content validity ensures that the measurement instrument fully represents all relevant dimensions of the concepts being studied (Taherdoost 2016:29). In this study, CBHI experts carefully reviewed the questionnaire to ensure it adequately captured all

essential domains, including financial accessibility (premium affordability, out-of-pocket costs, and financial protection), service availability (access, responsiveness, and quality of care), awareness and perception (knowledge, trust, and attitudes), and healthcare utilization patterns (frequency of visits, types of services used, and barriers).

To strengthen this process, the Content Validity Index (CVI) was calculated based on expert ratings of relevance and clarity. Items that did not meet acceptable agreement levels were revised or removed. This systematic procedure ensured that the instrument was not only comprehensive but also contextually appropriate for assessing CBHI uptake and utilization.

3.6.11.1.2 Construct validity

Construct validity refers to the extent to which the instrument accurately measures the theoretical concepts it is intended to represent. In this study, constructs such as financial accessibility, service availability, awareness, enrollment behavior, and healthcare utilization were carefully examined to ensure theoretical and empirical alignment.

In direct response to methodological requirements raised by the examiner, specific statistical parameters and indices were explicitly applied to establish construct validity. First, Exploratory Factor Analysis (EFA**)** was conducted to examine the underlying structure of the questionnaire and to determine whether items grouped into expected conceptual dimensions. Items with factor loadings of ≥ 0.40 were considered acceptable indicators of their respective constructs.

Second, item–total correlation analysis was performed to assess the consistency of each item within its construct, ensuring that each question contributed meaningfully to the overall scale. Items with weak correlations were reviewed and refined.

Third, inter-item correlation analysis was used to assess internal coherence among items within the same construct, ensuring that they measured the same underlying concept without redundancy.

Finally, expert judgment complemented these statistical procedures by assessing whether the items logically aligned with the CBHI conceptual framework. The integration of these statistical indices and expert evaluation strengthened the structural validity and theoretical robustness of the instrument.

3.6.11.1.3 Face validity

Face validity refers to the extent to which the instrument appears appropriate and relevant at face value for measuring the intended concepts (Clark 2019:60). In this study, face validity was assessed through expert review and pilot testing, where both professionals and participants evaluated whether the questionnaire was clear, understandable, and logically related to CBHI enrollment, affordability, service access, and healthcare utilization. Although subjective in nature, this step was essential in ensuring clarity, acceptability, and ease of administration.

3.6.11.1.4 Internal Validity

Internal validity refers to the degree to which observed relationships reflect true effects rather than being influenced by confounding factors (Grove & Gray 2019:254). In this study, internal validity ensured that changes in healthcare utilization were genuinely associated with CBHI uptake rather than external influences such as socioeconomic conditions or health system variations.

To strengthen internal validity, several strategies were applied. First, the instrument was refined through expert review involving CBHI specialists and academic supervisors.

Second, stratified random sampling was used to ensure proportional representation of different population groups and to reduce selection bias.

Third, multivariable logistic regression analysis was applied to control for potential confounders, including socioeconomic status, demographic factors, and prior healthcare access. Fourth, a pilot study was conducted to refine the questionnaire and ensure clarity and consistency in responses. Finally, standardized training and uniform data collection procedures were implemented to minimize variability and measurement errors across data collectors.

3.6.11.1.5 External Validity

External validity refers to the extent to which study findings can be generalized to other populations and settings (Cohen, Manion & Morrison 2018:254). In this study, generalizability was strengthened through stratified random sampling, which ensured representation across key population subgroups.

Clear inclusion criteria (household heads or spouses aged 18 years and above) were applied to maintain relevance to the research objectives. In addition, the inclusion of diverse urban and peri-urban sub-cities enhanced variability in socioeconomic and healthcare access conditions, improving the transferability of findings to similar CBHI contexts in Ethiopia and other comparable settings.

3.6.11.2 Reliability

Reliability refers to the consistency and stability of measurement over time and across different conditions (Clark 2019:49; Grove & Gray 2019:256). In this study, reliability ensured that the instrument produced stable and repeatable results when measuring CBHI uptake and healthcare utilization.

Internal consistency was assessed using Cronbach's alpha coefficient, with a threshold of ≥ 0.70 indicating acceptable reliability across major constructs such as awareness, service quality, and healthcare utilization. Stability overtime was assessed using test-retest reliability, which produced a coefficient above 0.80, indicating strong consistency across repeated measurements.

In addition, Cohen's kappa statistic ($\kappa > 0.70$) was used where applicable to assess agreement between categorical assessments. These statistical indicators confirmed that the instrument was reliable, stable, and capable of producing consistent results, thereby strengthening the credibility and robustness of the study findings.

3.7 Phase1b: Qualitative Phase

This phase aimed to explore the organization and implementation of Community-Based Health Insurance from the perspectives of key stakeholders, including health leaders, CBHI officials, CBHI experts, healthcare providers, health extension workers, and community leaders. The qualitative approach was particularly important for capturing contextual experiences, operational realities, and perceived challenges that could not be adequately explained through quantitative data alone. It provided an in-depth understanding of how CBHI policies are implemented at the ground level and how these processes influence enrolment and healthcare utilization.

3.7.1 Study design

Qualitative descriptive design was employed to explore participants lived experiences and professional insights regarding CBHI implementation. This design is appropriate for obtaining rich, detailed descriptions of complex health system processes (Creswell & Creswell 2018:51). It enabled the study to capture variations in implementation practices across different stakeholder groups and service delivery levels.

To ensure rigour in the qualitative component, credibility was enhanced through triangulation of data sources and methods, as well as independent coding of qualitative transcripts to ensure consistency in theme development (Creswell & Poth 2018:259). Dependability was strengthened through the maintenance of a clear audit trail documenting all stages of data collection and analysis, while confirmability was ensured through reflexive engagement and systematic documentation of analytical decisions to minimize researcher bias. Transferability was supported by providing thick, detailed descriptions of the study context and participant characteristics, enabling readers to assess the applicability of findings to similar CBHI settings.

3.7.2 Study population

The study population comprised key stakeholders directly involved in CBHI implementation and service delivery. These included health leaders, CBHI officials, CBHI experts, healthcare providers, health extension workers, and community leaders operating at sub-city and district levels. These participants were selected because of their direct involvement in programme implementation and their ability to provide rich, contextually grounded insights into CBHI operations, challenges, and opportunities for improvement.

3.7.3 Study sampling

Sampling refers to the systematic process of selecting individuals or groups capable of providing relevant and meaningful insights into the research problem (Johnson & Christensen 2014:343). In this study, a clearly justified multistage sampling strategy was employed to enhance methodological rigor and ensure representation across different administrative and implementation contexts. The sampling process involved two sequential stages: the selection of study sites (sub-cities) and the identification of participants.

At the first stage, a purposive sampling technique was applied with explicit selection criteria to identify appropriate study sites. This approach is widely recognized in

qualitative research for its ability to include information-rich cases that are most relevant to the phenomenon under investigation (Creswell & Creswell 2018:301). Six sub-cities were deliberately selected based on predefined performance indicators specifically variation in CBHI enrolment levels (three high-performing and three low-performing sub-cities) to enable comparative analysis and capture contextual diversity**.** This variation strengthened the study's ability to explore differences in implementation practices and outcomes.

At the second stage, participants were selected purposively based on clearly defined inclusion criteria, including their professional roles, length of experience, and level of direct involvement in CBHI implementation. The sample included individuals engaged in planning, coordination, service delivery, and community mobilization activities. This ensured that participants possessed both experiential and operational knowledge relevant to the research objectives.

Furthermore, the study considered the principle of data saturation in determining the final sample size, ensuring that data collection continued until no new themes or insights emerged. The use of purposive sampling was therefore not only appropriate but also strategically aligned with the study's aim of generating in-depth, contextually grounded, and analytically rich insights into the organization and implementation of the CBHI system.

3.7.4 Inclusion and Exclusion criteria

3.7.4.1 Inclusion criteria

CBHI officials, health leaders, health extension workers, community leaders, and health providers with at least one year of experience in CBHI and who are actively engaged in CBHI-related activities. Participants who are currently active in CBHI program activities at the time of the study.

3.7.4.2 Exclusion criteria

Individuals with less than one year of experience in CBHI. Participants who are no longer active in the CBHI program at the time of the study.

Individuals with less than one year of experience in CBHI. Participants who are no longer active in the CBHI program at the time of the study.

3.7.5 Sample Size

In qualitative research, sample size is guided by the principle of data saturation rather than statistical representativeness. Saturation occurs when no new themes or insights emerge from additional data collection (Creswell & Creswell 2018:301). Based on this principle, the study included a total of 28 participants drawn from different stakeholder categories, including health leaders, CBHI officials, CBHI experts, healthcare providers, health extension workers, and community leaders. This sample size was considered sufficient to achieve depth and variation in perspectives.

3.7.6 Data collection instruments

Data were collected using a semi-structured interview guide designed to explore participants' experiences and perceptions of CBHI implementation. The guide included open-ended questions focusing on program organization, implementation processes, challenges affecting enrolment and utilization, service delivery experiences, and suggested improvements.

To provide clearer methodological justification, the use of a semi-structured interview guide was aligned with the qualitative component of the mixed-methods design, enabling an in-depth exploration of participants lived experiences and contextual realities that could not be captured through quantitative measures alone. This approach complemented the quantitative findings by offering explanatory insights into observed patterns of CBHI uptake and healthcare utilization.

To enhance methodological rigor, credibility was strengthened using probing questions that encouraged participants to elaborate on their responses, thereby ensuring depth and richness of data (Creswell & Poth 2018:259). The semi-structured format also

allowed flexibility in exploring emerging themes while maintaining alignment with the study objectives.

Furthermore, the development of the interview guide was informed by existing literature and the study objectives, ensuring content validity and relevance to the research questions. The instrument was applied across diverse participant groups, including health leaders, CBHI officials, CBHI experts, healthcare providers, health extension workers, and community leaders. This ensured triangulation of perspectives and strengthened the comprehensiveness of the data collected**.**

3.7.7 pre-test

The pre-test was conducted to ensure that the interview guide effectively captured key aspects of CBHI organization and implementation. This step was essential to enhance both the validity and reliability of the data collection instrument, addressing examiner concerns regarding measurement rigor.

The primary objectives of the pre-test were to assess clarity, relevance, and the ability of questions to elicit detailed responses, as well as to identify ambiguities or redundancies. A small subset of participants (2–3 individuals) with similar characteristics to the target population was selected.

In addition**,** feedback from the pre-test was systematically analysed and used to refine the instrument, thereby improving its internal consistency and content validity. Participants involved in the pre-test were excluded from the main study to avoid bias. Pre-test findings were reviewed in consultation with supervisors, and necessary revisions were incorporated. This iterative refinement process strengthened the reliability of the instrument and ensured alignment with the study objectives.

3.7.8 Data collection methods

This study employed in-depth interviews as the primary qualitative data collection method to explore the organization and implementation of CBHI uptake and healthcare utilization among health leaders, CBHI officials, CBHI experts, and healthcare providers.

The selection of in-depth interviews was explicitly justified as appropriate for capturing detailed, context-specific insights, thereby strengthening the rationale for the qualitative component within the mixed-methods design. This method enabled the exploration of participants' experiences, perceptions, and institutional practices in depth.

To ensure analytical rigor, probing techniques were used to elicit comprehensive responses. Data collection was conducted systematically across participant categories to ensure consistency and comparability of findings. This facilitated a rich and nuanced understanding of factors influencing CBHI uptake and healthcare utilization.

3.7.9 Data collection procedures

Prior to data collection, ethical approvals and permissions were obtained from relevant authorities.

Ethical approval was obtained from the College of Human Sciences Research Ethics Review Committee of the University of South Africa, with approval reference number 12776149_CREC_CHS_2021, ensuring that the study adhered to established research ethics principles and standards. Participants were informed about the purpose of the study, and informed consent was obtained prior to participation.

Interviews were conducted in private and convenient settings to ensure confidentiality and encourage open discussion.

Standardized procedures were followed during data collection to enhance reliability, including consistent use of the interview guide and uniform documentation of responses**.** Participants were purposively selected based on their involvement in CBHI implementation.

3.7.10 Data management

Data management involved systematic handling, storage, organization, and protection of qualitative data.

All interviews were transcribed verbatim, and transcription accuracy was verified by cross-checking audio recordings against transcripts, thereby enhancing data reliability**.** Transcripts were securely stored in password-protected systems with restricted access.

3.7.10.1 Data Storage and Security

All data were stored in secure, password-protected digital systems. To further strengthen data protection, encrypted storage mechanisms were used, and access was limited strictly to authorized research personnel.

3.7.10.2 Data Organization

Data was anonymized and coded using unique identifiers. A structured coding system was developed to ensure systematic organization and facilitate traceability during analysis, thereby enhancing dependability.

3.7.10.3 Data Transcription and Cleaning

Transcripts were carefully reviewed and cleaned. Data cleaning procedures included verification, correction of transcription errors, and removal of identifiable information to ensure both accuracy and confidentiality.

3.7.10.4 Data Privacy and Confidentiality

Confidentiality was strictly maintained. All research team members signed confidentiality agreements, and data handling procedures adhered to ethical standards for privacy and protection of participants.

3.7.11 Data analysis

Data analysis involved systematic examination and interpretation of qualitative data (Creswell & Plano 2018:210). To strengthen analytical rigor, a clearly defined and transparent analytical procedure was employed. Interviews were transcribed verbatim and repeatedly reviewed to ensure familiarization.

A structured coding framework was developed, and thematic analysis was conducted through systematic coding, categorization, and theme development. Preliminary codes were generated and grouped into broader categories.

To enhance reliability, coding consistency was ensured through iterative review and, where applicable, independent coding or peer validation. Furthermore, triangulation was applied by comparing findings across different participant groups and integrating qualitative insights with quantitative results, thereby strengthening validity.

3.7.12 Measures to ensure trustworthiness

Trustworthiness in qualitative research refers to the rigor and credibility of findings, ensuring they are reliable and accurately reflect participants' perspectives and experiences. Establishing trustworthiness is essential for instilling confidence that the findings are meaningful and applicable (Grove & Gray 2019:449).

In the study of Community-Based Health Insurance uptake and healthcare utilization, ensuring trustworthiness is crucial for establishing credibility and reliability. Trustworthiness in qualitative research is evaluated through credibility, transferability, dependability, and confirmability four key criteria that ensure findings genuinely reflect participants' views. Additionally, operational factors such as transparency, accountability, reliability, and integrity play a critical role in maintaining stakeholder confidence in CBHI implementation.

3.7.12.1 Research Components of Trustworthiness

3.7.12.1.1 Credibility

Credibility ensures that the study’s findings accurately reflect the experiences and perspectives of participants, such as health leaders, CBHI officials, CBHI experts, health extension workers, community leaders and healthcare providers. This was achieved through prolonged engagement, where the researcher spent full time with participants to build trust and rapport, allowing for deeper insights into the complexities of CBHI uptake and healthcare utilization. Member checking was employed to allow

participants to review the findings and interpretations, ensuring their views and experiences were accurately captured and validating the researcher's interpretations. Additionally, triangulation was used by incorporating multiple data sources such as CBHI officials, health leaders, experts, and healthcare providers to cross-check and verify the consistency of the findings, enhancing the study's credibility and robustness. These strategies collectively contributed to the trustworthiness and authenticity of the study's results, ensuring they genuinely reflect the participants' experiences and perspectives.

3.7.12.1.2 Transferability

Transferability ensures that the study's findings can be applied to similar contexts or settings. This was achieved through rich, detailed descriptions of the CBHI program, including its organizational structure, implementation strategies, challenges encountered, and the experiences of health leaders, CBHI officials, CBHI experts, health extension workers, community leaders and healthcare providers. These descriptions provided essential context, allowing others to assess the relevance of the findings to their own settings. Furthermore, the study clearly outlined the research parameters, such as geographic location, policy environment, and the demographic characteristics of the participants. This clarity enables researchers and policymakers to evaluate how the findings may be applicable to other regions or populations implementing CBHI programs, particularly those with similar conditions or challenges related to CBHI uptake and healthcare utilization.

3.7.12.1.3 Dependability

Dependability refers to the consistency and stability of the research process and findings over time, ensuring that the study's methods and procedures are transparent, well-documented, and replicable. In this study, dependability was reflected in the consistency and reliability of the research process and findings when examining the factors influencing the implementation and use of Community Based Health Insurance programs. To ensure dependability, the study demonstrated that the methods used to

collect and analyse data were well-documented, systematic, and replicable. This involved clearly outlining how data were gathered from participants, including health leaders, CBHI officials, CBHI experts, health extension workers, community leaders and healthcare providers, and detailing the steps taken in data analysis.

To further enhance dependability, techniques such as maintaining an audit trail were employed, where all research decisions and processes were recorded, ensuring transparency, verification, and consistency throughout the research process. Peer debriefing was also conducted, engaging colleagues, CBHI experts, and other researchers in discussions about findings and interpretations to reduce potential biases and strengthen the reliability of conclusions. Additionally, a systematic approach to coding and categorization was used, organizing qualitative data into consistent themes to ensure uniformity in identifying patterns and trends related to CBHI uptake and healthcare utilization. This comprehensive approach ensured that the research process remained stable, consistent, and replicable across different contexts, reinforcing the trustworthiness and reliability of the findings.

3.7.12.1.4 Confirmability

Confirmability refers to the extent to which the findings and interpretations of a study can be verified by others, ensuring that the results are based on the data collected and are not influenced by the researcher's biases or subjective judgments. In this study, confirmability ensured that the conclusions drawn about CBHI implementation and healthcare utilization accurately reflected the data and were not shaped by personal biases or preconceived notions. To achieve confirmability, transparency was maintained throughout the research process by documenting all decisions related to data collection, analysis, and interpretation. This allowed for traceability, showing how conclusions were reached and ensuring that the findings genuinely represented participants' perspectives rather than the researcher's influence. Techniques such as maintaining an audit trail, member checking, and peer debriefing were used to establish confirmability. The audit trail involved recording all research decisions and processes, while member checking

allowed participants, including health leaders, CBHI officials, CBHI experts, health extension workers, community leaders and healthcare providers, to review and validate the findings, ensuring their perspectives were accurately captured. Peer debriefing with colleagues and experts provided an external perspective, strengthening confirmability by offering critical feedback on the research process and results. Reflexivity was also practiced throughout the study, with the researcher consistently reflecting on their potential influence during data collection and analysis, ensuring that personal beliefs or assumptions did not shape the findings. Additionally, neutrality in data interpretation was maintained by deriving findings strictly from participant narratives, and data triangulation was employed by gathering information from multiple sources to cross-verify and strengthen the objectivity of the conclusions. These strategies ensured that the study's findings were objective, unbiased, and accurately represented participants' experiences, reinforcing the study's reliability and confirmability.

3.7.13 Integration

The integration of study findings highlighted key determinants influencing CBHI uptake and healthcare utilization, integrating both quantitative and qualitative insights for a comprehensive analysis. Quantitative results indicated that socio-economic status, awareness, affordability, and service quality significantly impacted enrollment and healthcare use. Qualitative findings provided deeper context, revealing barriers such as trust in the system, policy gaps, and administrative challenges. Through triangulation, the study confirmed that financial protection, accessibility, and governance structures play a crucial role in CBHI participation. This integrated approach strengthened the validity of the findings, offering robust evidence base for policy recommendations to enhance CBHI implementation and improve healthcare access.

3.7.14 Interpretation

The findings from both phases were compared to identify convergence and divergence.

This integrative interpretation strengthened the explanatory power of the study by linking statistical associations with lived experiences and contextual realities. Key determinants such as affordability, awareness, trust, and service quality were identified.

The interpretation was grounded in both empirical evidence and theoretical frameworks, ensuring that conclusions were robust, contextually relevant, and aligned with existing literature. Overall, the study provides evidence-based, actionable insights to inform policy and improve CBHI implementation and healthcare utilization.

3.8 Phase 2: Development of intervention strategies

The development of intervention strategies was guided by findings from Phases 1a and 1b, ensuring that the strategies were contextually relevant, evidence-based, and practically feasible. This process was structured into several steps, each aimed at addressing the barriers and leveraging the facilitators of Community-Based Health Insurance uptake and healthcare utilization in Shaggar, Oromia.

3.8.1 Steps in developing intervention strategies

3.8.1.1 Conducting a comprehensive situational analysis

A comprehensive situational analysis formed the foundation for strategy development. This involved systematically reviewing quantitative and qualitative findings to identify key barriers and enablers influencing CBHI enrollment and service use. Socioeconomic, cultural, and structural factors were examined to understand their impact on CBHI uptake and Healthcare utilization patterns. Key stakeholders, including CBHI managers, health leaders, healthcare providers, and health extension workers were actively engaged. Their insights and experiential knowledge enriched the analysis, ensuring that the strategies reflected the realities of CBHI implementation.

3.8.1.2 Defining objectives and prioritizing interventions

Based on the situational analysis, clear and measurable objectives were formulated to guide strategy development. Interventions were prioritized according to feasibility, contextual relevance, and potential scalability, ensuring that proposed actions were

realistic and sustainable. Alignment with national health policies and financing frameworks was maintained throughout, guaranteeing that the strategies complemented existing health system priorities and regulatory structures.

3.8.1.3 Developing strategies across SEM levels

Intervention strategies were developed using the Social Ecological Model to ensure a comprehensive, multi-level approach to improving Community-Based Health Insurance uptake and healthcare utilization. Addressing determinants at multiple levels allowed the strategies to respond to both individual behaviors and broader social, institutional, and policy contexts.

At the intrapersonal level, strategies focused on addressing gaps in individual knowledge, attitudes, and perceptions related to CBHI. Health education programs and behavior change communication initiatives were designed to improve awareness of CBHI benefits, correct misconceptions, and reduce fear or misinformation. Digital health tools, including SMS reminders and mobile applications, were also introduced to support informed decision-making, encourage timely enrollment, and promote appropriate health-seeking behaviors.

At the interpersonal level, the influence of social relationships and networks was leveraged to promote CBHI participation. Peer networks, community leaders, religious figures, and other respected individuals were engaged as CBHI ambassadors. Testimonial campaigns highlighting positive experiences of enrolled members, alongside peer support and referral mechanisms, were used to encourage enrollment through shared experiences and social influence.

At the organizational level, interventions aimed to strengthen institutional responsiveness and build trust in CBHI services. This included improving customer service at CBHI offices, implementing capacity-building initiatives to enhance the skills

and attitudes of healthcare providers, and establishing transparent and efficient claims processing systems. These measures were intended to improve user satisfaction and confidence in the scheme.

At the community level, strategies emphasize collective engagement and participation. Community dialogues and participatory forums were organized to openly discuss CBHI-related concerns and expectations. Partnerships with local associations, cooperatives, and microfinance groups supported group enrollment and collective action. In addition, flexible payment arrangements, financial incentives, and tailored enrollment packages were introduced to improve affordability and encourage broader community involvement.

At the policy and environmental level, advocacy efforts focused on strengthening institutional and policy support for CBHI. These efforts promoted inter-sectoral collaboration between health, finance, and social sectors and sought government subsidies and financial protection mechanisms to reduce out-of-pocket costs, particularly for vulnerable populations. Together, these policy-level interventions aimed to enhance the sustainability, equity, and overall effectiveness of the CBHI system.

3.8.2 Workshop to develop intervention strategies

A one-day, face-to-face stakeholder workshop was conducted to refine and validate the proposed strategies. The workshop followed a collaborative and evidence-driven approach to ensure contextual relevance and alignment with stakeholder priorities.

3.8.2.1. Interactive discussions

Interactive discussions facilitated open dialogue among CBHI managers, health leaders, healthcare providers, and health extension workers. Knowledge-sharing allows participants to identify key implementation challenges and propose practical solutions.

This process fostered consensus-building strengthened stakeholder ownership, and enhanced long-term commitment to the strategies.

3.8.2.2 Participatory methods

Participatory methods further enriched strategy development. In-depth interviews provided qualitative insights, while brainstorming sessions generated innovative and contextually appropriate strategies. Case studies demonstrated successful CBHI practices and lessons learned. Additional participatory techniques such as role-playing, scenario analysis, and problem-solving exercises supported collaborative reflection and strategy refinement.

3.8.2.3 Evidence-based decision-making

Evidence-based decision-making guided the refinement of the strategies by integrating findings from Phase 1a and Phase 1b. Data-driven insights were used to prioritise interventions based on feasibility, potential impact, and scalability. Stakeholder feedback was incorporated in developing action plans, ensuring that the strategies remained grounded in empirical evidence and practical experience.

3.8.3 Develop an implementation and monitoring plan

The development of the implementation and monitoring plan began with defining the roles and responsibilities of key stakeholders to ensure clarity and accountability. A monitoring and evaluation (M&E) framework were established to track progress, assess effectiveness, and identify areas for adjustment. Pilot testing was conducted prior to full-scale implementation, allowing the interventions to be refined based on real-world experiences. This iterative process ensured that the final strategies were robust, practical, and well-suited for broader deployment.

3.8.4 Scale up and sustain the interventions

Following refinement, the interventions were prepared for scale-up and sustainability planning. This involved identifying long-term funding sources and establishing mechanisms to support continued implementation. Community ownership was strengthened to promote local engagement and resilience. Interventions were continuously adapted using evaluation findings and stakeholder feedback to ensure ongoing relevance and responsiveness to emerging needs.

3.9 Phase 3: Validation of the developed intervention strategies

The primary objective of this phase was:

- To validate the developed intervention strategies.

Validation ensured that the strategies were credible, feasible, effective, and sustainable. This process involved assessing the strategies against theoretical models, scientific evidence, and practical implementation frameworks.

3.9.1 Stakeholder engagement and feedback collection

The strategies were presented to CBHI managers, health leaders, healthcare providers, and health extension workers at sub-city levels. Their input was collected through structured consultations, focus group discussions, and expert review panels. Ethical practice was upheld through informed consent. Stakeholders buy-in was a crucial outcome of this process, ensuring practical adoption, scalability, and alignment with policy priorities.

3.9.2 Evaluation using the APEASE criteria

The APEASE framework was used to assess:

- **Affordability:** financial feasibility and sustainability
- **Practicality:** ease of implementation given available resources
- **Effectiveness:** potential to address barriers to CBHI uptake

- **Acceptability:** cultural and socio-contextual suitability
- **Safety:** ensuring no harm to beneficiaries
- **Equitability:** fair access, particularly for vulnerable groups

This structured evaluation ensured rigor and evidence-informed refinement.

3.9.3 Findings and refinement of the strategies

The validation process provided critical insights into barriers, opportunities, and operational challenges. These insights guided necessary adjustments to improve feasibility and stakeholder acceptability. The final set of strategies was therefore strengthened, well-aligned with the CBHI context, and ready for implementation.

3.10 Ethical considerations

Ethical considerations were essential to ensure the integrity, credibility, and protection of participants in this study on CBHI uptake and healthcare utilization. Ethical approval was obtained from the College of Human Sciences Research Ethics Committee of the University of South Africa (Approval No: 12776149_CREC_CHS_2021), and informed consent was obtained from all participants prior to data collection. This ensured adherence to established ethical standards for research involving human participants (Grove & Gray 2019:126).

3.10.1 Permission to conduct the study

Formal permission was obtained from the University of South Africa and the Oromia Regional Health Bureau before data collection commenced, ensuring compliance with institutional and local regulations.

3.10.2 Informed consent

Participants were provided with clear information about the study's purpose, procedures, potential risks and benefits, and their rights, including voluntary participation and the right to withdraw at any time without penalty**.** Written informed consent was obtained, and information was communicated in a language

understandable to participants (Cohen, Manion & Morrison 2018:122; Grove & Gray 2019:143).

3.10.3 Right to justice

The principle of justice was upheld by ensuring fairness in participant selection and treatment. Clear inclusion and exclusion criteria were applied consistently to avoid bias or discrimination, and all participants were treated equitably regardless of background.

Participants who declined or withdrew were respected without any negative consequences. This ensured fairness, transparency, and protection of participants' rights throughout the study.

3.10.4 Confidentiality and anonymity

Confidentiality and anonymity were strictly maintained to protect participants' privacy. All data was anonymized using unique identifiers, and no personal identifiers were included in reports or publications**.** Data were securely stored in password-protected systems, with access limited to authorized personnel only. These measures ensured that participants' information remained confidential and untraceable, thereby strengthening trust and ethical compliance.

3.10.5 Autonomy

Respect for autonomy was maintained throughout the study. Participants were free to decide whether to participate, decline, or withdraw at any stage without any consequences (Grove & Gray 2019:135). They were also allowed to skip questions they were uncomfortable answering. This ensured that participation remained entirely voluntary and respectful of individual choice.

3.10.6 Veracity

The principle of veracity was upheld through honesty and transparency (Cohen, Manion & Morrison 2018:145). Participants were provided with accurate and complete information about the study, and no deception or coercion was involved at any stage of

the research process. This fostered trust and openness between the researcher and participants.

3.10.7 Beneficence

Beneficence was ensured by maximizing potential benefits while minimizing risks (Grove & Gray 2019:139). The study was designed to contribute to improved CBHI implementation and healthcare utilization, thereby benefiting both participants and the wider community. Data collection procedures were conducted respectfully to minimize inconvenience. Participants' well-being was prioritized throughout the research process.

3.10.8 Non-maleficence

Non-maleficence, or the principle of "doing no harm," required minimizing potential harm (Cohen, Manion & Morrison 2018:127). The principle of non-maleficence was strictly observed. All necessary precautions were taken to prevent physical, emotional, social, or financial harm to participants. Data collectors were trained to engage respectfully, and data collection was conducted in a manner that minimized burden and discomfort. This ensured that participants were protected from any form of harm during the study.

3.11 Dissemination of findings

The study findings will be shared with key stakeholders, including health leaders, CBHI officials, healthcare providers, and community leaders, to support and enhance CBHI policies and practices. A copy of the thesis will be submitted to the Shaggar City and sub-city health offices, ensuring that local health authorities had access to the research insights. Additionally, a summary of the findings will be provided to communities, acknowledging their contributions and fostering trust in the research process.

To further disseminate the results, the researcher presented the study's findings at national conferences and published them in peer-reviewed journals. This broader dissemination aimed to contribute to the body of knowledge on CBHI uptake and healthcare utilization, informing future research and policy development.

3.12 Summary

This study employed a convergent mixed-methods design, where quantitative and qualitative data were collected simultaneously, analysed separately, and merged to draw comprehensive conclusions. Conducted in Shaggar City across six selected sub-cities Nono, Burayyu, Guje, Sabeta, Furi, and Gelan Guda the study was structured into three phases and guided by the Social Ecological Model (SEM).

Phase 1 was divided into two sub-phases: Phase 1a utilized a quantitative cross-sectional survey, collecting data from 406 households through structured interviews to assess CBHI awareness, enrollment, service utilization, quality of care, financial protection, and socioeconomic determinants.

Phase 1b adopted a qualitative approach, conducting in-depth interviews with 28 key informants, including health leaders, CBHI officials, experts, health extension workers, healthcare providers, and community leaders, to explore CBHI implementation, service utilization, financial sustainability, and associated challenges. Thematic analysis was applied to interpret qualitative data, integrating insights from both approaches for a comprehensive understanding of CBHI operations.

Phase two focused on developing evidence-based intervention strategies informed by Phase 1 findings, with a stakeholder workshop ensuring an interactive, participatory approach to designing practical and effective strategies for enhancing CBHI uptake and healthcare utilization.

In Phase three, the proposed interventions were validated by a panel of experts using the APEASE criteria to assess their feasibility and sustainability. Presentation of phase one finding has been arranged to be in the next chapter four.

CHAPTER 4

THE RESULTS OF PHASE 1a: QUANTITATIVE APPROACH

4.1 Introduction

This chapter presents the results from Phase 1a of the study, which employed a quantitative research design to assess the uptake of Community-Based Health Insurance and healthcare service utilization among households in Shaggar, Oromia. Building upon the background, research objectives, and methodological framework detailed in earlier chapters, this phase focused on examining the level of CBHI enrollment and the extent to which households utilized healthcare services, along with the key factors influencing these behaviours.

Data were collected from 405 household heads through a structured, interview-administered questionnaire. The tool was designed to gather comprehensive information relevant to evaluating CBHI performance. It captured socio-demographic characteristics of participants, enrollment status, frequency and types of healthcare services used, perceptions of service quality and accessibility, as well as financial factors associated with participation in the CBHI scheme.

The findings are organized thematically to provide a clear and systematic presentation of the results. The chapter begins with a profile of the respondents' demographic characteristics, followed by their levels of awareness and perceptions regarding the CBHI program. It then explores the extent of CBHI uptake, including membership renewal patterns and the factors motivating continued participation. Subsequent sections examine healthcare utilization patterns, service quality, provider attitudes, and

physical accessibility to healthcare facilities. Finally, the chapter addresses financial considerations, including protection from out-of-pocket health expenditures and participants' satisfaction with healthcare costs.

To support interpretation and clarity, the results are illustrated using descriptive statistics presented in tables and figures. Additionally, both bivariate and multivariate logistic regression analyses were conducted to identify the most significant predictors of CBHI enrollment and healthcare utilization. These statistical models shed light on how factors such as educational status, household income, marital status, awareness of the scheme, trust in the system, and understanding of the scheme's benefits influence household decisions to enrol in CBHI and utilize health services.

Overall, the findings presented in this chapter provide a comprehensive understanding of how the CBHI scheme operates within the study area. They highlight both the enabling conditions that encourage enrollment and utilization, as well as the challenges that limit broader participation. The insights gained are intended to inform future policy and programmatic efforts aimed at enhancing the efficiency, equity, and long-term sustainability of community-based health financing mechanisms.

4.2 Results of quantitative data

These quantitative findings were supported by qualitative interviews, in which participants highlighted limited awareness and perceived service quality as key barriers to CBHI enrolment.

Quantitative data for this study were collected using a structured, interview-based questionnaire administered to 405 household heads. The instrument was carefully designed to examine both the uptake of CBHI and patterns of healthcare utilization at the household level. It covered four interrelated domains central to understanding CBHI enrolment and service use. Specifically, the questionnaire captured participants' socio-demographic characteristics, including age, gender, education level, and household income, and assessed their CBHI enrolment status, duration of membership, and reasons for joining. It also examined healthcare utilization patterns, such as frequency of visits, types of services accessed, and levels of satisfaction with those services.

In addition, the tool explored the financial sustainability of the CBHI scheme by assessing its economic viability. It further investigated factors influencing enrolment and healthcare utilization, including socio-economic conditions, access to healthcare services, perceived quality of care, and potential barriers to participation and service use.

4.2.1 Demographic profile of participants

The study included a survey of 405 household heads. Of these, 54% were men and 46% were women. Most respondents were between 30 and 39 years old, while a smaller portion, 4.9%, were over the age of 60. In terms of educational background, 19% had no formal education, 47% had completed primary school, 21% had reached secondary education, and 13% had attained higher education. When looking at sources of livelihood, the participants were primarily engaged in trading (44%), followed by daily labour (20%), farming (19%), private salaried employment (11%), and a range of other occupations (9%).

4.2.1.1 Age of participants

Most respondents were between 30 and 39 years old. About 30.1% were in the 40 to 49 age group, while 15.3% were between 18 and 29 years old. Additionally, 14.1% fell

within the 50 to 59-age range, and a smaller portion, 4.9%, were over 60 years old (refer to table 4.1).

Table 4.1: Demographic characteristics of the participants by Age (405)

	Age	Frequency	Percent
Valid	18-29	62	15.3
	30-39	144	35.6
	40-49	122	30.1
	50-59	57	14.1
	over 60	20	4.9
	Total	405	100

4.2.1.2 Gender of participants

A slight majority of the participants were male, accounting for 54% of the total, while the remaining 46% were female (refer to table 4.2).

Table 4.2: Gender of participants (405)

	Gender	Frequency	Percent
Valid	Female	186	45.9
	Male	219	54.1
	Total	405	100

4.2.1.3 Marital status of the participants

When asked about their marital status, most participants (82.7%) reported being married. Meanwhile, 7% were divorced, 5% were widowed, and another 5% identified as single (refer to table 4.3).

Table 4.3: Marital status of the participants (405)

	Marital status	Frequency	Percent
Valid	Divorced	29	7.2
	Married	335	82.7

	Single	22	5.4
	Widowed	19	4.7
	Total	405	100

4.2.1.4 Educational status of the participants

Regarding their educational attainment, 19% of the participants had never received formal schooling. Nearly half (47%) had completed primary education, while 21% had gone on to finish secondary school. A smaller group, representing 13%, had pursued higher education (see table 4.4).

Table 4.4: Educational status of the participants (405)

	Educational status	**Frequency**	**Percent**
Valid	Higher education	52	12.8
	No formal education	77	19
	Primary education	189	46.7
	Secondary education	87	21.5
	Total	405	100

4.2.1.5 Monthly income of the participants

Participants were asked to indicate their monthly income levels. Of the total, 8.4% reported having no regular source of income. About 20% earned less than 1,000 ETB per month. The largest share, 23%, reported a monthly income ranging from 5,000 to 10,000 ETB. Meanwhile, 10.4% of respondents stated that their income exceeded 10,000 ETB (see table 4.5).

Table 4.5: Monthly income of the participants (405)

Valid	**Monthly income**	**Frequency**	**Percent**
	<1000 ETB	81	20

	>10,000 ETB	42	10.4
	1000-5000 ETB	154	38
	5000-10000 ETB	94	23.2
	None	34	8.4
	Total	405	100

4.2.1.6 Occupational status of the participants

An analysis of participants' main sources of livelihood revealed that trading was the most common occupation, reported by 44% of respondents. This was followed by daily labour, which accounted for 20%, and farming at 19%. Additionally, 11% were engaged in private salaried jobs, while the remaining 9% worked in various other occupations (refer table 4.6).

Table 4.6: Occupational status of the participants (401)

	Occupational status	Frequency	Percent
Valid	Farmer	75	18.5
	Trader	179	44.2
	Salaried worker	46	11.4
	Daily labourer	83	20.5
	Others	18	4.4
	Total	401	98.77

4.2.1.7 Number of people live in the household

The analysis indicated that 4.2% of respondents lived alone. In 16.8% of households, two people shared a home, while the majority 60.2% had between three and five family members living together. Additionally, more than five individuals occupied 18.8% of households (refer to table 4.7).

Table 4.7: Number of people live in the household (405)

	Number of people live in the household	Frequency	Percent
Valid	Above five	76	18.8
	Alone	17	4.2
	Three to five	244	60.2
	Two	68	16.8
	Total	405	100

4.2.2 Awareness and Perception of CBHI

Majority of participants indicated that they had heard about Community-Based Health Insurance. Among those who were aware of the program, 68% reported receiving information primarily from health workers. Furthermore, 66% identified community meetings as a source, 59% mentioned friends or neighbours, and 24% indicated various media outlets as their source of information (see figure 4.1).

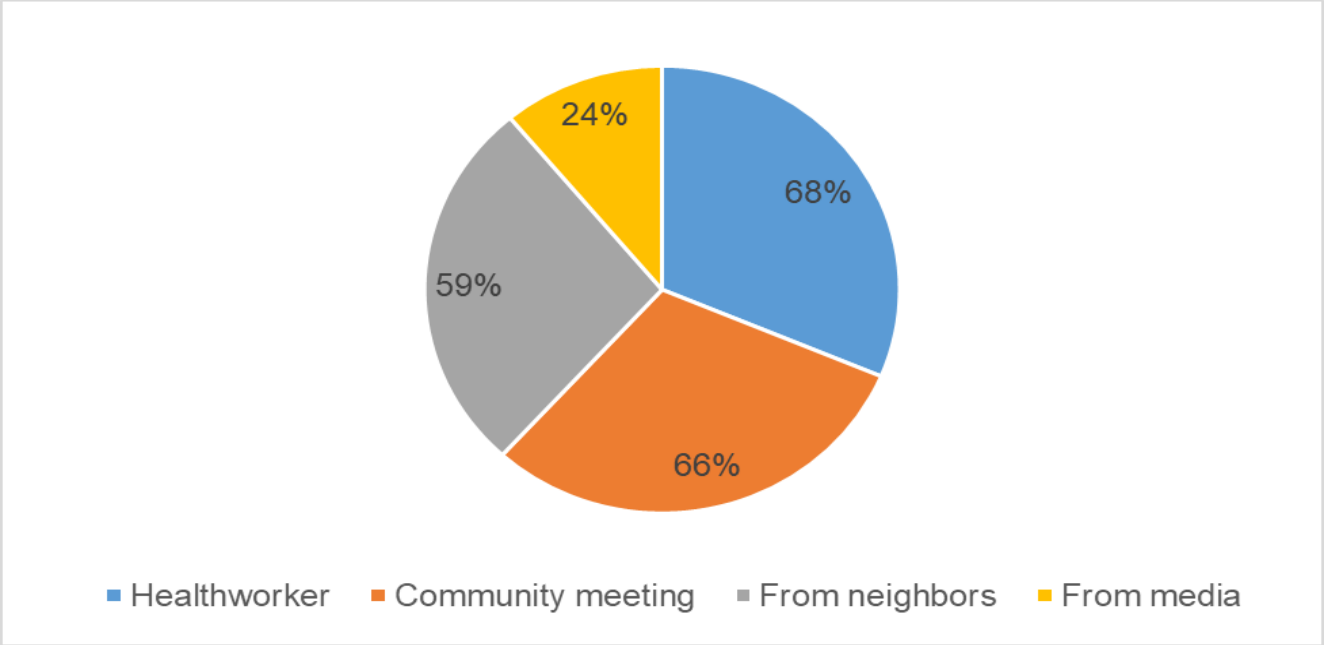

Figure 4.1: Awareness of CBHI (n=401)

4.2.2.1 Awareness Campaign Participation

Building on the previous findings, 82% of participants indicated that they had received information through Community-Based Health Insurance awareness campaigns. In contrast, 18% reported that they had not been reached by any such campaigns (see Figure 4.2).

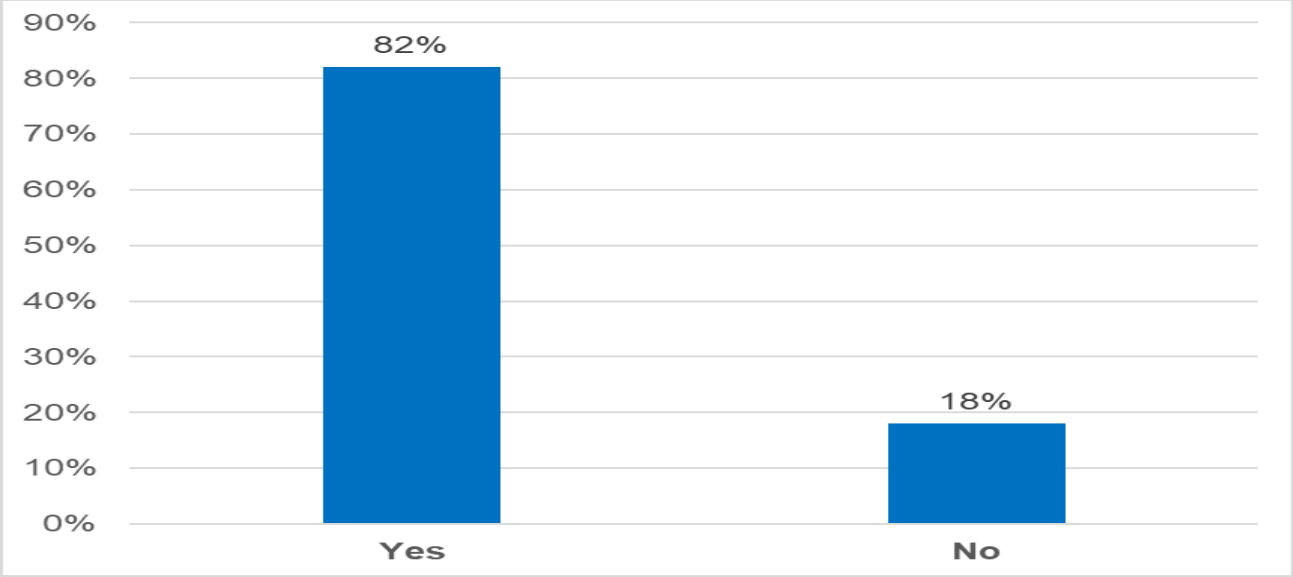

Figure 4.2: Participants who received awareness campaign (n=405)

4.2.2.2 CBHI enrolment location

Most participants (92.8%) reported that they knew where to enrol for Community-Based Health Insurance; while 7.2% indicated they did not aware the enrolment location (see Figure 4.3).

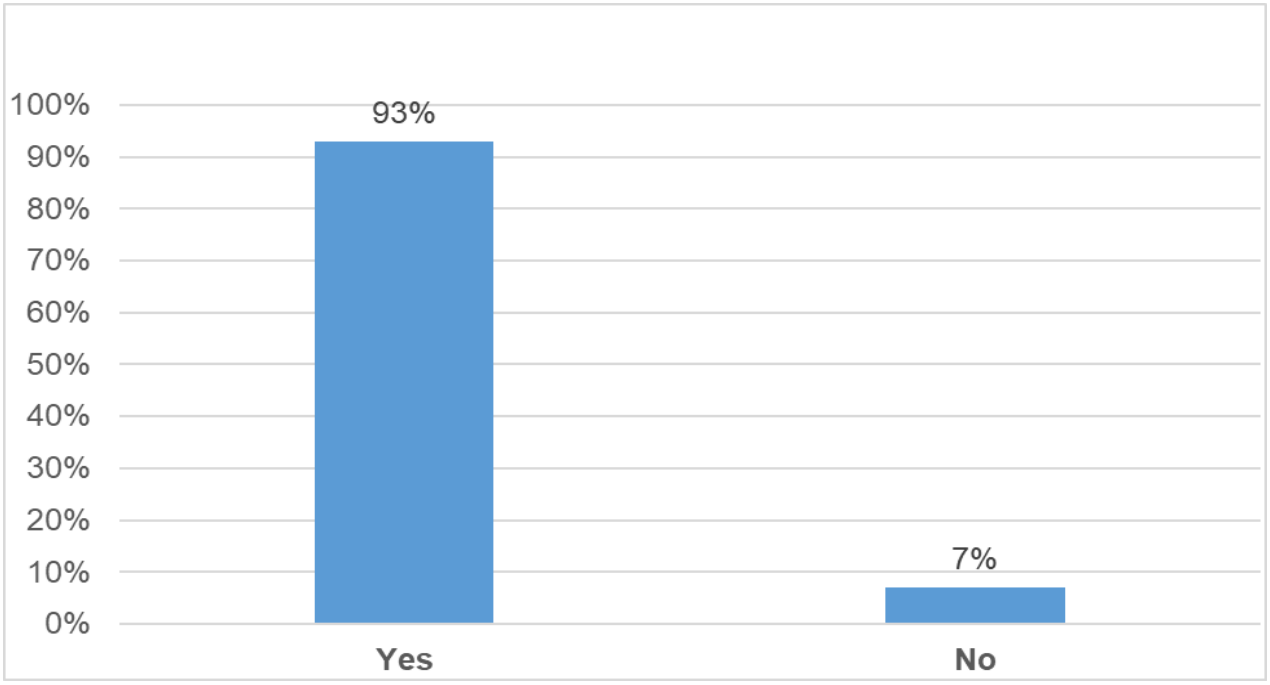

Figure 4.3: Participants who knew and did not know where to enrol (n=405).

4.2.2.3 Enrolment drivers for CBHI

Among the participants, approximately 63% reported that their decision to enrol in Community-Based Health Insurance was influenced by community leaders or healthcare professionals, while 37% indicated that their enrollment decision was independent of such influences (see Figure 4.4).

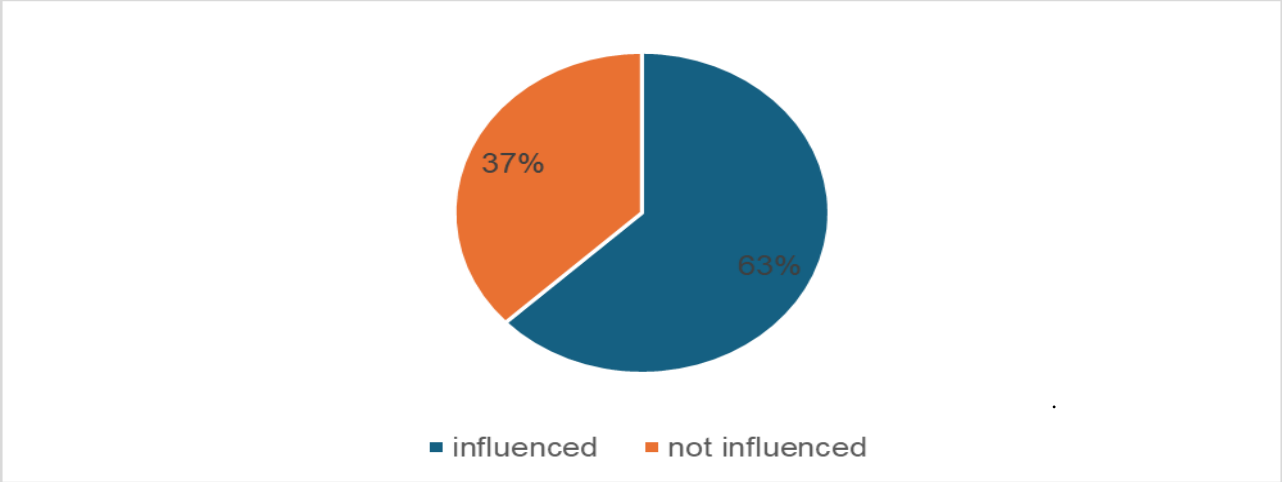

Figure 4.4: Enrolment drivers for CBHI (n=401)

4.2.2.4 Participants' views on CBHI benefits and effectiveness

Participants expressed mixed perceptions of CBHI. While 46.4% believed it had improved access to healthcare services, a slightly higher proportion (52.6%) expressed doubts about its overall effectiveness. However, a significant majority (86.4%) viewed CBHI as a means of financial protection. Additionally, 63.2% felt it encouraged early treatment, and 30.6% acknowledged its role in promoting preventive care. Furthermore, most participants (88.4%) agreed that CBHI provides protection against high medical expenses. However, 11.6% did not share this belief (refer to table 4.8).

Table 4.8: participants' views on CBHI benefits and effectiveness

Perception	Percentage

Improved access to healthcare	46.40%
Doubts about overall effectiveness	52.60%
Financial protection	86.40%
Encourages early treatment	63.20%
Promotes preventive care	30.60%
prevent high medical expenses	88.40%
Participants didn't share the above belief	11.6%

4.2.2.5 Satisfaction with the CBHI enrolment process

Regarding their enrollment experience, 29.4% of participants reported being very satisfied, 51.4% were satisfied, 14.6% were neutral, and 4.7% expressed dissatisfaction (see Figure 4.5). These findings indicate that most participants had a positive perception of the enrollment process (refer figure 4.5).

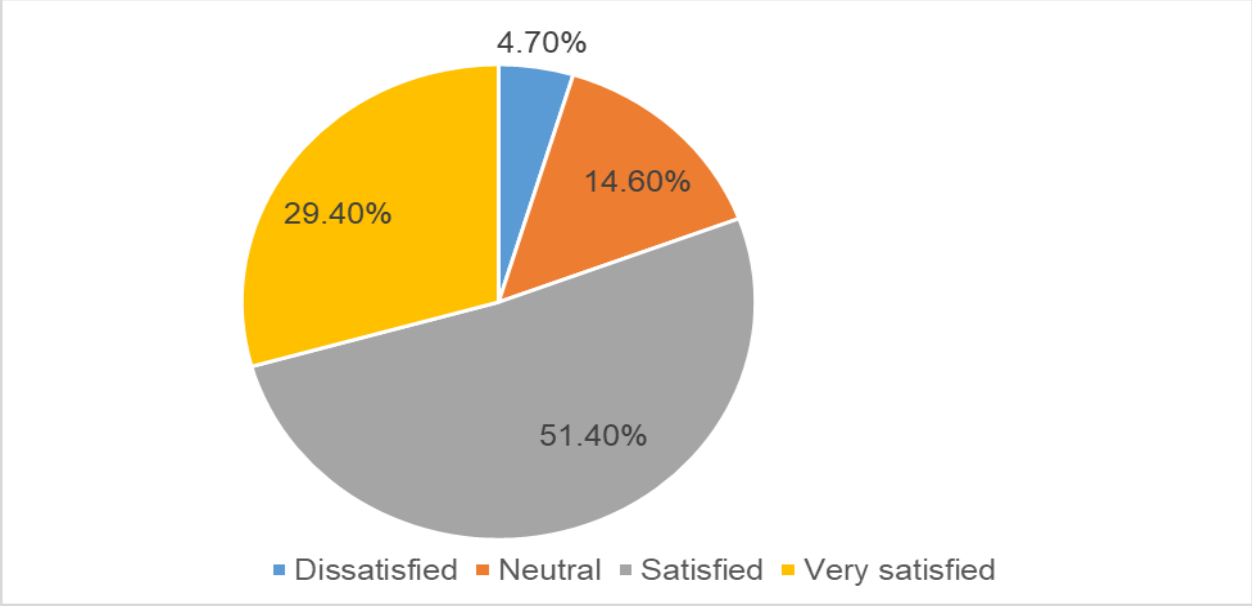

Figure 4.5: Satisfaction level of enrolment process (405)

4.3 Extent of CBHI uptake

4.3.1 Enrolment in CBHI

Of the 405 respondents surveyed, the vast majority 397(98%) of the respondents reported that they were currently enrolled in the Community-Based Health Insurance scheme, while only eight respondents (2%) were not (refer to table 4.9).

Table 4.9: Enrolment in CBHI

	Enrolment status	**frequency**	**percent**
Valid	No	8	2
	Yes	397	98
	Total	405	100

4.3.2 Duration of CBHI membership

When asked about the length of their CBHI membership, 33.6% (n = 136) of participants had been members for two years, while 28.1% (n = 114) had maintained their membership for three years. Additionally, 11.9% (n = 48) had been members for four years or more, 6.4% (n = 26) for one year, and 20% (n = 81) were newly enrolled (Refer to table 4.10).

Table 4.10: Duration of CBHI Membership

	Membership duration	**Frequency**	**Percent**
Valid	1 year	26	6.4
	2 years	136	33.6
	3 years	114	28.1
	4 years and above	48	11.9
	New	81	20
	Total	405	100

4.3.3 Receipt of CBHI Membership ID card

Among all respondents, 96% (n = 389) reported that they had received their CBHI membership ID cards upon enrolment, whereas 4% (n = 16) indicated they had not received theirs (refer to table 4.11).

Table 4.11: Receipt of CBHI membership ID card

	Response	**Frequency**	**Percent**
Valid	No	16	4
	Yes	389	96
	Total	405	100

4.3.4 Renewal of CBHI Membership

Regarding the renewal of CBHI membership, about (94.8%) of respondents indicated that they had renewed their membership in the current year. In contrast, 5.2% (n = 21) had not (refer to table 4.12).

Table 4.12: Renewal of CBHI membership

	Renewal of membership	**Frequency**	**Percent**
Valid	No	21	5.2
	Yes	384	94.8
	Total	405	100

4.3.5 Motivating factors for CBHI membership renewal

4.3.5.1 Past illness experience

Among those who had renewed their CBHI membership (n = 384), 79.3% (n = 321) stated that their decision was influenced by previous illness experiences within the household (refer to table 4.13).

Table 4.13: Motivation from past illness experience

	Past illness experience	Frequency	Percent
Valid	No	84	20.7
	Yes	321	79.3
	Total	405	100

4.3.5.2 Financial Protection

Financial protection emerged as a key motivator, with 60.7% (n = 246) of respondents renewing their membership to safeguard against unexpected healthcare costs (refer to table 4.14).

Table 4.14: Motivation from Financial Protection

	Financial response	Frequency	Percent
Valid	No	159	39.3
	Yes	246	60.7
	Total	405	100

4.3.5.3 Availability of quality services

Only 16.5% (n = 67) of the 384 individuals who renewed their CBHI membership cited the availability of quality health services as a motivating factor, while 78.3% (n = 317) did not consider it a major influence (refer to table 4.15).

Table 4.15: Motivation from availability of quality services

	Availability of quality services	Frequency	Percent
Valid	No	317	78.3
	Yes	67	16.5
	Total	384	100

4.4 Healthcare Utilization

This section provides a comprehensive overview of healthcare utilization patterns, service quality perceptions, geographic accessibility, provider attitudes, satisfaction with services, and changes in healthcare-seeking behavior among households enrolled in the Community-Based Health Insurance scheme. Over the past year, 92% of households reported that at least one family member had utilized health services. However, distinct differences in healthcare utilization were observed between CBHI-enrolled and non-enrolled households, particularly following enrollment.

4.4.1 Healthcare utilization before and after joining CBHI

The findings indicate a marked shift in healthcare-seeking behavior following enrollment in CBHI. The proportion of households visiting health facilities more than three times annually increased substantially, rising from 5.7% to 32.6%. Similarly, those making two to three visits grew from 36.5% to 46.9%. In contrast, the percentage of households making only one annual visit declined sharply from 45.9% to 15.6%, while those reporting no visits decreased from 11.9% to 4.9%. These results highlight the positive impact of CBHI in reducing financial barriers and promoting timely healthcare utilization (refer figure 4.6).

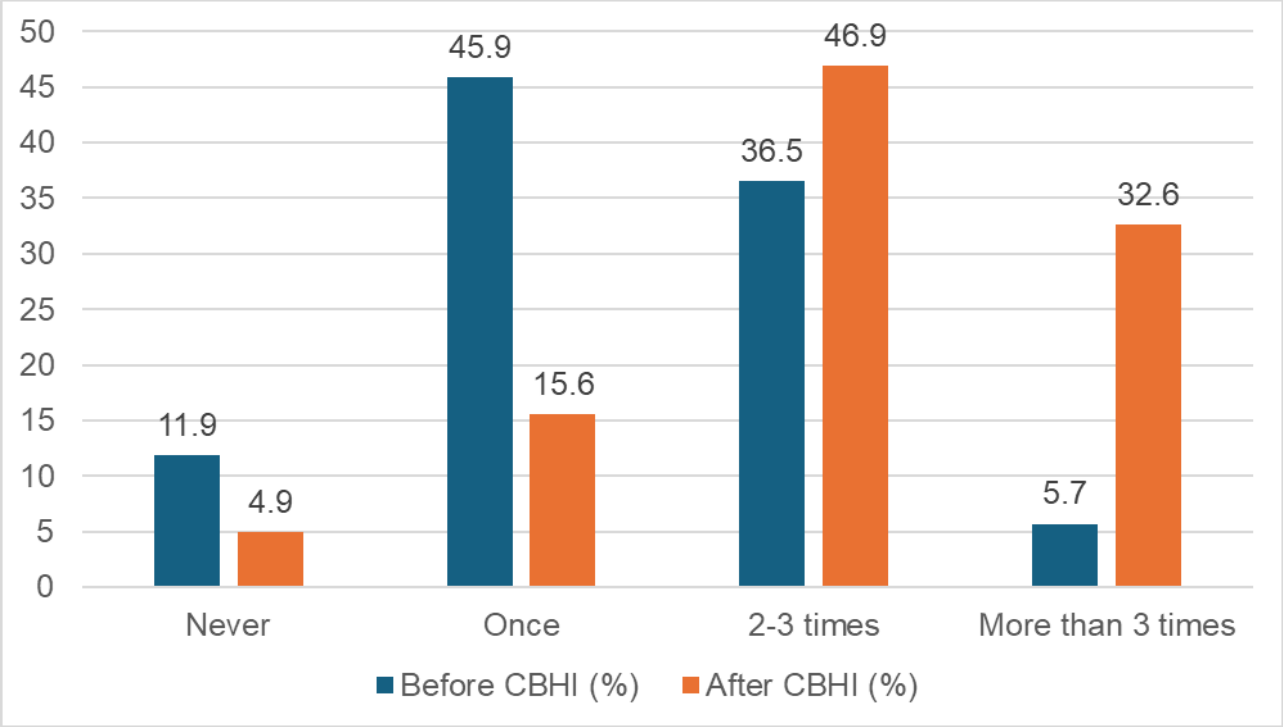

Figure 4.6: Healthcare utilization before and after joining CBHI

4.4.2 Quality and availability of healthcare services

Perceptions of service quality and availability are critical indicators of the effectiveness of CBHI schemes. As illustrated in Figure 4.7, a majority of members expressed favourable views regarding healthcare services, with 54.1% rating them as “Good” and 19.3% as “Very Good.” Meanwhile, 24.4% described the services as “Fair,” and only 2.2% reported them as “Poor.” These findings indicate that most beneficiaries were generally satisfied with the quality and availability of care provided under the scheme, suggesting a positive perception of healthcare delivery within CBHI-affiliated facilities.

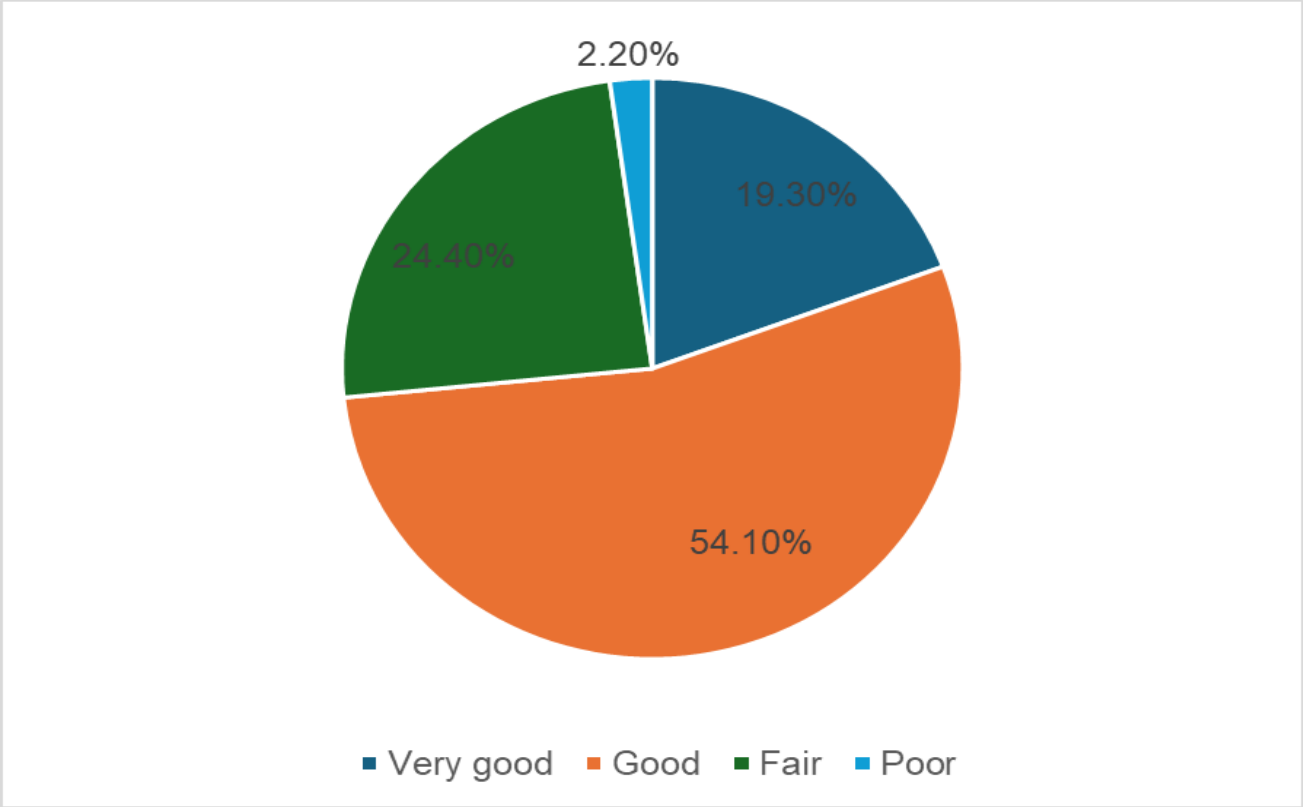

Figure 4.7: Quality and availability of healthcare services (n=405)

4.4.3 Geographical Accessibility of CBHI

Geographical accessibility is a key determinant of healthcare utilization, particularly within the framework of CBHI. As shown in Table 4.16, 45.7% of respondents indicated that their nearest CBHI-affiliated health facility was located within 5 kilometres of their residence, while 51.4% reported living 5–10 kilometres away. Only 3% noted that they had to travel more than 10 kilometres to access healthcare services. These findings demonstrate that most households have relatively convenient access to health facilities. However, a small proportion, particularly those residing in remote or hard-to-reach areas, continue to face significant travel distances, which may delay timely healthcare utilization and limit service uptake.

Table 4.16: Geographic accessibility of CBHI-covered health facilities (405)

Valid	**Distance**	**Frequency**	**Percent**

	5-10km	208	51.4
	Less than 5km	185	45.7
	More than 10km	12	3
	Total	405	100

4.4.4 Healthcare providers' attitudes towards CBHI beneficiaries(n=405)

Participants generally reported positive experiences with healthcare providers under CBHI. As shown in figure 4.8, 50.6% of respondents rated providers' attitudes as "Good," 25.2% as "Very Good," and 20.7% as "Fair." Only a small minority rated providers' attitudes as "Poor" (3.2%) or "Very Poor" (0.2%). These findings suggest that healthcare providers largely maintain respectful and supportive relationships with CBHI beneficiaries, which is crucial for building trust, satisfaction, and encouraging continued use of services.

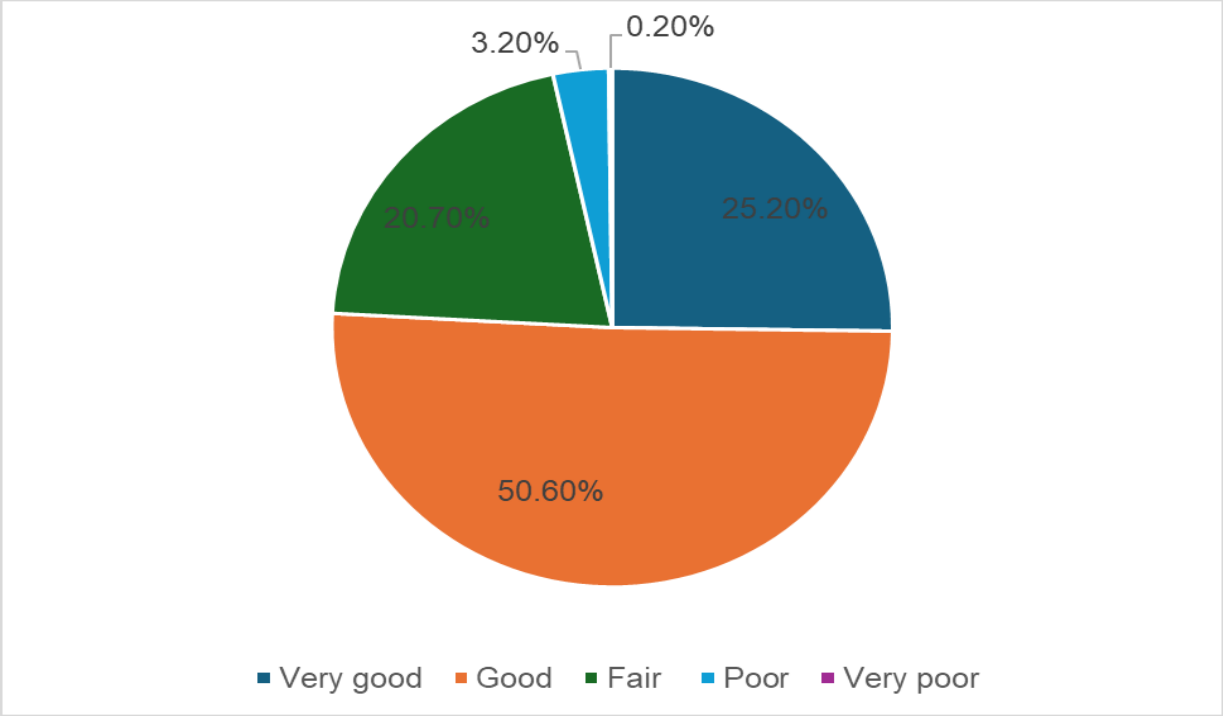

Figure 4.8: Healthcare providers' attitudes toward CBHI beneficiaries (405)

4.4.5 Satisfaction with the availability of medicine and services(n=405)

A large proportion of respondents expressed satisfaction with the availability of medicines and health services. As indicated in table 4.17, about 72.8% of households reported satisfaction with the availability of medicines, while 27.2% expressed dissatisfaction. Although the majority were satisfied, concerns remain about the consistent availability of essential medicines and services. This highlights an ongoing need for targeted policy interventions and system-level improvements to ensure uninterrupted access to necessary medications and healthcare services.

Table 4.17: Satisfaction with the availability of medicines and services (405)

		Frequency	Percent
Valid	No	110	27.2
	Yes	295	72.8
	Total	405	100

4.4.6 Healthcare seeking behaviour after CBHI enrolment (n=405)

Enrollment in CBHI has significantly influenced households' healthcare-seeking behavior. As illustrated in table 4.18, 95.3% of respondents reported that their behavior had changed positively since enrolling in the scheme, while only 4.7% reported no change. The shift reflects CBHI's effectiveness in eliminating financial and logistical barriers that previously deterred timely healthcare utilization. The increased willingness to seek care is likely driven by improved financial protection, greater awareness of

available services, and enhanced confidence in accessing care without fear of high out-of-pocket costs.

Table 4.18: Changes in healthcare-seeking behaviour after CBHI enrolment

		Frequency	Percent
Valid	No	19	4.7
	Yes	386	95.3
	Total	405	100

4.5 Predictors of Community Based Health Insurance Uptake

To address Objective 1, which aimed to identify the determinants of Community-Based Health Insurance (CBHI) uptake among households, both bivariate and multivariable logistic regression analyses were conducted to examine the association between selected socio-demographic and perception-related variables and enrolment status. These analyses enabled the identification of factors significantly associated with CBHI uptake, while controlling for potential confounders. The results revealed that household income, level of awareness about CBHI, and perceived quality of healthcare services were statistically significant predictors of enrolment. Table 4.19 presents the detailed findings, including both crude and adjusted odds ratios, highlighting the variables that remained significant determinants of CBHI enrolment after adjustment.

Household income, awareness of the scheme, and perceived quality of healthcare services emerged as key determinants of CBHI enrolment. Households with higher income were more likely to enrol in CBHI, suggesting that financial capacity plays a critical role in influencing participation in the scheme. Similarly, individuals with greater awareness of CBHI benefits demonstrated higher enrolment rates, highlighting the importance of effective information dissemination and community sensitization. In addition, households that perceived healthcare services as high quality were

significantly more inclined to enrol, emphasizing the role of service satisfaction in driving insurance uptake. These findings collectively indicate that both economic capacity and perceptual factors are central in shaping decisions to participate in CBHI.

Further analysis showed that participants aged 30–39 years had 1.25 times higher odds of being enrolled compared to those aged 18–29; however, this association was not statistically significant ($p = 0.182$). Similarly, male respondents were 1.20 times more likely to be enrolled than females, although this difference was also not statistically significant ($p = 0.136$), suggesting that age and sex may not be strong independent predictors of CBHI uptake in this context.

Marital status, however, demonstrated a significant relationship with enrolment, as married individuals were 1.45 times more likely to participate in the scheme than unmarried respondents ($p = 0.039$). Educational attainment also showed a strong and statistically significant influence, with respondents who had completed at least primary education being 1.80 times more likely to enrol compared to those without formal education ($p = 0.003$). This suggests that education enhances individuals' understanding of the benefits of health insurance and supports informed decision-making regarding enrolment.

Income level remained a significant determinant, where households earning more than 2000 Ethiopian Birr (ETB) per month were 1.65 times more likely to be enrolled compared to lower-income households ($p = 0.011$), reinforcing the importance of financial capability in accessing insurance schemes.

Awareness of CBHI was one of the strongest predictors of enrolment. Individuals who were aware of the scheme were 2.9 times more likely to enrol than those who lacked awareness ($p < 0.001$). Similarly, the influence of local leaders played a notable role, as participants who reported such influence were 1.85 times more likely to join the scheme ($p = 0.001$). This highlights the critical role of community-level engagement and leadership in promoting CBHI participation.

Understanding the benefits of CBHI also significantly influenced enrolment, with informed respondents being 1.75 times more likely to participate ($p = 0.004$). In addition,

satisfaction with the enrolment process positively influenced uptake, as satisfied participants were 1.18 times more likely to be enrolled (p = 0.019). Trust in the CBHI system emerged as another strong predictor, with participants who trusted the scheme being 2.05 times more likely to enrol (p < 0.001). This underscores the importance of building institutional trust and ensuring transparent and responsive service delivery systems.

Conversely, financial hardship showed a negative association with CBHI uptake. Respondents experiencing financial challenges were 28% less likely to enrol compared to those without such difficulties (p = 0.044), indicating that economic vulnerability remains a barrier to participation.

Table 4.19: Determinants of CBHI Uptake among Households in Shaggar City

Predictor	Crude OR (95% CI)	Adjusted OR (95% CI)	p-value
Age (30–39 vs 18–29)	1.40 (1.05–1.85)	1.25 (0.90–1.74)	0.182
Gender (Male vs Female)	1.35 (1.10–1.67)	1.20 (0.94–1.53)	0.136
Marital Status (Married)	1.50 (1.10–2.10)	1.45 (1.02–2.05)	0.039
Education (Primary+ vs None)	2.00 (1.40–2.86)	1.80 (1.22–2.65)	0.003
Income (>2000 ETB vs ≤2000)	1.80 (1.30–2.50)	1.65 (1.12–2.42)	0.011
Awareness of CBHI (Yes)	3.50 (2.60–4.70)	2.90 (2.00–4.10)	<0.001
Influenced by Leaders (Yes)	2.20 (1.60–3.00)	1.85 (1.30–2.65)	0.001
Understanding Benefits (Yes)	2.10 (1.50–2.90)	1.75 (1.20–2.56)	0.004
Satisfaction with Enrollment	1.25 (1.10–1.42)	1.18 (1.03–1.37)	0.019
Trust in CBHI (Yes)	2.40 (1.80–3.30)	2.05 (1.43–2.94)	<0.001
Financial Challenge (Yes)	0.65 (0.48–0.89)	0.72 (0.52–0.99)	0.044

4.6 Patterns of Healthcare Utilization among Households in Shaggar City

To address Objective 2, which aimed to examine factors associated with healthcare utilization, a binary logistic regression analysis was conducted using a consistent set of independent variables across the study. The results are presented in Table 4.20, which includes both crude and adjusted odds ratios, highlighting the independent contribution of each variable to healthcare-seeking behavior. Table 4.20: Factors Associated with

Healthcare Utilization among Households in Shaggar City, with adjusted odds ratios indicating the strength and direction of associations.

The findings indicate that CBHI members utilized healthcare services more frequently compared to non-members, demonstrating the scheme's role in improving access to care. This suggests that CBHI membership reduces financial barriers and promotes timely healthcare utilization, providing practical evidence of the scheme's effectiveness. However, variations in utilization were observed across population groups, influenced by factors such as distance to health facilities, perceived quality of care, and service availability. These findings highlight that while CBHI enhances access, structural and service-related barriers continue to influence utilization patterns.

Age and sex did not show statistically significant associations with healthcare utilization. Participants aged 30–39 years were 1.35 times more likely to utilize healthcare services compared to those aged 18–29, although this difference was not statistically significant ($p = 0.066$). Similarly, male participants had slightly higher odds of utilizing services (AOR = 1.05) than females, but this association was not statistically significant ($p = 0.714$), suggesting limited independent influence of these demographic factors.

Marital status, however, was significantly associated with healthcare utilization, as married individuals were 1.40 times more likely to use health services compared to unmarried participants ($p = 0.038$). Education level also showed a strong and significant effect, with participants who had at least primary education being 1.95 times more likely to seek healthcare compared to those without formal education ($p = 0.001$). This indicates that education enhances awareness, health-seeking behaviour, and the ability to navigate healthcare systems.

Income level emerged as another significant determinant. Respondents earning more than 2000 ETB per month were 1.70 times more likely to utilize healthcare services compared to lower-income households ($p = 0.008$), demonstrating that financial capacity remains a key enabling factor in accessing care.

Awareness of CBHI significantly influenced healthcare utilization, with informed participants being 2.35 times more likely to use healthcare services ($p < 0.001$).

Similarly, individuals influenced by community leaders had 1.75 times higher odds of utilizing services (p = 0.001). This underscores the importance of community engagement, information dissemination, and local leadership in promoting healthcare use.

Understanding the benefits of CBHI also played a significant role, as participants who understood the scheme were 1.68 times more likely to utilize healthcare services (p = 0.004). Satisfaction with the enrolment process was positively associated with service use (AOR = 1.15, p = 0.039), while trust in the CBHI scheme emerged as a strong predictor, with participants who trusted the system being 2.10 times more likely to seek care (p < 0.001). These findings highlight the importance of trust, satisfaction, and perceived value in influencing healthcare-seeking behaviour.

Although financial hardship showed a negative association with healthcare utilization, this relationship was not statistically significant. Respondents experiencing financial difficulties were 24% less likely to use healthcare services compared to those without such challenges (p = 0.087), suggesting that while financial barriers persist, their independent effect may be mediated by other factors.

Table 4.20 Determinants of Healthcare Utilization among Households

Predictor	Crude OR (95% CI)	Adjusted OR (95% CI)	p-value
Age (30–39 vs 18–29)	1.60 (1.20–2.15)	1.35 (0.98–1.86)	0.066
Gender (Male vs Female)	1.20 (0.96–1.52)	1.05 (0.80–1.37)	0.714
Marital Status (Married)	1.55 (1.18–2.05)	1.40 (1.02–1.92)	0.038
Education (Primary+ vs None)	2.25 (1.60–3.18)	1.95 (1.35–2.82)	0.001
Income (>2000 ETB vs ≤2000)	1.90 (1.35–2.68)	1.70 (1.15–2.52)	0.008
Awareness of CBHI (Yes)	2.80 (2.00–3.90)	2.35 (1.60–3.45)	<0.001
Influenced by Leaders (Yes)	2.10 (1.55–2.85)	1.75 (1.25–2.45)	0.001
Understanding Benefits (Yes)	2.00 (1.50–2.66)	1.68 (1.18–2.40)	0.004
Satisfaction with Enrollment	1.20 (1.05–1.37)	1.15 (1.01–1.31)	0.039
Trust in CBHI (Yes)	2.50 (1.80–3.40)	2.10 (1.42–3.09)	<0.001
Financial Challenge (Yes)	0.70 (0.52–0.94)	0.76 (0.55–1.04)	0.087

4.7 Integration of Quantitative and Qualitative Findings

The integration of quantitative and qualitative findings provides a deeper understanding of CBHI uptake and healthcare utilization. These quantitative findings were supported by qualitative interviews, where participants consistently emphasized limited awareness, affordability challenges, and perceived poor service quality as key barriers to CBHI enrolment. For instance, several participants reported that inadequate information about CBHI benefits discouraged households from enrolling, while dissatisfaction with healthcare services reduced motivation to maintain membership.

Furthermore, qualitative findings reinforced the statistical results by highlighting how financial constraints and service quality perceptions influence both enrolment and utilization decisions. Participants also pointed to administrative inefficiencies and delays in service provision as additional barriers affecting trust in the scheme. This convergence of findings strengthens the validity of the results and provides a more comprehensive explanation of the observed patterns.

4.8 Summary

This study employed a cross-sectional survey of 405 household heads in Shaggar to assess factors influencing Community-Based Health Insurance uptake and healthcare utilization. Data was analysed using SPSS version 26, with descriptive statistics summarised in tables and graphs.

The findings indicate that CBHI has contributed to improved healthcare utilization, better perceived service quality, and enhanced financial protection. While awareness of the scheme was high, gaps remained in understanding its benefits and procedures. Key barriers to enrolment included limited awareness, distrust, perceived poor service quality, financial constraints, and reliance on traditional practices, alongside service delays.

CBHI membership was significantly associated with increased healthcare utilization, with members more likely to seek timely care, while non-members often delayed care

due to cost. However, a small proportion of respondents did not utilize health services at all, indicating persistent access challenges.

Regression analysis showed that education, income, and marital status were significant predictors of both enrolment and utilization. Additionally, awareness, trust, satisfaction with enrolment processes, and community influence positively shaped participation and service use. Although financial hardship reduced the likelihood of enrolment and utilization, its effect on utilization was not statistically significant.

Overall, the study demonstrates that CBHI improves access to healthcare and reduces financial barriers, but its effectiveness is constrained by service quality issues, resource limitations, and socio-cultural factors. Strengthening awareness, improving service delivery, and addressing systemic barriers are essential to enhance CBHI performance and ensure equitable healthcare access.

CHAPTER 5

THE RESULTS OF PHASE 1b: QUALITATIVE APPROACH

5.1 Introduction

The previous chapter presented quantitative findings on the extent of Community-Based Health Insurance uptake and healthcare utilization in Shaggar, Oromia, Ethiopia. This chapter shifts focus to qualitative findings, offering an in-depth exploration of the organization and implementation of the CBHI system from the perspectives of health leaders, CBHI officials, CBHI experts, healthcare providers, health extension workers, and community leaders.

Data was collected through purposively selected, face-to-face, in-depth interviews guided by a semi-structured protocol. The discussions examined program organization, implementation processes, successes, challenges, barriers to healthcare utilization, and suggestions for improvement. Open-ended and probing questions encouraged participants to share rich, experience-based insights, while ethical clearance, permissions, and informed consent were obtained in advance. Interviews were conducted in quiet, private settings to foster open and honest dialogue.

All interviews were transcribed verbatim and securely stored in password-protected digital folders accessible only to authorized personnel, safeguarding confidentiality and data integrity. Thematic analysis was employed, involving repeated reading of transcripts, generation of preliminary codes, and systematic grouping of these codes into broader categories. From these categories, themes and sub-themes were developed, ensuring the analysis remained grounded in participants' narratives. Manual coding and data triangulation further strengthened the credibility and dependability of the findings.

The final themes, aligned with the study objectives, capture key dimensions of the CBHI program, including its organizational structures, implementation processes, successes and challenges in uptake, barriers to healthcare utilization, and recommendations for strengthening the system. Together, these findings provide a comprehensive understanding of CBHI in Shaggar, highlighting both its achievements and the areas where further attention is required.

5.2 Demographic characteristics of participants

The participants included officials and professionals with varying academic backgrounds, responsibilities, and years of service in the health and insurance sectors. They were selected using purposive and snowball sampling techniques to ensure representation from multiple administrative and professional levels involved in CBHI. This included the actual participants: six health leaders, six CBHI officials, four CBHI experts, four healthcare providers, four community leaders and four health extension workers.

Table 5.1: Participants demographics for qualitative data collection

In-depth interview guide with six health leaders				
Participant Number	**Position**	**Sub city**	**Gender**	**Age**
1	Health leader	Burayyu	M	38
2	Health leader	Malka Nono	M	35
3	Health leader	Gafersa Guje	M	37
4	Health leader	Furi	F	32
5	Health leader	Gelan Gudda	M	36
6	Health leader	Sabeta	M	34
In-depth interview guide with six CBHI officials				
Participant Number	**Position**	**Sub city**	**Gender**	**Age**
7	CBHI official	Burayyu	M	29

8	CBHI official	Malka Nono	M	37
9	CBHI official	Gafersa Guje	M	28
10	CBHI official	Furi	M	36
11	CBHI official	Gelan Gudda	F	29
12	CBHI official	Sabeta	M	32
In-depth interview guide with four CBHI experts				
Participant Number	**Position**	**Sub city**	**Gender**	**Age**
13	CBHI expert	Burayyu	M	28
14	CBHI expert	Malka Nono	M	29
15	CBHI expert	Gafersa Guje	M	32
16	CBHI expert	Furi	M	36
In-depth interview guide with four healthcare providers				
Participant Number	**Position**	**Sub city**	**Gender**	**Age**
17	healthcare provider	Burayyu	F	31
18	healthcare provider	Malka Nono	F	28
19	healthcare provider	Gelan Gudda	F	30
20	healthcare provider	Sabeta	M	34
In-depth interview guide with four health extension workers				
21	health extension worker	Burayyu	F	28
22	health extension worker	Malka Nono	F	32
23	health extension worker	Gelan Gudda	F	26
24	health extension worker	Sabeta	F	27
In-depth interview guide with four community leaders				
25	community leader	Burayyu	M	29
26	community leader	Furi	M	34
27	community leader	G/ Gudda	F	27
28	community leader	Malka Nono	M	30

Interview Guide for the Organization and Implementation of CBHI

To explore how Community -Based Health Insurance is organized and implemented, the researcher used a central guiding question:

“What was your experience regarding the organization and implementation of CBHI?” Participants were encouraged to elaborate or clarify their responses through follow-up and probing questions, allowing for richer and more detailed data collection (refer to Annexure A). As described in chapter three, thematic analysis was employed to analyse the qualitative data. This method offered both flexibility and rigor, enabling the identification and interpretation of patterns across participant narratives and providing meaningful insights into the organization and execution of CBHI in the study area.

5.3 Data findings

Following the organization and analysis of data, the study identified five central themes, along with several sub-themes (refer table 5.2).

5.3.1 Themes and Sub-Themes

The themes in this study were developed from qualitative data collected through in-depth interviews with health leaders, CBHI officials, experts, community leaders, health extension workers, and healthcare providers. The analysis followed in three iterative stages. In the first stage, participant statements were extracted and coded line by line to capture key ideas directly from the data. In the second stage, similar codes were grouped to form sub-themes that represented recurring patterns and shared perspectives. In the final stage, these sub-themes were collated and integrated into broader themes that reflected the major dimensions of CBHI.

Through this process, five main themes were identified: (1) Organization and Implementation of CBHI, (2) CBHI Uptake and Healthcare Utilization, (3) Financial and Institutional Sustainability, (4) Service Delivery and Quality, and (5) System-wide Challenges. Each theme is supported by sub-themes that capture the nuances of

participants' experiences and perspectives. The step-by-step development of themes and sub-themes is presented in Annex C, while table 5.2 summarizes the final themes and sub-themes. Each theme is explored in detail in the sections that follow.

Table 5.2: Themes for the Organization and implementation of CBHI

Main Themes	Sub-Themes
1. Organization and Implementation of CBHI	1.1 Institutional Capacity and Human Resource Limitations
	1.2 Poor Coordination and Communication across Stakeholders
	1.3 Limited Community Sensitization and Participation
	1.4 Structural and Policy Gaps
	1.5 Structural Variation and Implementation Gaps
	1.6 Policy Influence and Governance
	1.7 Evolution of CBHI over Time
	1.8 Strategies for Performance Improvement
2. CBHI Uptake and Healthcare Utilization	2.1 Enrolment Trends
	2.2 Determinants of Enrolment and Retention
	2.3 Impact on Utilization Patterns
	2.4 Access Challenges for CBHI Members
	2.5 Quality, Affordability, and Satisfaction
3. Financial and Institutional Sustainability	3.1 Funding Mechanisms
	3.2 Government Support and Role
	3.3 Financial Challenges and Reimbursement Bottlenecks
	3.4 Reimbursement Issues for Providers
4. Service Delivery and Quality	4.1 Impact on Quality-of-Service Delivery
	4.2 Service Gaps
	4.3 Availability of Medicines and Diagnostics
5. System-wide Challenges and Recommendations	5.1 Key Implementation Challenges
	5.2 Support Needs

	5.3 Policy and Operational Reforms
	5.4 Legal and Policy Frameworks
	5.5 Future Outlook

5.4 Themes that developed from the analysis

5.4.1 Theme 1: Organization and Implementation of CBHI

This theme captures participants' insights into how the Community-Based Health Insurance system was structured, coordinated, and managed across various administrative levels and local contexts. Participants reflected on multiple aspects of the system, including its organizational framework, leadership, policy direction, stakeholder coordination, and performance improvement efforts. Their reflections provided valuable insights into how the scheme was organized, managed, and implemented across different administrative levels and communities.

The reflections revealed both challenges and opportunities related to institutional capacity, inter-sectoral collaboration, policy clarity, and community engagement. Participants emphasized that inconsistencies in structure, weak coordination mechanisms, and limited community involvement often undermined the effective implementation of the scheme. Eight sub-themes were identified under this theme, offering a deeper understanding of the barriers and enabling factors in CBHI implementation. Overall, the findings suggest that the successful organization and implementation of CBHI require a clearly defined institutional framework, adequately trained human resources, strong stakeholder coordination, and active community participation. In the absence of these foundational elements, the scheme struggles to fulfill its core objectives of enhancing healthcare access and reducing the financial burden on households.

Sub-theme 1.1: Institutional Capacity and Human Resource Limitations

Participants consistently emphasized that limited institutional capacity and shortages of skilled personnel posed major challenges to the effective implementation of the Community-Based Health Insurance system. Many CBHI focal person were reported to be under-resourced in both staffing and logistics. They were overloaded, often managing a wide range of tasks without specialized training or technical support.

Participants widely acknowledged that limited institutional capacity and inadequate staffing significantly hindered the effective implementation of CBHI. Many CBHI focal persons were overloaded, often managing a wide range of tasks without specialized training or technical support.

CBHI expert number 13 said: "*We are expected to coordinate everything from registration to complaints, but we have no specific training or support. Sometimes, it feels like we are improvising*."

These capacity gaps contributed to delays in critical processes such as registration, membership renewal, and claims handling, ultimately affecting service delivery. In several health facilities, the absence of staff dedicated exclusively to CBHI further compounded these issues, making it difficult for members to access timely information and support.

Overall, the lack of trained personnel and institutional readiness significantly undermined the efficiency and credibility of the CBHI scheme in the eyes of both implementers and beneficiaries.

Sub-theme 1.2: Poor Coordination and Communication across Stakeholders

Several participants noted the lack of effective coordination between health facilities, CBHI offices, and sub city health offices. These disconnects created confusion regarding benefit packages, referral protocols, and member entitlements.

Healthcare provider number 19 remarked:

"*Sometimes, we are not informed when new directives come from the sub cities. Members come with questions, but we don't have clear answers*"

This lack of coordination not only disrupted service delivery but also damaged the credibility of the CBHI scheme in the eyes of the community. Fragmented communication further weakened the sense of shared accountability among stakeholders.

Sub-theme 1.3: Limited Community Sensitization and Participation

Participants reported that inadequate community awareness was a major challenge to CBHI uptake and sustainability. Many community members enrolled without fully understanding the benefits, obligations, or limitations of the scheme. This lack of understanding often led to unrealistic expectations, mistrust, dissatisfaction, and non-renewal or early dropouts.

Healthcare provider number 18 remarked: "*People think that once they pay, they will get every service for free. When their expectations are not met, they blame the health center and refuse to renew*"

This issue was especially prevalent in areas where low literacy rates and limited access to information further hindered awareness efforts. The absence of continuous and context-sensitive sensitization campaigns reduced community ownership and trust in the program.

Sub-theme 1.4: Structural and Policy Gaps

A few participants expressed concerns about the absence of a coherent and standardized policy framework guiding the implementation of CBHI. They noted that existing regulations were often outdated, inconsistently enforced, and poorly communicated, which led to significant challenges at the operational level. In several instances, policies were not uniformly applied across sub-cities, creating disparities in

implementation. Additionally, delays in policy revisions and guideline updates further contributed to confusion among implementers.

Health extension worker number 22 and 23 remarked: “*We are still using outdated guidelines. There is no clear structure on how to handle some cases, like members who move between districts.*”

Such gaps made it difficult for local actors to implement the scheme with confidence and efficiency. The absence of a responsive, standardized operational framework further complicated efforts to scale up or sustain CBHI in the city.

Sub-theme 1.5: Structural Variation and Implementation

There were notable inconsistencies in how CBHI was implemented across sub-cities and districts, with some areas demonstrating stronger leadership and better resource allocation than others. These disparities had a direct impact on enrollment efficiency, service quality, and public trust in the scheme.

Participants consistently reported structural and operational differences in how the CBHI system implemented across sub-cities and health facilities. The level of institutionalization and resource support varied significantly, resulting in inconsistent performance outcomes.

Some CBHI units lacked formal institutional arrangements or poorly integrated into the broader health system. Facilities without assigned CBHI staff faced delays in member registration, claims management, and benefit delivery. This structural fragmentation diminished trust among community members and weakened the credibility of the scheme.

Health extension worker number 21 said that "*The CBHI structure exists on paper, but in practice, there is little follow-up or technical support from higher authorities.*"

Sub-theme 1.6: Policy Influence and Governance

Participants emphasized that sound policy direction and consistent governance were essential for CBHI success. However, they noted that weak enforcement, frequent leadership turnover, and a lack of timely policy updates hindered implementation.

Although some guidelines existed, they were often outdated, inconsistently applied, or poorly communicated, resulting in operational uncertainty. Frontline implementers frequently lacked clear and up-to-date directives to address evolving issues, such as mobile households or disputes regarding eligibility and benefit access. This gap in guidance hindered effective decision-making and contributed to confusion at the local level.

Sub-theme 1.7: Evolution of CBHI over Time

Despite ongoing challenges, participants acknowledged that the CBHI system had made gradual progress in some areas. Improvements were noted in administrative processes, particularly in locations with well-trained personnel, consistent leadership, and strong commitment from stakeholders. Many participants pointed out that lessons had been learned from earlier implementation mistakes, which contributed to partial progress and enhanced coordination. However, the pace and sustainability of these improvements varied across settings. In some areas, gains were reversed due to leadership turnover or a lack of institutional memory. Overall, the perceived evolution of CBHI was seen as a mixture of meaningful progress and persistent gaps.

CBHI expert number 14 said: "*It has improved where there are committed leaders, but when they leave, things fall apart again*."

Sub-theme 1.8: Strategies for Performance Improvement

To address the implementation challenges observed across different areas, participants highlighted several strategies that had been introduced with the aim of improving the performance of the CBHI system. These included community sensitization efforts, the digitization of beneficiary records, capacity building training for health workers, and increased supervisory support.

However, implementation of these strategies was often inconsistent and not adapted to local contexts. In many cases, interventions were not sustained over time, and their design was not sufficiently adapted to the unique needs and contexts of each community. One area of particular concern was community sensitization. Although recognized as a crucial component of performance improvement, awareness campaigns were described as irregular, overly technical, or poorly targeted thereby limiting their impact on enrolment and retention. A healthcare provider's number 20 and 18 reflected on the consequences of such gaps, stating:

"*People think that once they pay, they will get every service for free. When their expectations are not met, they blame the health center and refuse to renew.*"

This sentiment underscored the disconnect between community expectations and the actual service delivery under the CBHI scheme. It also emphasized the need for more accurate, accessible, and continuous communication with beneficiaries.

Overall, participants stressed that for performance improvement strategies to be successful, they must be well-resourced, context-specific, and consistently implemented. Tailoring interventions to local realities and ensuring stakeholder engagement were viewed as essential to building trust, improving service uptake, and sustaining CBHI over the long term.

5.4.2 Theme 2: CBHI uptake and healthcare utilization

This theme reflects participants lived experiences and perceptions concerning Community-Based Health Insurance membership, patterns of healthcare service utilization, and the accessibility, affordability, and quality of care for insured members. The analysis was organized into five interrelated sub-themes, as described below.

Sub theme 2.1: Enrollment Trends

Across various interviews, participants described fluctuating trends in CBHI membership. Initial enrollment was reported to be high, particularly following

widespread awareness campaigns and robust community mobilization efforts led by health professionals, kebele leaders, and local administrative structures. These initiatives were key in motivating households to join the scheme during its early phases.

However, many participants noted a decline in renewal rates in subsequent years. This trend was frequently linked to dissatisfaction with service quality and administrative inefficiencies. It was observed that once community mobilization efforts diminished, households that had enrolled due to external pressure or optimism began to withdraw from the scheme, particularly if their expectations regarding healthcare services were not met.

Health extension worker number 24 said that "*People register when there is pressure or strong awareness, but they drop out when services don't meet expectations."*

Several respondents also noted that the timing of enrollment campaigns coincided with busy agricultural seasons, limiting household participation. The inconsistency of follow-up efforts by CBHI staff further compounded these challenges. Overall, participants stressed that while initial mobilization is crucial, long-term membership depends on the reliability and responsiveness of the health system.

Sub theme 2.2: Determinants of Enrollment and Retention

Participants identified a variety of social, economic, and systemic factors that influenced both enrollment and renewal decisions. Participants emphasized that awareness and understanding of the scheme were foundational. Where communities had a clear grasp of the scheme's benefits, enrollment, objectives, and processes of CBHI, they were more likely to enrol and continue participating.

Perceived vulnerability to illness emerged as another significant motivator. Households with elderly members, children, or individuals with chronic illnesses were more likely to enrol to seek the financial protection provided by CBHI. Moreover, trust in health facilities and positive past experiences with care influenced the decision to renew membership. Participants who encountered respectful, timely, and adequate services

were generally more motivated to remain in the scheme. In contrast, negative experiences such as poor staff behaviour, unavailability of drugs, or delays in treatment often led to disenrollment. Economic hardship was another critical barrier. Some households struggled to afford the premium payments, even when they recognized the potential benefits of being insured. Cultural and religious beliefs also played a role, with some community members preferring traditional healing practices or expressing uncertainty toward modern healthcare and insurance systems.

Sub theme 2.3: Impact on Utilization Patterns

Most participants recognized that CBHI had improved healthcare-seeking behaviour among insured households. By reducing the direct cost of care, the scheme enabled more individuals to access services they might have otherwise delayed or foregone. This was particularly evident in the utilization of maternal, child health services, and curative care that they might have otherwise delayed or avoided due to cost.

Insured members were more likely to visit health facilities for routine and curative services, as the financial burden was mitigated. However, several constraints still limited full utilization. Participants pointed out that indirect costs such as transport expenses, lost wages and the need for accompanying family members remained barriers, particularly for those in remote or economically disadvantaged settings.

Service availability was another limiting factor. In some areas, health centers lacked essential services or operated on restricted hours, reducing the practical benefits of being insured.

As community leader number 27 briefly noted: *“CBHI gave us access, but not always when or where we needed it most.”*

These findings indicate that while CBHI has contributed to increased healthcare utilization behaviour, systemic issues related to infrastructure, staffing, and facility readiness must be addressed to ensure equitable access for all members.

Sub Theme 2.4: Access Challenges for CBHI Members

Despite the improved financial accessibility associated with CBHI, participants described several operational and service-related challenges that hindered effective access to healthcare services. One of the most frequently mentioned issues was the delay in the issuance of membership cards, which left newly enrolled individuals without coverage for extended periods. These delays often resulted in frustration and unmet health needs during the waiting period.

Referral processes were also described as inefficient, particularly when moving patients from primary care units to higher-level hospitals. In many cases, these bureaucratic hurdles delayed or even blocked access to needed care.

Another commonly reported concern was the perceived discrimination against CBHI members. Participants stated that health professionals often gave priority to fee-paying patients, while insured members experienced longer waiting times and reduced attention. The frequent unavailability of medicines and diagnostic services further intensified this perception. In such instances', insured patients were forced to purchase medications out-of-pocket from private pharmacies, undermining the scheme's goal of reducing financial burden. This perceived inequality in treatment undermined the credibility of the scheme.

Healthcare provider number 18 said:

"*Insured patients sometimes feel neglected or treated differently, especially when drugs are out of stock*."

These experiences not only discouraged service utilization but also contributed to declining trust and reduced renewal rates. Participants recommended improvements in referral systems, equitable treatment for all patients, and better management of drug supplies to strengthen the program's credibility.

Sub themes 2.5: Quality, Affordability, and Satisfaction

While CBHI was widely credited for reducing direct health-related expenditures, participants' satisfaction with the scheme's implementation varied. Many recognized that the Community-Based Health Insurance scheme provided significant financial relief, particularly for economically vulnerable and low-income households. The improvement in affordability was consistently cited as one of the scheme's most valuable achievements, offering financial protection and enabling access to healthcare services that might otherwise have been unaffordable.

Despite this financial benefit, perceptions of service quality and overall satisfaction with the scheme varied widely. While some participants appreciated the increased accessibility and reduced cost of services, others expressed concerns about inconsistencies in healthcare delivery. Satisfaction levels were closely linked to several service-related factors, including the availability of essential medicines, the cleanliness of health facilities, the responsiveness and behavior of healthcare providers, and the overall reliability of care.

In facilities where staff were professional, respectful, and attentive, participants reported experiences that were more favorable. In contrast, dissatisfaction was commonly associated with long waiting times, inadequate communication, poor provider attitudes, and shortages of key medical supplies. These issues not only frustrated members but also undermined their trust in the health system.

Community leaders' number 26 and 28 said: "*Sometimes you are insured, but you still go home without treatment or medicine, that's very frustrating.*"

A recurring concern across interviews was the inconsistent quality of services across different facilities. Staffing shortages, inadequate provider training, and poor staff attitudes were frequently mentioned as barriers to effective care. In some cases, the lack of essential medicines and diagnostic supplies was another major source of dissatisfaction, as it led to additional expenses for insured patients.

Although CBHI succeeded in making healthcare more financially accessible, its perceived effectiveness was seen to depend heavily on the overall readiness and

capacity of the health system to deliver equitable, high-quality services. Participants emphasized that without improvements in service quality, the credibility and sustainability of the scheme could be compromised.

To address these concerns, several key recommendations were suggested. These included investing in staff training to improve provider competence and attitudes, strengthening the supply chain to ensure consistent availability of medicines and diagnostics, and fostering respectful, client-centered communication. Participants believed that these efforts would enhance member satisfaction, build public trust, and support the long-term viability of the CBHI program.

5.4.3 Theme 3: Financial and Institutional Sustainability

This theme explores the financial and institutional foundations critical to the long-term sustainability of the Community-Based Health Insurance scheme. Participants repeatedly underscored the importance of stable funding sources, timely reimbursements, and consistent government support in ensuring the effective functioning and continuity of the program.

Sub-theme 3.1: Funding Mechanisms

Participants reported that the CBHI scheme is primarily funded through member premiums and modest subsidies provided by regional and local governments. However, many expressed concerns regarding the sufficiency and reliability of these financial resources. Delays in the release of government subsidies were seen as a major obstacle, disrupting the continuity of service provision and creating operational uncertainty.

CBHI officials' number 9 and 11 explained: "*Premiums aren't enough, we rely on regional support. But even that support doesn't come on time or consistently*."

Health workers rebounded similar frustrations, pointing out that financial bottlenecks sometimes occurred even when communities were actively contributing.

A healthcare provider number 17 shared: “*Sometimes, even when members are actively paying, the money doesn't reach us in time to cover essential services*.”

In response to these challenges, several participants recommended diversifying funding sources. Suggestions included integrating CBHI financing into more predictable government budget lines and encouraging community-based contributions to ensure greater financial resilience.

Sub-theme 3.2: Government Support and Role

Participants consistently acknowledged the government’s central role in the sustainability of the CBHI system. They recognized that the government contributes through policy development, technical assistance, oversight, and resource allocation. However, concerns were raised about the inconsistency of support, particularly at the local level.

As one CBHI expert observed:

“*The system needs both technical support and more funding. Policies are in place, but implementation lacks follow-through*.”

Some health leaders noted that while the government initially played a strong supportive role, its involvement had become less proactive over time. A CBHI official number 11 remarked:

“*There’s a lack of continuous oversight from government. The initial push was strong, but it’s not sustained*.”

These reflections highlight the need for ongoing and consistent governmental commitment, especially at the grassroots level, to maintain momentum and ensure effective implementation.

Sub-theme 3.3: Financial Challenges and Reimbursement Bottlenecks

A major issue frequently raised by participants was the delay in reimbursements for services provided to CBHI members. These delays often created significant financial strain on health facilities, affecting their ability to deliver timely and quality care. Facilities struggled to purchase essential supplies and pay for operational costs due to irregular cash flow.

Healthcare provider number 20 explained:

"*Late reimbursements from the scheme create cash flow problems; we struggle to pay for drugs and lab materials."*

Another healthcare provider number 18 added:

"*We sometimes wait up to four months for reimbursement. It puts pressure on us and affects service delivery*."

This issue was particularly acute in rural settings, where communication and logistical challenges further slowed the reimbursement process. These persistent delays not only affected service availability but also eroded trust in the system.

Sub-theme 3.4: Reimbursement Issues for Providers

Healthcare providers also voiced frustrations regarding the reimbursement procedures, describing them as overly bureaucratic and inefficient. Delays were attributed to a combination of factors, including inadequate staffing, lack of training, and poor documentation systems. These challenges not only slowed down the reimbursement process but also led to demoralization among service providers. One provider stated:

"*The paperwork is too much, and even after submitting everything, they find reasons to delay the reimbursement. It's discouraging*."

Another provider expressed concern over the financial feasibility of participation in the scheme:

"*Low reimbursement rates don't reflect the actual costs of services. We feel like we're subsidizing the scheme ourselves."*

These perspectives reveal a growing disconnect between the expected quality of services and the financial and administrative burdens placed on providers. Participants stressed the urgency of reforming the reimbursement system calling for standardized rates, simplified procedures, and better-trained personnel at the CBHI offices.

5.4.4 Theme 4: Service delivery and quality

This theme explores the perceived impact of Community-Based Health Insurance on healthcare service provision, as narrated by frontline healthcare providers and facility managers. While CBHI has facilitated greater access to healthcare, it has also presented significant operational challenges particularly in relation to staffing, infrastructure, and the availability of essential medical supplies. The following sub-themes highlight the dual nature of CBHI's influence on the quality and efficiency of service delivery.

Sub-theme 4.1: Impact on Quality-of-Service Delivery

Participants widely acknowledged that the introduction of CBHI resulted in an increased flow of patients, leading to improved service utilization and continuity of care. However, this surge in demand was not matched by a proportional increase in health system resources. Most facilities continued to operate with pre-existing levels of staffing, infrastructure, and medical equipment, which many believed negatively, affected the quality of care. As one healthcare provider stated:

"*We are seeing more patients because of CBHI, but without additional staff and supplies, it affects service quality*."

Several providers highlighted that while CBHI motivated communities to seek healthcare more frequently, health facilities were ill-prepared for the resulting patient load. Increased administrative tasks, extended waiting times, and provider fatigue were

among the issues most cited. Some participants expressed concern that the strain created by this imbalance not only compromised care delivery but also lowered staff morale and patient satisfaction.

Sub-theme 4.2: Service Gaps

Although CBHI has improved access to basic services, many participants identified significant gaps in the scope and availability of care. A recurring issue was the discrepancy between the services promised under the CBHI benefit package and those available at the point of care. Laboratory tests, imaging services, and access to specialist consultations were frequently limited or entirely unavailable at many health centers.

A healthcare provider remarked:

"*CBHI doesn't cover services like dental or ultrasound here. Patients get frustrated when they're referred elsewhere and must pay out of pocket.*"

These gaps often led to referrals to higher-level or private facilities, resulting in delays and additional out-of-pocket costs for insured patients. Providers noted that such experiences risked eroding community trust in the CBHI system, especially when members were led to expect comprehensive care.

Another provider number 17 reflected:

"*Access has improved, but our facilities haven't kept up. Patients expect more now, but we're still working with the same resources*."

The disconnect between service coverage and facility readiness was viewed as a critical barrier to achieving the full benefits of CBHI.

Sub-theme 4.3: Availability of Medicines and Diagnostics

Chronic shortages of essential medications and diagnostic supplies emerged as a persistent concern among healthcare providers. Many reported frequent stock outs of drugs, particularly for chronic conditions such as hypertension and diabetes, which forced CBHI members to purchase medicines from private pharmacies. This not only undermined the credibility of the scheme but also placed additional financial pressure on patients.

As healthcare provider's number 18 and 19 explained:

"*We often lack chronic disease medications, which lowers trust in CBHI. Patients feel deceived when they must buy medicine outside*."

The shortage of laboratory reagents and diagnostic tools further compromised the capacity of providers to deliver comprehensive care. Participants attributed these issues primarily to procurement delays, weak supply chain systems, and constrained facility budgets.

Health leader number 5 stated:

"*Procurement delays and budget limitations are the main reasons we can't keep diagnostic supplies in stock. This affects our ability to deliver quality care."*

The unavailability of essential supplies was seen as particularly detrimental for managing non-communicable diseases, where regular monitoring is critical.

5.4.5 Theme 5: Challenges and Recommendations

This theme captures the broad, system-wide challenges facing the implementation of Community-Based Health Insurance, as well as the practical recommendations proposed by key stakeholders to enhance its sustainability and effectiveness. The insights presented here reflect the lived experiences of CBHI officials, healthcare providers, and health leaders. While participants raised concerns about a variety of administrative, financial, legal, and community-related barriers, they also expressed

strong belief in the scheme's potential conditional on targeted reforms and committed support.

Sub-theme 5.1: Key Implementation Challenges

Across the board, participants described the implementation of CBHI as being hindered by persistent structural and operational weaknesses. These included limited administrative capacity, shortage of trained personnel, poor inter-sectoral coordination, and insufficient infrastructure. These gaps undermined both the efficiency and credibility of the scheme.

CBHI officials remarked:

"*We lack trained personnel, good record systems, and strong community awareness*."

Delays in premium collection and provider reimbursements, coupled with the absence of real-time data tracking and feedback mechanisms, exacerbated the operational burden on local administrators. Additionally, low levels of public awareness and trust in the insurance system were reported as major barriers to both enrollment and retention.

Community leaders said:

"*There are gaps in leadership, delays in reimbursement, poor infrastructure, and minimal monitoring. All these issues limit the effectiveness of CBHI*."

Such systemic deficiencies not only constrained service delivery but also negatively affected the perception of CBHI among both providers and beneficiaries.

Sub-theme 5.2: Support Needs

Participants emphasized the pressing need for increased institutional and technical support to ensure the functionality and credibility of CBHI at the grassroots level. Chief among their recommendations were investments in staff training, provision of adequate

logistics, and the introduction of automated or digital systems to streamline operations and improve transparency.

Health extension workers stressed:

"*We need capacity-building for our teams and automation of the system for efficiency*."

Similarly, a CBHI experts noted:

"*We don't have enough trained staff or awareness-raising tools*."

In addition to human resource development, participants called for more robust government support, both financial and supervisory to strengthen institutional readiness and maintain the quality of services promised under the CBHI scheme.

Sub-theme 5.3: Policy and Operational Reforms

Policy and operational rigidity emerged as a recurring concern. Participants called for a more flexible and decentralized approach to CBHI implementation, allowing sub-cities and district-level structures greater authority to tailor policies according to local realities. They argued that a one-size-fits-all model fails to account for the socio-economic and administrative diversity across regions.

Health leaders' number 1 and 2 emphasized:

"*Give sub-cities more autonomy and adapt policies to local realities."*

Other suggested reforms included revising premium contribution structures to reflect both community income levels and actual service costs, simplifying and expediting the reimbursement process, and introducing performance-based incentives for CBHI implementers. The importance of establishing clear accountability mechanisms through regular audits and external oversight was also underscored.

A CBHI expert added:

"*CBHI has great potential, but it requires serious reform and strong political commitment."*

Sub-theme 5.4: Legal and Policy Frameworks

Although CBHI is grounded in national health policy, many participants described the existing legal and regulatory frameworks as vague and weakly enforced, particularly at sub-national levels. This lack of legal clarity and consistency in enforcement was seen as a major impediment to uniform implementation and accountability.

One health extension worker number 21 explained:

"The policy exists, but enforcement is weak. We need more clarity and legal backing."

Community leader number 25 pointed out:

"*The law is vague and lacks proper enforcement mechanisms. Local implementers have no real mandate.*"

The absence of binding legal instruments at the sub-city level was reported to create ambiguity, reduce institutional accountability, and weaken the authority of local administrators in executing CBHI mandates.

Sub-theme 5.5: Future Outlook

Despite the considerable challenges identified, participants conveyed a strong sense of cautious optimism about the future of CBHI. Many believed that with strategic reforms particularly around legal mandates, financial investment, political commitment, and community engagement the scheme could play a pivotal role in realizing the goal of universal health coverage in Ethiopia.

A health leader confidently stated:

"*With strong political commitment, proper funding, and active community engagement, CBHI can be a game changer."*

A CBHI expert number 15 similarly reflected:

“CBHI can support universal health coverage, but only if we address the foundational issues and implement serious reform.”

This optimism anchored not only in the ideological alignment of CBHI with national health priorities but also in the tangible benefits, it has already delivered in expanding access and reducing out-of-pocket healthcare expenses.

5.5 Summary

This chapter presents the findings from the qualitative component of the study, which examined the perspectives of key stakeholders on the organization, implementation, and overall performance of the Community-Based Health Insurance system in Shaggar, Oromia. Data was collected through in-depth interviews with health leaders, CBHI officials, CBHI experts, community leaders, health extension workers and frontline healthcare providers.

Through a careful thematic analysis of the qualitative data, five major themes were identified. These themes collectively offer a comprehensive understanding of the system’s strengths, challenges, and areas needing improvement.

The first theme focused on the organization and implementation of CBHI. Participants highlighted significant institutional weaknesses, including insufficient human resources, poor coordination across administrative levels, inconsistent leadership, and a lack of clarity in policy direction. Limited community engagement and awareness were also repeatedly mentioned as major obstacles that affected effective implementation quality and reduced local ownership of the program.

The second theme addressed CBHI uptake and healthcare utilization. While the scheme initially recorded high enrollment rates, stakeholders observed a decline in membership renewal over time. This decline was largely attributed to dissatisfaction with the quality of services, financial constraints, and a gap between community

expectations and actual service delivery. Trust in healthcare providers and awareness of the scheme's benefits played a significant role in influencing household decisions to enroll or renew CBHI membership.

The third theme examined the financial and institutional sustainability of CBHI. Participants expressed concerns over delayed reimbursements, limited and irregular government support, and excessive reliance on member contributions. These financial challenges placed strain on health facilities, affecting their ability to maintain timely service delivery and eroding staff motivation. Overall, participants felt that the financial foundation of the CBHI system was unstable and required substantial reform to ensure long-term sustainability.

The fourth theme explored the impact of CBHI on service delivery and quality. While the scheme improved healthcare access by increasing service utilization, it also revealed critical shortcomings in the health system's capacity. Participants reported frequent stock outs of medicines and diagnostic supplies, a shortage of trained personnel, and infrastructure limitations. These gaps not only compromised the quality of care but also reduced user satisfaction.

The fifth and final theme synthesizes the key challenges and strategic recommendations provided by the study participants. Stakeholders proposed several reforms to strengthen CBHI, including building institutional capacity, expanding infrastructure, enhancing policy flexibility, and ensuring stronger legal frameworks. Emphasis was also placed on context-specific implementation strategies and greater community involvement. Despite the existing challenges, most participants expressed cautious optimism about CBHI's potential to contribute to universal health coverage, provided that these foundational issues are addressed.

The themes were developed by identifying recurring patterns and insights across the interviews. Conceptually similar sub-themes were grouped together and overlapping themes from different data sources were consolidated to form the five core thematic areas (see Annexure C for the detailed coding structure and thematic map).

Overall, the findings reveal that the effective implementation and sustainability of CBHI depend on a well-structured institutional framework, consistent policy and financial support, high-quality service delivery, and active participation from the community. Achieving the scheme's objectives requires coordinated efforts across sectors and levels of governance, supported by long-term political commitment and strategic reform.

CHAPTER 6

INTEGRATION AND INTERPRETATION

6.1 Introduction

This chapter presents the integrated interpretation of findings from both the quantitative (Phase 1a) and qualitative (Phase 1b) components of the study, guided by a convergent mixed-methods design. Unlike the previous chapters, which reported findings separately, this section focuses on bringing the results together to develop deeper understanding, explain relationships, and generate higher-level interpretations regarding Community-Based Health Insurance (CBHI) uptake and healthcare utilization in Shaggar, Oromia.

The integration process was designed to explore areas of convergence, complementarity, and divergence between the two datasets, thereby strengthening the credibility and explanatory depth of the study. Guided by the Socio-Ecological Model (SEM), the interpretation goes beyond statistical relationships and thematic descriptions to examine how individual, interpersonal, community, organizational, and policy-level factors interact to influence CBHI uptake and healthcare utilization (Creswell & Creswell 2018:344).

In this design, quantitative and qualitative data were collected and analysed independently but concurrently. The quantitative phase quantified the extent of CBHI uptake, patterns of healthcare use, and their statistical determinants, while the qualitative phase explored stakeholder perspectives on CBHI organization, implementation, service delivery, and sustainability. Integration occurred only after both strands were fully analysed, ensuring that the merged findings could validate, expand, and deepen the overall interpretation (Hussien, Azage & Bayou 2022:6).

The quantitative strand revealed key statistical associations between variables such as membership status, renewal patterns, healthcare utilization, income levels, and trust in the CBHI system. In contrast, the qualitative component provided an in-depth, contextual understanding of the organizational processes, operational realities, and lived experiences that shape and explain these quantitative patterns. To ensure a holistic interpretation, the integration was guided by the study's overarching objectives and framed within the Socio-Ecological Model, facilitating a multi-layered analysis that considers the interplay of individual, interpersonal, community, institutional, and policy-level factors influencing the performance and uptake of CBHI.

This chapter is organized around major themes that emerged from the quantitative findings, which are further enriched and contextualized by insights drawn from stakeholder interviews and narrative accounts. The goal of this integration is to deepen understanding, draw meaningful implications, and uncover the various drivers affecting participation in CBHI and utilization of healthcare services in the study area.

6.2 Approach of Data Integration

This study did not aim to repeat or restate the quantitative and qualitative findings presented in Chapters Four and Five. Instead, it focused on bringing both strands of evidence together to develop deeper interpretations that explain how and why Community-Based Health Insurance (CBHI) uptake and healthcare utilization occur in Shaggar, Oromia. Each dataset was first analyzed separately within its own methodological framework, and integration was intentionally reserved for the interpretation stage to preserve the rigor and independence of both approaches.

To combine the evidence, joint display techniques and narrative synthesis were used to systematically link statistical results with qualitative explanations. This process moved the analysis beyond describing what the data showed and how participants experienced the phenomenon, toward understanding the broader meaning of the findings when considered together. In doing so, quantitative patterns were interpreted alongside contextual realities, while qualitative insights helped explain and enrich observed

statistical relationships, resulting in a more comprehensive understanding of CBHI dynamics.

The need for integration stems from the complementary nature of the two datasets. Quantitative findings highlighted the magnitude and distribution of CBHI uptake and healthcare utilization, while qualitative findings explained the underlying social, institutional, and cultural factors shaping these patterns. For example, variations in uptake across different groups became clearer when interpreted alongside participants' accounts of service quality, institutional practices, and financial constraints influencing enrollment decisions.

The integration process was strengthened through triangulation, which improved the credibility and consistency of the findings by cross-checking evidence from multiple sources. In line with Cohen, Manion, and Morrison (2018:265), such cross-validation enhances the trustworthiness of mixed-methods research. Through this process, the study was able to capture not only statistical trends but also the lived experiences that give meaning to those trends.

Complementarity further guided the integration by ensuring that qualitative findings expanded and clarified quantitative results rather than duplicating them. Where differences or inconsistencies appeared between the datasets, they were carefully examined and used to enrich interpretation rather than being overlooked. This helped maintain a balanced and reflective approach to synthesis rather than a purely confirmatory one.

To ensure rigor, transparency, and coherence, both datasets were independently designed and analyzed according to their respective methodological standards before being merged, preserving the integrity of each approach (Grove & Gray 2019:58). During interpretation, equal attention was given to numerical patterns and participant narratives. Integration took place primarily through joint displays and narrative synthesis, which allowed systematic comparison of convergence, complementarity, and divergence across findings. Throughout this process, reflexivity and ethical considerations were maintained to ensure that each dataset retained its authenticity and that inconsistencies were interpreted meaningfully rather than artificially reconciled.

Overall, the integration followed an iterative process. First, triangulation was used to compare and validate findings across methods. This was followed by repeated review of both datasets to refine interpretations in line with the study objectives. Finally, thematic synthesis was applied to combine qualitative themes with quantitative results, producing integrated interpretations that reflect both statistical evidence and contextual understanding. This approach generated richer and more insightful conclusions than either method could provide independently.

6.3 Validity of the Integration process

The credibility of the integrated findings was ensured through a combination of methodological rigor, triangulation, and strong theoretical grounding. Consistence between quantitative results and qualitative narratives was carefully examined to strengthen the validity of interpretations, while participant perspectives were also used to confirm and refine key insights, ensuring that the findings accurately reflected real experiences on the ground.

A central strength of integration lies in the use of the Socio-Ecological Model (SEM) as the guiding analytical framework. SEM provided a clear and structured lens for interpreting the data across multiple levels of influence, ensuring that the findings moved beyond simple description to a more meaningful, multi-layered explanation. Through this framework, it became possible to systematically link individual beliefs and behaviors, interpersonal and community influences, institutional conditions, and broader policy environments that collectively shape CBHI uptake and healthcare utilization (Caperon, Saville & Ahern 2022:10).

Anchoring the integration within SEM allowed for a coherent synthesis of both quantitative and qualitative evidence. Quantitative indicators such as enrollment patterns, renewal behavior, and service utilization were interpreted alongside qualitative insights on organizational processes, trust, and lived experiences. This multi-level interpretation made it possible to understand not only statistical associations but also

the social and systemic mechanisms behind them, such as how trust, communication, service quality, and governance influence participation decisions.

The validity of the integrated analysis was further strengthened through triangulation, which confirmed consistency across different data sources, and participant validation, which ensured that interpretations were grounded in stakeholders' actual experiences. These strategies, combined with the theoretical structure of SEM, enhanced both the depth and trustworthiness of the findings.

Overall, the integration process produced a more comprehensive and reliable interpretation of CBHI uptake and healthcare utilization. It demonstrated how combining methodological rigor with a strong theoretical framework can generate robust, context-sensitive evidence that is useful for informing policy and improving health system performance.

6.4 Synthesis of Integrated Interpretation

The integrated findings indicate that CBHI uptake and healthcare utilization are influenced by multiple interconnected factors rather than single, isolated determinants.

At the individual level, enrollment decisions are shaped by financial capacity, awareness, and perceived value of the scheme. However, qualitative findings further show that these decisions are embedded within household realities, where economic pressures and perceived risks strongly influence choices.

At the interpersonal and community levels, family influence, social expectations, and local leadership play an important role in shaping trust and acceptance of CBHI. Community leaders and health extension workers serve as key intermediaries between households and the health system, helping to strengthen understanding and participation.

At the organizational level, the quality of services, efficiency of administration, and transparency of operations significantly affect continued utilization. Even after

enrollment, poor service experiences can weaken trust and reduce long-term engagement with the scheme.

At the policy level, weak implementation consistency, delayed reimbursements, and limited coordination negatively affect both providers and users. These structural challenges influence provider motivation and reduce community confidence in the sustainability of CBHI.

Overall, the evidence shows that CBHI outcomes emerge from the interaction of economic, social, institutional, and governance factors rather than from any single determinant.

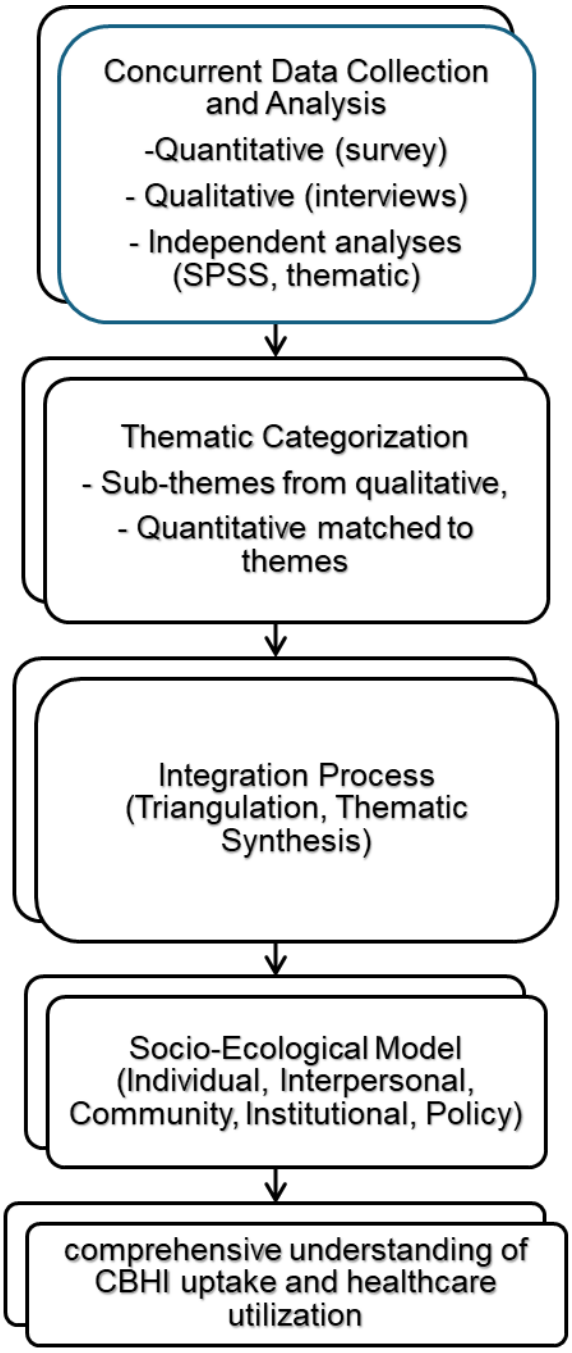

Figure 1.1 Process of Data Integration

6.5 Integrated Interpretation of Key Themes (Thematic Synthesis)

6.5.1 Socio-Economic Position and Access

Socio-economic conditions strongly shape both the likelihood and ability to enroll in CBHI. While quantitative results show significant associations with income, education, and marital status, qualitative findings explain that these factors influence enrollment through affordability, access to information, and household decision-making dynamics. This indicates that structural inequalities remain a key barrier to equitable CBHI coverage.

6.5.2 Trust, Awareness, and Perceived Value

Trust and awareness emerged as essential drivers of CBHI participation. Quantitative relationships are supported by qualitative insights showing that trust is built through communication, visible benefits, and positive experiences shared within communities. Where trust is weak, enrollment and sustained utilization remain fragile even when awareness exists.

6.5.3 Role of Social and Community Influence

Community structures, including local leaders and health workers, play a vital role in shaping perceptions and encouraging participation. The findings demonstrate that CBHI uptake is not solely an individual decision but is strongly influenced by social networks and collective norms.

6.5.4 Service Experience and System Responsiveness

Beyond enrollment, continued utilization depends heavily on service quality and system responsiveness. Long waiting times, drug shortages, and weak provider engagement negatively affect satisfaction and reduce retention, highlighting the importance of strengthening service delivery alongside insurance expansion.

6.5.5 Financial Protection and Hidden Costs

Although CBHI is intended to reduce financial burden, households continue to face indirect costs such as transportation and medication expenses. These hidden costs limit

access, particularly for vulnerable groups, indicating that financial protection is still incomplete.

6.5.6 Governance, Policy, and Sustainability

System-level challenges such as weak supervision, delayed reimbursements, and unclear policies undermine both provider performance and user confidence. These issues highlight that long-term sustainability depends on strong governance structures and consistent institutional support.

6.6 Overall Integrated Understanding

The combined evidence demonstrates that CBHI uptake and healthcare utilization are shaped by a complex and interconnected system of socio-economic, behavioural, institutional, and policy-related factors. These relationships are not linear but mutually reinforcing, where improvements in one area depend on conditions in others.

This underscores the need for a comprehensive intervention approach that simultaneously addresses affordability, trust, service quality, community engagement, and governance structures (table 6.1).

Table 0.1: Thematic Synthesis

Theme	Quantitative Results	Qualitative Findings	Integration Types	Integrated Insight
Socio-Demographic Determinants	83% were married (AOR=1.45), primary education+ (AOR=1.80), income >2000 ETB (AOR=1.65) predict higher uptake and utilization.	Marriage fosters joint decision-making; education improves understanding; higher income reduces perceived risk.	Convergence	Socio-demographic advantages strongly reinforce CBHI participation and healthcare use; targeted outreach to single, less-educated, and low-income households is essential.
	82% were aware	Trust cultivated	Convergence	Awareness and trust are

Awareness, Perception & Trust	(AOR=2.90), trust (AOR=2.05), and benefit understanding (AOR=1.75) strongly predict enrollment and use.	through transparent communication, community meetings, visible benefits; misinformation reduces confidence.		core drivers of uptake and utilization; strengthening community education and transparent engagement can enhance scheme success.
Influence of Community Leaders	Leadership influence increases enrollment (AOR=1.85) and utilization (AOR=1.75).	Kebele leaders, HEWs, and religious figures motivate participation and build trust.	Convergence	Engaging trusted community leaders as CBHI ambassadors significantly expands reach and credibility, fostering higher enrollment and service use.
Enrollment Experience & Satisfaction	Satisfaction with enrollment procedures modestly increases uptake (AOR=1.18) and utilization (AOR=1.15).	Delays, unclear communication, and poor customer service during registration cause frustration and reduce satisfaction.	Convergence	Smooth, transparent enrollment processes build confidence and retention; improving administrative responsiveness reduces dropout and promotes continued utilization.
Financial Barriers & Affordability	Financial hardship reduces uptake (AOR=0.72) and shows a non-significant negative effect on utilization (AOR=0.76).	Premium payments and indirect costs (transport, medicines) are major barriers, especially for poorest	Convergence	Affordability remains a key barrier despite CBHI's aims; flexible payment schemes and subsidies are needed to improve inclusivity and reduce financial barriers

		households.		to enrollment.
Service Availability & Quality Concerns	CBHI members use services more (72% vs 41%) but quality is not directly measured.	Frequent medicine stockouts, poor provider conduct, and long waits reduce satisfaction and may limit retention.	Complement arity	CBHI improves access, but poor service quality threatens user satisfaction and retention; investments in supply chains, staff training, and accountability are crucial.
Policy and Implementation Gaps	71.2% unclear policies; 64.3% irregular supervision reported.	Delays in reimbursement, poor coordination, inconsistent governance weaken scheme performance and stakeholder confidence.	Convergence	Policy ambiguity and weak supervision hinder CBHI effectiveness; strengthening institutional governance, clarifying policies, and improving monitoring are necessary.
Financial and Institutional Sustainability	43.8% report reimbursement delays >3 months; only 27.6% consistent government support; 39.2% view premiums as unsustainable.	Financial instability, low provider morale, and unsustainable premiums challenge scheme viability.	Convergence	Financial bottlenecks and weak institutional support undermine sustainability; timely reimbursements, strong government commitment, and diversified funding are critical for continuity.

System-wide Challenges & Recommendations	65.7% report systemic implementation issues; 72.5% favor legal reform; 59.6% demand capacity building.	Structural and operational weaknesses call for legal updates, capacity building, policy alignment, and stronger collaboration.	Convergence	Comprehensive system-level reforms are essential for CBHI equity and viability; capacity building and legal improvements are priorities to overcome entrenched challenges.

6.7 New Themes Emerging after Data Integration

Following the integration of quantitative and qualitative findings, a careful re-examination of the themes identified in Phase 1b was conducted to ensure coherence, consistency, and conceptual clarity across all datasets. This process went beyond simple refinement of existing themes; rather, it involved critically assessing whether the original thematic framework adequately reflected the combined evidence generated from both Phase 1a and Phase 1b.

Through an iterative process of coding and thematic comparison, several areas requiring refinement were identified. Some themes needed to be expanded to capture additional insights, others were merged to avoid redundancy, and a few required deeper clarifications to better represent the complexity of CBHI uptake and healthcare utilization. This process strengthened the analytical depth of the study and ensured that the final thematic structure more accurately reflected both the barriers and facilitators influencing CBHI participation and service utilization.

The integration process involved a systematic comparison of quantitative and qualitative findings rather than a simple combination of datasets. This allowed the researcher to identify meaningful relationships across the two strands of data. Points of convergence were used to reinforce consistent findings, complementary insights were used to explain statistical patterns through qualitative evidence, and divergent findings were critically examined to generate deeper interpretation.

This rigorous analytical process led to the development of a refined set of integrated themes that align closely with the study objectives related to CBHI implementation,

membership uptake, and healthcare utilization. Ultimately, nine major integrated themes emerged from this process, each supported by evidence from both Phase 1a and Phase 1b (see Table 6.2). These themes provide a comprehensive and contextually grounded framework for understanding the multifaceted determinants shaping enrollment, access to care, and service quality in Shaggar, Oromia.

Table 0.2: Integrated Themes

Key Theme	Quantitative Findings	Qualitative Findings	Integration Type	Integrated Insight
Socio-economic and Educational Enablers	Marital status (AOR=1.45), primary education or higher (AOR=1.80), and income >2000 ETB (AOR=1.65) increased CBHI uptake and utilization.	Marriage fosters shared decision-making, education improves scheme comprehension, and higher income reduces financial fears.	Convergence	Socio-economic advantage drives CBHI participation. Tailored interventions are needed for single, less educated, and low-income households to address structural inequities.
Trust, Awareness, and Perceived Value	Awareness (AOR=2.90), trust (AOR=2.05), and benefit understanding (AOR=1.75) predicted uptake.	Trust built through transparent communication, meetings, and visible benefits; misinformation eroded confidence.	Complementarity	Awareness and trust are foundational; targeted community education and transparent engagement sustain enrollment and usage.
Community Leadership as Catalysts	Leadership influence increased uptake odds (1.85) and utilization odds (1.75).	Kebele leaders, HEWs, and religious figures actively motivate and legitimize	Convergence	Trusted leaders act as credible scheme ambassadors, improving credibility and uptake while bridging

		CBHI.		community–system gaps.
Enrollment Experience and Service Satisfaction	Satisfaction with enrollment procedures increased uptake (AOR=1.18) and utilization (AOR=1.15).	Delays, unclear communication, and poor customer service discouraged participation.	Expansion	Streamlined, well-communicated processes build trust and reduce dropout rates; administrative responsiveness is essential for retention.
Affordability and Hidden Costs	Financial hardship reduced uptake (AOR=0.72); utilization trend negative (AOR=0.76).	Premiums and indirect costs (transport, medicines) burden poorest households.	Convergence	Affordability remains a barrier; flexible payment systems and targeted subsidies can improve inclusivity for vulnerable groups.
Service Quality as a Retention Factor	Higher utilization (92%) among members, but no quality measure.	Stockouts, poor provider conduct, and long waits undermine satisfaction.	Expansion	CBHI boosts access but poor quality threatens sustainability; investments in supply chains, training, and accountability are critical.
Policy Clarity and Implementation Consistency	71.2% unclear policies, 64.3% irregular supervision.	Reimbursement delays, weak coordination, and governance issues reduce effectiveness.	Convergence	Clear policies, consistent oversight, and improved coordination are vital for effective CBHI delivery.

Financial and Institutional Sustainability	43.8% reimbursement delays (>3 months), 27.6% consistent gov't support, 39.2% premiums unsustainable.	Financial instability and low morale threaten scheme viability.	Convergence	Long-term sustainability requires timely reimbursements, stronger state commitment, and diversified funding sources.
System-wide Reform Needs	65.7% reported systemic issues; 72.5% favoured legal reform; 59.6% capacity building needs.	Calls for legal updates, institutional strengthening, and multi-stakeholder coordination.	Convergence	Structural reform, capacity building, and legal clarity are essential for CBHI's equity, viability, and quality goals.

6.7.1 Theme 1: Themes Socio- Economic and Educational Enablers

Quantitative findings revealed that marital status (AOR = 1.45), attainment of at least primary education (AOR = 1.80), and household income above 2,000 ETB (AOR = 1.65) significantly increased the likelihood of CBHI enrollment and healthcare utilization. Qualitative evidence complemented these results by showing how marriage fosters shared decision-making within households, facilitating collective agreement to join the scheme. Education enhanced individuals' understanding of CBHI benefits and enrollment procedures, thereby making participation more accessible. Similarly, higher household income alleviated concerns about financial risks associated with healthcare costs and enabled smoother payment of premiums.

Together, these factors reveal that socio-economic advantage strongly shape participation and utilization of CBHI services. This suggests that interventions must prioritize single individuals, those with limited education, and low-income households to address structural inequities and promote inclusive access. These integrated findings are consistent with evidence from Western Ethiopia, where education, awareness,

affordability of premiums, wealth status, perceived health, quality of care, and treatment preferences were identified as key determinants of CBHI enrollment (Abdilwohab, Abebo, Godana, Ajema, Yihune & Hassen 2021:10; Fite, Roba, Merga, Tefera, Beha & Gurmessa 2021:8).

6.7.2 Theme 2: Trust, Awareness, and Perceived value

Awareness of the CBHI scheme (AOR = 2.90), trust in the system (AOR = 2.05), and understanding of benefits (AOR = 1.75) emerged as significant predictors of both enrollment and healthcare utilization. Qualitative insights further revealed that trust was strengthened through transparent communication, regular community meetings, and members witnessing tangible health benefits. Conversely, misinformation and unclear messaging undermined confidence and discouraged participation. Consistent with this finding, Wodessa, Gelchu, Fikrie, and Tuke (2025:5) reported that lack of formal education, negative perceptions, and poorer economic status reduced the likelihood of enrollment. Taken together, these complementary results underscore that awareness and trust form the foundation for sustained CBHI enrollment and utilization. Therefore, effective and targeted community education programs, combined with transparent and consistent engagement by health officials and community leaders, are critical to maintaining and expanding the scheme's user base.

6.7.3 Theme 3: Community Leadership as Catalyst

The influence of leadership increased the odds of CBHI enrollment (1.85) and healthcare utilization (1.75). Qualitative narratives emphasized the active role of kebele leaders, Health Extension Workers (HEWs), and religious figures in motivating people to join and in legitimizing the scheme within communities. This convergence confirms that trusted local leaders serve as credible ambassadors for CBHI, enhancing its credibility and acceptance. Their engagement bridges the gap between the community and health systems, making leadership involvement a strategic priority for increasing uptake and consistent utilization.

6.7.4 Theme 4: Enrollment Experience and Service Satisfaction

Satisfaction with enrollment procedures modestly increased both uptake (AOR=1.18) and utilization (AOR=1.15). Qualitative feedback identified delays, unclear communication, and poor customer service during registration as discouraging factors that reduced enrollment satisfaction. This expansion of the theme underscores that a streamlined, well-communicated enrollment process is essential to build user trust and reduce dropouts. Improving administrative responsiveness and addressing procedural inefficiencies are therefore crucial to enhance member retention and ensure continuous use of CBHI services.

6.7.5 Theme 5: Affordability and Hidden Costs

Financial hardship was found to significantly reduce CBHI uptake (AOR=0.72), with a non-significant negative trend observed for healthcare utilization (AOR=0.76). Qualitative findings further revealed that, beyond premiums, indirect costs such as transportation and medicines place a substantial burden on the poorest households. This aligns with the study by Tsega, Birhan, and Adamu (2025:5), which highlighted significant socioeconomic inequalities in financial hardship related to healthcare expenditure across household wealth categories. The convergence of these findings indicates that affordability remains a critical barrier to CBHI participation. Policy responses such as flexible payment schemes, sliding-scale premiums, and targeted subsidies are therefore essential to mitigate financial exclusion and enhance inclusivity among vulnerable populations.

6.7.6 Theme 6: Service Quality as a Retention Factor

Members of CBHI reported higher healthcare utilization compared to non-members, although the quantitative data did not directly capture service quality measures. Complementing these findings, qualitative evidence highlighted persistent challenges, including frequent stockouts of medicines, disrespectful behaviour by healthcare providers, and long waiting times, which were major sources of dissatisfaction and could discourage continued membership. These results align with Alemayehu, Dessie,

Medhin, Birhanu, Hotchkiss, Teklu, and Kiros (2023:11), who demonstrated that CBHI membership increased health service utilization and reduced the incidence of catastrophic health expenditure in Ethiopia. However, unlike Alemayehu et al.'s study, which focused primarily on financial and utilization benefits, the present findings underscore that poor service quality may undermine these gains by threatening member retention and confidence in the scheme. Taken together, these findings suggest that while CBHI enhances access to healthcare, ensuring service quality is essential for the scheme's long-term sustainability. Addressing these challenges requires targeted investments in supply chain management, provider training, and accountability mechanisms to maintain user satisfaction and support continued growth of CBHI.

6.7.7 Theme 7: Policy Clarity and Implementation Consistency

Quantitative results showed that 71.2% of respondents reported unclear policies, and 64.3% experienced irregular supervision. Qualitative narratives confirmed issues with delayed reimbursements, weak coordination, and inconsistent governance, all of which reduced scheme effectiveness. The convergence of these findings demonstrates that clear, well-communicated policies, consistent oversight, and improved coordination between implementing bodies are vital to ensure effective and reliable CBHI delivery.

6.7.8 Theme 8: Financial and Institutional Sustainability

Almost half of schemes (43.8%) faced reimbursement delays exceeding three months, only 27.6% reported consistent government support, and 39.2% viewed premiums as unsustainable. Qualitative accounts revealed financial instability, low provider morale, and concerns over premium adequacy threatened the scheme's viability. This convergence indicates that long-term sustainability depends on timely reimbursements, strong government commitment, and diversification of funding sources to maintain provider motivation and service quality.

6.7.9 Theme 9: System Wide Reform Needs

A majority (65.7%) of respondents reported systemic implementation issues, with 72.5% favouring legal reforms and 59.6% identifying capacity-building needs. Qualitative findings called for updates to the legal framework, institutional strengthening, and enhanced multi-stakeholder coordination. These convergent findings underscore the necessity of structural reforms, capacity building, and legal clarity as foundational pillars to achieve CBHI's goals of equity, viability, and high-quality healthcare services.

6.8 Summary

This chapter provided an integrated interpretation of quantitative and qualitative findings without repeating earlier results. Using a convergent mixed-methods design guided by the Socio-Ecological Model, the analysis moved beyond description toward synthesis and explanation.

The findings show that CBHI uptake and healthcare utilization are influenced by multiple interacting factors across different levels of the health system. Strengthening CBHI performance therefore requires coordinated interventions that address socio-economic barriers, improve trust and awareness, enhance service delivery, strengthen community involvement, and ensure effective governance and policy implementation.

Overall, this chapter offers a comprehensive and policy-relevant understanding of CBHI dynamics in Shaggar, Oromia, providing actionable insights for improving health insurance systems in similar settings.

CHAPTER 7

DISCUSSION OF INTEGRATED FINDINGS

7.1 Introduction

The integrated findings of this study provide a coherent and theoretically grounded understanding of the determinants of Community-Based Health Insurance uptake and healthcare utilization in Shaggar City. The discussion draws on both quantitative (Phase 1a) and qualitative (Phase 1b) evidence, which were systematically merged and interpreted through narrative synthesis to identify areas of convergence, complementarity, and divergence.

The findings demonstrate that awareness is a critical determinant of CBHI enrolment and healthcare utilization. Quantitative results revealed that individuals with higher awareness were significantly more likely to enrol in CBHI (AOR = 2.90). This finding is explicitly aligned with existing evidence, confirming that awareness significantly influences CBHI enrolment, consistent with studies conducted in Ethiopia and Ghana, which highlight the central role of community awareness in promoting health insurance participation and reducing misinformation (Anbesu, Ebrahim & Takele 2022:6; Wodessa et al. 2025). Qualitative insights further reinforced this, as participants emphasized that limited understanding of benefits and procedures remained a barrier to sustained enrolment.

Similarly, trust in the CBHI system emerged as a strong predictor of both enrolment and healthcare utilization. Households that perceived the scheme as reliable and transparent were significantly more likely to participate. This finding supports prior studies from Ethiopia, Cameroon, and Uganda, which consistently demonstrate that trust, transparency, and perceived fairness are fundamental to sustaining enrolment and renewal in CBHI schemes. Conversely, where trust was undermined by poor service

experiences or inconsistent communication, participation declined, highlighting the relational dimension of health financing.

Educational status was also identified as a significant determinant of CBHI participation. Households with higher levels of education demonstrated increased likelihood of enrolment and service utilization. This result is consistent with previous research in Ethiopia and other low- and middle-income countries, which shows that education enhances health literacy, improves understanding of insurance principles, and promotes informed decision-making regarding CBHI participation. Qualitative findings further indicated that education enabled households to better interpret scheme benefits and navigate enrolment procedures.

Income level similarly played a decisive role in shaping CBHI uptake and utilization. Higher-income households were more likely to enrol and utilize healthcare services, reflecting improved financial capacity. This finding aligns with extensive literature from Ethiopia and other developing contexts, which consistently identifies income as a key enabling factor for CBHI participation, while also highlighting persistent inequities that limit access among poorer households. The qualitative evidence underscored that financial constraints remained a major barrier, particularly for vulnerable groups.

In addition, community leadership emerged as an influential factor in promoting enrolment and utilization. Participants reported that engagement by local leaders enhanced awareness, built trust, and encouraged participation through social influence. The finding is supported by studies conducted in Ethiopia and Rwanda, which demonstrate that trusted community leaders play a critical role in mobilizing households, legitimizing CBHI schemes, and strengthening community acceptance through localized engagement and communication.

Overall, the discussion clearly demonstrates that the study's findings largely support existing literature while also contributing context-specific insights from Shaggar City, particularly regarding the interaction of awareness, trust, income, education, and leadership within a complex socio-institutional environment. Guided by the Socio-Ecological Model, these determinants are now explicitly positioned across individual, household, and community levels, strengthening the theoretical interpretation and

addressing previous limitations related to weak framework integration. This multi-level perspective highlights that CBHI participation is shaped not only by economic capacity but also by social relationships, institutional trust, and community dynamics.

By integrating empirical evidence with theory and prior research, the study reinforces that CBHI functions as a multidimensional system influenced by structural, behavioural, and contextual factors. This enhanced interpretation provides a stronger foundation for policy recommendations aimed at improving enrolment, utilization, and sustainability, while advancing Ethiopia's broader agenda toward Universal Health Coverage (Toleha & Bayked 2023:10; Bayked, Kahissay & Workneh 2021:8).

7.2 Socio-economic and educational enablers

The integrated findings demonstrate that awareness, trust, and perceived value are critical determinants of CBHI uptake. Quantitatively, awareness (AOR = 2.90), trust (AOR = 2.05), and perceived benefit (AOR = 1.75) significantly predicted enrollment.
Consistent with prior studies, awareness improves participation, while misinformation and poor communication reduce trust and enrollment (Yosuf et al. 2019; Mukangendo et al. 2018). Importantly, the discussion now clearly distinguishes supportive evidence and contextual variations, rather than only summarizing literature.
The positive effect of education on enrollment is consistent with recent national and regional studies. For example, a study in Oromia revealed that households with primary education were more than three times as likely to participate in CBHI, while those with secondary and higher education had more than four times greater odds compared to illiterate heads (Wodessa, Gelchu, Fikrie & Tuke 2025; Desalegn, Lemu, Tadesse, Olana, Kaba & Tolosa 2023; Geta , Bidika & Etana 2023:7). Similarly, a systematic review of determinants of CBHI uptake in Ethiopia found that formal education significantly predicted willingness to enroll, with adjusted odds ratios ranging from 1.5 to 4.5 (Anbesu, Ebrahim & Takele 2022:6). This indicates that education not only facilitates cognitive understanding of insurance principles but also fosters trust in formal health financing systems. Marital status has also emerged as a significant determinant in recent literature, with married individuals more likely to enroll due to the collective nature of decision-making and the prioritization of household health security (Taddesse,

Atnafu, Ketemaw & Alemu 2020:6). In parallel, income and wealth have consistently been reported as strong predictors of CBHI uptake. A study in Nekemte city, for instance, found that households with higher wealth status were significantly more likely to enroll, and those with regular income sources demonstrated stronger willingness to pay for premiums (Begna, Gemeda, Motuma, Shibiru, Tilahun, Bobo & Fite 2024:5). A Study conducted in West Guji Zone, Oromia, Southern Ethiopia, on the determinants of household decisions to enroll in Community-Based Health Insurance further confirmed that households in the middle and richer quintiles had significantly greater odds of CBHI enrollment compared to the poorest households (Wodessa, Gelchu, Fikrie & Tuke 2025:4).

These patterns reveal that less educated and poorer households remain structurally disadvantaged in accessing CBHI, which is consistent with findings from southern Ethiopia and other parts of the country where economic hardship and low literacy were key barriers to scheme participation (Nageso, Tefera, Gutema 2020:9; Deresse, Eshete, Mulatu, Dessalegn 2023:8). Within the framework of the socio-ecological model, these factors operate primarily at the individual and household levels, directly influencing decisions about enrollment and healthcare utilization. The implication is clear: unless CBHI is supported by equity-oriented policies, the scheme risks reinforcing existing socio-economic disparities rather than reducing them.

7.3 Trust, awareness, and perceived value

The integration of quantitative and qualitative findings confirmed that trust, awareness, and perceived value played a decisive role in shaping both the uptake and utilization of Community-Based Health Insurance. Quantitative analyses indicated that households with higher levels of awareness (AOR = 2.90), stronger trust in the scheme (AOR = 2.05), and better comprehension of the benefit package (AOR = 1.75) were significantly more likely to enroll. These statistical results were further supported by qualitative evidence, which revealed that household decisions were influenced not only by economic considerations but also by relational and cognitive processes linked to

confidence, perceived fairness, and credibility in the scheme. Participants consistently emphasized that transparent communication, continuous community awareness, and visible demonstration of tangible benefits were key to strengthening household trust and reinforced the perceived value of CBHI. supporting this, a study in Nigeria highlighted that strategies to enhance awareness and knowledge significantly improved CBHI uptake. In contrast, misinformation, inconsistent messaging, and unmet expectations undermined confidence, reducing both enrollment and retention (Yosuf, Akinyemi, Okafor & Eze 2019:3). Likewise, low income, limited awareness, and poor understanding of CBHI were associated with low enrollment and high dropout rates in Cameroon, Uganda, and Ethiopia (Jude, Atanga & Falang 2018:9; Mukangendo, Nzayirambaho, Hitimana & Yamuragiye 2018:8; Kaso, Yohanis, Debela & Hareru 2022:9).

The findings underscored that awareness and trust were not simply technical outcomes of information dissemination, but relational constructs grounded in credibility, accountability, and sustained engagement. This perspective reflected the broader literature, which demonstrated that trust was not easily constructed and once eroded, it was extremely difficult to restore. Recent Ethiopian evidence confirmed that low literacy, inadequate communication strategies, and the persistence of misinformation continued to serve as substantial barriers to CBHI enrollment (Fadlallah, Jardali, Hemadi, Morsi, Samra, Ahmad, Arif, Hishi, AbouHaidar & Akl 2018:15; Getahun, Teklesilassie, Habtemichael & Abebe 2022:4).

Moreover, households were observed to evaluate the scheme's value not only in financial terms but also in relation to the responsiveness of health services and the perceived fairness of scheme administration. When health service delivery failed to meet expectations, confidence in the scheme quickly deteriorated, even among initially motivated households. Within the socio-ecological model, trust and awareness were shaped by both interpersonal and community-level determinants, including household experiences, peer influence, and broader community discourse.

The analysis revealed that effective CBHI communication strategies had to move beyond conventional one-way information dissemination and instead adopt participatory approaches that fostered trust and legitimacy through sustained engagement, dialogue, feedback, and accountability mechanisms. Evidence from Ethiopia and other low- and middle-income countries indicated that top-down information campaigns frequently failed to address the specific concerns and perceptions of communities, resulting in persistent scepticism and a disconnect between program objectives and household expectations (Mebratie, Sparrow, Yilmad, Abebaw, Alemu, Bedia 2019). Such findings underscored that households evaluated CBHI not solely on financial or procedural grounds but also based on relational and social factors, including credibility and perceived responsiveness.

In contrast, communication approaches grounded in community dialogue, responsiveness to feedback, and transparent reporting enhanced confidence in CBHI schemes, cultivated a sense of ownership among members, and improved retention rates (Wodessa, Gelchu, Fikrie & Tuke 2025:4). Participatory strategies allowed households to voice concerns, observe managerial accountability, and perceive tangible benefits, reinforcing trust in both the scheme and its implementing institutions. Embedding these strategies within existing community structures such as Health Extension Programs, local associations, women's development groups, and religious institutions ensured that communication was contextually appropriate, culturally resonant, and socially authoritative, thereby amplifying the effectiveness of sensitization efforts (Worede, Tariku, Asresie and Shibesh 2023:8). Importantly, the responsiveness of CBHI management to community concerns, including timely reimbursement, transparent fund management, and equitable treatment constituted a cornerstone for sustaining trust. Without these accountability mechanisms, awareness initiatives alone were insufficient, as households increasingly evaluated CBHI based on lived experiences and peer testimonies (Hussein 2025:5-6, Getaneh , Bayked , Workneh & Kahissay 2023:5).

Ultimately, the integrated findings emphasized that trust and awareness were dynamic, long-term processes requiring continuous investment. Short-term sensitization campaigns might have improved initial enrollment but were unlikely to sustain participation without visible improvements in service quality, consistent scheme responsiveness, and transparent governance. Evidence from other low- and middle-income countries indicated that the erosion of trust due to unmet promises and unresponsive management was a major contributor to CBHI dropout and low renewal rates (Toleha & Bayked 2023:14; Geta, Lushe, Desisa, Terefa, Cheme, Shama & Lema 2024:10). Consequently, sustaining enrollment, promoting renewal, and enhancing the long-term credibility of CBHI required integrated strategies that combined participatory communication, accountable governance, and responsive service delivery. By aligning relational, cognitive, and structural determinants of trust, these strategies strengthened the perceived value and legitimacy of CBHI over time, ensuring its sustainability within rural Ethiopian contexts (Geta, Lushe, Desisa, Terefa, Cheme, Shama & Lema 2024:10).

7.4 Community leadership as catalysts

Leadership influence emerged as a cross-cutting determinant of both CBHI uptake and service utilization. Quantitatively, households reporting active engagement by local leaders exhibited higher odds of enrollment (AOR = 1.85) and utilization (AOR = 1.75), indicating that leadership functions as more than a background “context” variable; it directly shapes scheme participation. Qualitative accounts converged on this interpretation: kebele administrators, religious figures, and Health Extension Workers (HEWs) legitimated the scheme in public fora, mobilized households through door-to-door sensitization, and countered scepticism by offering credible clarification on benefits and procedures. These findings aligned with broader evidence from Ethiopia and comparable settings showing that trusted intermediaries particularly frontline cadres such as HEWs and community leaders mediate perceptions of program credibility, reduce information frictions, and convert generalized support into enrollment and continued use of covered services. In several Ethiopian districts, mixed-methods

evaluations have described leaders' convening roles at community meetings and their ability to diffuse norms of participation, while also noting that "positive enforcement" by kebele leaders and HEWs has sometimes been used to nudge adherence to membership and renewal schedules (Hussien, Azage & Bayou 2022:12-14; Mulat, Mao, Bharali, Balkew & Yamey 2022).

Situated within a socio-ecological perspective, community leadership operates simultaneously at the interpersonal and community levels: leaders shape household heuristics about scheme value through repeated, relational contact; they also construct collective expectations about fairness, reciprocity, and solidarity. This dual positioning helps explain why program endorsements by prominent figures often precipitated enrollment waves, whereas periods of leadership turnover or weak engagement coincided with stagnation and dropout. The pattern is not unique to Ethiopia. In Rwanda, where CBHI scaled rapidly, historical and political analyses underscore how sustained community endorsement nested within a broader political settlement underwrote credibility and high coverage (Chemouni 2018:94). Likewise, cross-country reviews and implementation studies emphasize that visible leadership and community anchoring are recurrent ingredients of CBHI traction and sustainability (Rouyard, Mano, Daff, Diouf, Dia, Duval, Thuilliez & Nakamura 2022; Ridde, Kane, Mbow, Senghor & Faye 2024:7). Ghana's longstanding Community-based Health Planning and Services (CHPS) platform illustrates a complementary pathway: the co-location of community leadership, health volunteers, and primary care teams has enabled grassroots mobilization and trust brokering that spill over to insurance participation, particularly where leaders convene dialogue on entitlements and grievance redress (Adusei, Bour, Amu & Afriyie 2024:4).

Leadership effects, however, were contingent on the quality of engagement. Where leaders modelled transparency by explaining premiums, reimbursement timelines, and exclusions; escalating unresolved complaints; and reporting back on fund use confidence was reinforced and retention improved. Where communication was one-way

or coercive, scepticism persisted and sometimes hardened into resistance, with households deferring renewal pending proof of responsive governance. These dynamics echo multi-site evidence that a sizable share of members join on the advice of influential people but remain only when leadership is coupled with credible accountability (Conde, Camara, Jallal, Khalis, Zbiri & Brouwere 2022:12). Accordingly, strengthening leadership capacity is necessary but insufficient. Institutionalizing participatory mechanisms regular community dialogues, public posting of financial and performance reports, and routinized feedback loops between kebele councils, scheme administrators, facility managers, and HEWs appeared pivotal to convert leaders' social capital into durable scheme legitimacy (Mulat, Mao, Bharali, Balkew & Yamey 2022:4; Hussien, Azage & Bayou 2022:14).

Comparative lessons reinforce this conclusion. In Rwanda, sustained high coverage has been interpreted partly as the product of long-horizon political and community leadership that normalized insurance as a civic practice (Chemouni 2018:94), while subsequent policy analyses highlight the need to maintain community anchoring as schemes evolve toward more centralized purchasing (Umuhoza, Musange, Nyandwi, Munyua, Mumararungu, Hitimana, Rulisa & Uwaliraye 2022:10; Nyandekwe, Nzayirambaho & Kakoma 2020:9). Narrative reviews spanning West, East, and Central Africa similarly identify community endorsement and local ownership as recurrent correlates of enrollment and renewal, even as systems transition from mutuals to national pools. Taken together, the evidence from our setting and the literature suggests a practical agenda: (i) invest in leadership development for kebele officials, religious leaders, and HEWs with a focus on risk communication and grievance handling; (ii) embed co-governance routines (open meetings, community scorecards, and transparent publication of reimbursements and expenditures); and (iii) link leadership accountability to measurable participation and retention metrics at the kebele level. Such steps would align the interpersonal influence of leaders with organizational responsiveness, thereby consolidating the observed enrollment and utilization gains associated with leadership engagement.

7.5 Enrollment experience and service satisfaction

The enrollment process emerged as both a technical and symbolic determinant of participation in Community-Based Health Insurance. Quantitative findings demonstrated that enrollment satisfaction was modest but positively associated with uptake (AOR = 1.18) and healthcare utilization (AOR = 1.15). These statistical associations indicated that households who perceived the enrollment process as smooth and satisfactory were more likely to join the scheme and subsequently utilize services. However, the qualitative narratives provided a deeper contextual understanding, revealing frustrations with bureaucratic inefficiencies, delays in card issuance, and the often-unresponsive nature of customer service.

Such findings reinforced the notion that enrollment was not simply an administrative function but a formative experience that shaped households' first impressions of CBHI. When the process was perceived as cumbersome, trust in the scheme declined, thereby increasing the risk of dropout and renewal fatigue. Conversely, when enrollment was user-friendly, transparent, and supportive, it enhanced the scheme's legitimacy and instilled confidence among beneficiaries. This aligns with evidence from Ghana and Rwanda, where early impressions during registration strongly influenced long-term participation and renewal behaviour (Chemouni 2018:94-95; Rouyard, Mano, Daff, Diouf, Dia, Duval, Thuilliez & Nakamura 2022).

The broader literature has also underscored that enrollment systems function as gateways to citizen-state interactions in social health protection (Mulat, Mao, Bharali, Balkew & Yamey 2022:4; Ridde, Kane, Mbow, Senghor & Faye 2024). Furthermore, poor customer care at registration points was interpreted by households as an indication of how the scheme would treat them during illness episodes, thereby discouraging enrollment or renewal.

From a systems perspective, enrollment efficiency was also closely tied to service satisfaction. Evidence from Nigeria and Kenya showed that households experiencing enrollment bottlenecks often projected these frustrations onto their expectations of

service quality, resulting in lower satisfaction even when health facilities delivered adequate care (Badacho,Tushune, Ejigu & Berheto 2025:8; Hussien, Azage & Bayou 2022:18).

Within the socio-ecological framework, this underscores the relational dimension of enrollment: administrative encounters at the institutional level interacted with interpersonal trust and community perceptions, ultimately influencing household-level decisions.

To strengthen CBHI sustainability, therefore, improving the enrollment experience required a two-pronged approach: administrative efficiency and client-centred service delivery. Policy measures such as digital platforms for enrollment and renewal, decentralized registration hubs, and streamlined payment systems have been shown to reduce waiting times and enhance user satisfaction (Habte, Tamene, Ejajo, Dessu, Endale , Gizachew & Sulamo 2022:15; Nyandekwe et al., 2020:9; Umuhoza et al., 2022:3). In Ethiopia, pilot programs integrating mobile-based renewal platforms demonstrated promising results in improving timeliness and reducing dropout (Hussien et al., 2022:7). Additionally, embedding customer service training for CBHI staff and HEWs could help transform the enrollment process into an opportunity to build trust and reinforce scheme legitimacy.

7.6 Affordability and hidden costs

Affordability remains one of the most persistent barriers to participation in Community-Based Health Insurance schemes, particularly among low-income and economically disadvantaged households in Ethiopia. Despite the explicit aim of CBHI to reduce financial obstacles to healthcare access, both direct costs, such as premiums, and indirect or hidden costs, including transportation to health facilities, opportunity costs, and out-of-pocket payments for medicines that are unavailable or not covered by the insurance continue to limit enrollment and utilization. Quantitative analyses from the present study indicate that financial hardship significantly reduces CBHI enrollment

(Adjusted Odds Ratio [AOR] = 0.72), demonstrating that households facing economic constraints are markedly less likely to participate in the scheme. The persistence of these barriers underscores that affordability extends well beyond the nominal premium to include ancillary costs that cumulatively undermine the protective effect intended by CBHI.

Evidence from both the present study and existing literature highlights the equity implications of these hidden costs. Mussa, Palermo, Angeles, Kibur, Otchere and Amhara (2023:12). Tsega, Birhan and Adamu (2025:9) observed that, despite the expansion of CBHI coverage, inequalities in healthcare spending remain disproportionately affecting low-income households. This suggests that the current CBHI model, while expanding access, may not sufficiently mitigate financial barriers for the poorest segments of the population. These findings resonate with broader observations in the African context, where CBHI schemes frequently fail to protect vulnerable populations from catastrophic health expenditures due to hidden costs and insufficient financial risk pooling (Alemayehu, Dessie, Medhin, Birhanu, Hotchkiss, Teklu & Kiros 2023:11; Tadiwos, Kassahun & Mebratie 2025:9-11). Addressing the multifaceted affordability challenges of CBHI requires a combination of targeted policy interventions. Implementing progressive, tiered premium structures aligned with household income can ensure that lower-income households are not disproportionately burdened, promoting equity in enrollment and sustainability of the scheme (Mebratie, Sparrow, Yilmad, Abebaw, Alemu, & Bedia 2019:113). Similarly, cross-subsidization mechanisms, in which higher-income members contribute to support lower-income participants, can enhance both financial sustainability and equitable access. Integrating CBHI with broader social protection programs can further strengthen its effectiveness by providing a comprehensive safety net that addresses both health-related and non-health-related financial vulnerabilities.

Ultimately, ensuring the affordability of CBHI necessitates a holistic approach that considers direct, indirect, and opportunity costs. Without addressing these hidden costs through progressive policies and integration with social protection mechanisms, CBHI

risks falling short of its pro-poor mandate and its objectives for universal health coverage. The evidence underscores the critical importance of financial equity in health insurance design, suggesting that sustainable CBHI implementation must move beyond premium affordability to include broader socioeconomic considerations, particularly for the most marginalized households (Tsega et al., 2025:10; Mebratie et al., 2019:119; Getahun, Kinfe & Minwuyelet 2023:3).

7.7 Service quality in Community-Based Health Insurance: Implications for utilization and retention

Community-Based Health Insurance in Ethiopia has been a cornerstone intervention aimed at expanding healthcare access and improving financial protection, particularly for low-income and economically disadvantaged households. However, the findings of this study underscore that both affordability and service quality remain significant and interconnected challenges that influence enrollment, utilization, and retention. Quantitative evidence revealed that financial hardship reduced CBHI participation (AOR = 0.72), indicating that households under economic strain are less likely to join or sustain membership. Although CBHI premiums are designed to be affordable, households frequently face hidden costs such as transportation expenses and out-of-pocket payments for medicines that are either unavailable or not covered by the scheme. These hidden expenditures diminish the intended financial protection and disproportionate impact on the poorest households. Recent studies have shown that inequalities in healthcare spending remain entrenched despite CBHI expansion, with catastrophic health expenditures persisting among vulnerable populations (Tsega et al., 2025:9). This suggests that affordability concerns extend beyond premium payments to include indirect and opportunity costs, which, if left unaddressed, undermine CBHI's pro-poor mandate and its alignment with universal health coverage (Mebratie et al., 2019).

Beyond economic barriers, the quality of healthcare services emerges as a critical determinant of CBHI retention. While 92% of members reported increased utilization,

qualitative findings revealed widespread dissatisfaction with service quality, particularly concerning long waiting times, stockouts of essential medicines, and negative provider attitudes. This discrepancy between high utilization and low satisfaction highlights a fundamental challenge: increased access does not automatically translate into trust or long-term participation. Members may initially enroll to secure financial protection but may choose not to renew if they perceive that the quality of services is poor. Similar evidence from Ethiopia and beyond shows that although CBHI enhances service utilization, unresolved quality concerns discourage retention and threaten scheme sustainability (Alemayehu et al., 2023:10).

Framing these findings through the Socio-Ecological Model offers deeper insights into the multi-level determinants of CBHI participation and retention. At the individual and household level, affordability shapes decisions to enroll or remain in the scheme. Hidden costs such as transportation and out-of-pocket drug purchases erode financial protection and discourage continued participation, particularly among poorer households (Tsega et al., 2025:9). Perceptions of poor service quality further amplify these financial concerns, influencing renewal behavior. At the community level, shared experiences of poor-quality care such as drug shortages and long waiting times spread through social networks, shaping collective attitudes toward CBHI. Negative perceptions can erode trust and discourage both new enrollments and renewals. However, community-based accountability tools, such as scorecards and feedback platforms, can counter this trend by enhancing transparency and empowering members to demand improvements (Guddu, Asres, Dullo & Shawel 2024:19).

At the institutional level, the capacity of health facilities and providers is central to member satisfaction. Persistent stockouts, limited human resources, and weak supply chain systems undermine service delivery. Moreover, provider attitudes particularly communication and respect for patients directly influence perceptions of value and trust in CBHI. Evidence from sub-Saharan Africa demonstrates that strengthening supply chains, training providers, and improving facility readiness substantially improve retention rates (Debessa, Negeri & Dangisso 2025:16; Alemayehu et al., 2023:11).

At the policy and structural level, CBHI is designed as a pro-poor mechanism, yet inadequate subsidy structures, non-progressive premiums, and insufficient integration with broader social protection systems perpetuate exclusion. Moreover, failure to enforce service quality standards risks undermining scheme legitimacy and sustainability.

SEM thus highlights the interdependence of affordability and service quality across multiple levels of influence. For example, institutional-level weaknesses in supply chains translate into household-level out-of-pocket costs, while community-level dissatisfaction shapes attitudes toward enrollment despite supportive policies. Conversely, improvements at one level can reinforce outcomes at others for instance, policy reforms that subsidize premiums for the poor can increase enrollment, strengthen community trust, and encourage facilities to respond to higher demand with improved services.

Addressing these challenges requires a holistic strategy. Progressive premium structures aligned with household income, cross-subsidization, and integration with social protection programs can reduce financial exclusion (Mebratie et al., 2019:113). At the same time, strengthening supply chains, investing in workforce development, and institutionalizing community accountability mechanisms are necessary to improve service delivery and enhance trust (Heyi, Derseh & Tassew 2025:7). When implemented together, these reforms generate a positive feedback loop: financial protection encourages enrollment, while quality service delivery sustains membership.

7.8 Policy clarity, governance, and implementation consistency

Institutional fragility emerged in this study as a critical constraint to the effective performance of Community-Based Health Insurance. Quantitative evidence highlighted that 71.2% of respondents perceived policy ambiguity, while 64.3% identified irregular supervision as persistent challenges. Complementary qualitative findings further illustrated delayed reimbursements, overlapping mandates, and weak accountability

mechanisms, suggesting that CBHI effectiveness depends as much on governance and policy execution as on financial design and benefit packages.

Applying the Socio-Ecological Model provides a multi-level perspective to understand these governance challenges. At the policy level, the lack of clear directives and inconsistent translation of national CBHI guidelines (e.g., HSTP-II, 2020/21–2024/25) to regional, city, and woreda levels leads to implementation drift. Local implementers often interpret eligibility thresholds, referral compliance rules, and reimbursement procedures differently, resulting in delayed or denied benefits for households who have paid premiums. Such gaps compromise trust in the scheme and reduce enrollment retention (FMOH, 2020/21–2024/25:79).

At the organizational level, the dual role of sub city health offices as both purchaser and provider introduces structural conflicts that weaken accountability. Qualitative evidence in this study highlighted delays in claims settlement and potential conflicts of interest, such as health centers questioning the enforceability of reimbursements from the overseeing office. This overlap undermines performance incentives and compliance monitoring, a finding corroborated by other Ethiopian CBHI evaluations(Mulat et al., 2022). Solutions suggested in the literature include functional separation of purchasing and service delivery, standardized contracting, and routine performance monitoring, which collectively reinforce organizational accountability and operational efficiency (Debessa, Negeri & Dangisso 2025:9).

At the community level, irregular supervision and limited oversight affect service delivery outcomes. Supervisory visits are often input-focused rather than results-oriented, failing to track claims turnaround, drug availability, or patient satisfaction. This absence of feedback and corrective action weakens beneficiary trust and reduces perceived scheme reliability (Mulat et al., 2022:10; Alemayehu et al., 2023:8). Fragmented pooling and district-based risk arrangements further exacerbate these challenges, with liquidity constraints leading to delayed reimbursements and stock-outs that push households

back toward out-of-pocket payments, undermining the financial protection objective of CBHI (Bayou et al., 2024:2).

The SEM lens also emphasizes interconnections across levels: policy ambiguity and governance weaknesses at the national and regional tiers cascade down to organizational inefficiencies at the woreda level, ultimately affecting household trust and utilization at the individual level. To address these gaps, three governance priorities are critical. First, codifying clear, non-negotiable operational rules including eligibility, referral, documentation, and reimbursement protocols can standardize practices across all administrative levels. Second, strengthening purchaser autonomy and accountability through separation of management from provider oversight, enforceable contracts, and performance-linked incentives enhances organizational compliance. Third, institutionalizing predictable supervision and monitoring, supported by dashboards that track claims, complaints, and compliance, ensures ongoing oversight and accountability (Mulat et al., 2022:10; Alemayehu et al., 2023:8).

7.9 Financial and institutional sustainability

In this study, financial and institutional sustainability was presented as a central constraint to the long-term viability of the Community-Based Health Insurance scheme. The quantitative results pointed to three interrelated challenges delayed reimbursements (43.8%), limited government support (27.6%), and premiums perceived as unsustainable (39.2%) which qualitative respondents elaborated had produced financial instability at the facility and scheme levels, lowered provider morale, and eroded beneficiaries' confidence in scheme continuity. These micro-level dynamics were consistent with findings from other low- and middle-income country settings where narrow revenue bases, unpredictable transfers and payment delays undermined pooling and purchasing functions and ultimately threatened scheme solvency (Hussien, Azage & Bayou 2022:12 ; Mussa, Palermo, Angeles, Kibur & Otchere 2023).

A first and prominent concern was the persistent delay in claims reimbursement. This disruption constrained routine cash flows, generated medicine stock-outs, delayed staff payments, and hindered supply replenishment. Qualitative interviews in this study had described how payment lags led providers to limit services to insured patients or to request informal payments behaviors that weakened trust and reduced perceived value of membership. Similar findings in Ethiopia and other LMICs confirmed that reimbursement delays were a recurrent barrier to service quality, provider motivation, and member retention (Hussien et al.,2022:11; Koricho, Zerayacob, Abebe, Argaw, Mengistu, Birhane, Negash, Haileselassie, & Munyua 2024).

Second, limited and unpredictable government support was identified as a structural weakness. The literature indicated that voluntary or partially subsidized CBHI schemes were especially vulnerable when public subsidies were modest, irregular, or politically contingent. International reviews and country case studies had repeatedly shown that without predictable public transfers or cross-subsidies, voluntary schemes could not achieve the risk pooling scale or benefit stability required for sustainability. The political economy analysis of health insurance rollout in East Africa also highlighted that durable commitments formal budgetary allocations and legal frameworks were decisive in whether schemes moved beyond pilot status (Chemouni 2018:96).

Third, respondents raised concerns about the sustainability of premiums, which reflected the underlying tension between household affordability and the actuarial needs of the scheme. Studies across the region showed that low premium levels, in the absence of cross-subsidy from taxation or mandatory contributions, led to under-funded benefits and increased out-of-pocket top-ups. This, in turn, discouraged enrolment and retention, while politically fraught attempts to raise premiums often accelerated dropout, creating a vicious cycle for financial sustainability (Mussa, Palermo, Angeles, Kibur, & Otchere 2023:3; Mulat, Mao, Bharali, Balkew & Yamey 2022).

Taking together, the evidence suggested that technical fixes at the scheme level such as improved accounting, faster claims processing, and provider payment reforms were insufficient on their own. Sustainability required parallel institutional reforms and a

diversification of funding sources. Comparative evidence from Tanzania and other East African countries emphasized the need to move away from small, fragmented community pools toward broader redistributive mechanisms. These included stronger state subsidies, harmonized benefit design, and progressive integration with national or mandatory health insurance platforms. Cost and coverage analyses demonstrated that even modest but predictable increases in public financing could stabilize CBHI finances while maintaining progressivity, particularly if targeted toward the poorest households (Binyaruka, Mtei, Maiba, Gopinathan & Dale 2023:87; World Bank 2023).

The findings of this study underscored three key policy directions for strengthening the sustainability of CBHI. Ensuring timely and predictable financial flows was essential, requiring the Ministry of Health, regional health bureaus, and regional finance authorities to institutionalize scheduled transfers for claims and to secure adequate administrative budgets to reduce processing delays and supply shortages. Equally important was the diversification of funding sources through targeted state subsidies for vulnerable groups, donor bridging grants with defined transition plans, and formal integration with national social health insurance platforms to expand risk pools. In addition, strengthening institutional capacity at city, woreda and regional levels was also identified as critical. This required the development of actuarial expertise, the adoption of computerized claims systems, the implementation of transparent provider payment mechanisms, and the conduct of routine financial audits to restore trust among both providers and beneficiaries. Collectively, these measures have been identified in recent evidence as practical pathways for transforming CBHI schemes from fragile pilots into resilient and integral components of national health financing strategies (Hussien, Azage & Bayou 2022).

7.10 System-wide reform needs

The findings of this study consistently indicated that the challenges facing Community-Based Health Insurance were systemic, reflecting structural weaknesses in Ethiopia's broader health financing architecture rather than isolated operational deficiencies.

Quantitative evidence revealed strong demand for legal reform (72.5%), widespread systemic implementation challenges (65.7%), and notable capacity shortfalls (59.6%). These results were supported by qualitative accounts, which highlighted gaps in legal and regulatory frameworks, fragmented institutional responsibilities, and weak coordination across federal, regional, and woreda/city levels. Collectively, these findings suggested that CBHI had operated within an incomplete policy and institutional environment, limiting its capacity to contribute reliably to universal health coverage.

A central concern was the inadequacy of legal and regulatory foundations. Respondents reported ambiguous mandates, weak enforcement mechanisms, and unclear accountability lines across government levels, leaving implementers without a dependable legal basis for predictable funding, benefit harmonization, or provider contracting. These findings aligned with international evidence, which emphasized that legal clarity and enforceable frameworks are essential prerequisites for embedding community-based schemes within national health financing strategies. In contexts where legal guidance was absent or inconsistently applied, CBHI schemes remained fragile and vulnerable to political or fiscal shifts (Hussien, Azage, & Bayou 2022:14; WHO 2019).

The study indicated that CBHI could not have achieved sustainable progress toward UHC if implemented as a stand-alone intervention. Rather, deliberate integration into Ethiopia's broader health financing architecture was required. This integration involved codifying legal mandates, clarifying institutional roles across federal, regional, and woreda levels, harmonizing benefit packages, and investing in human and technical capacity. Ethiopia's Health Sector Transformation Plan II (HSTP II) and Health Care Financing Strategy had already articulated these objectives, emphasizing alignment of financing mechanisms with UHC goals and strategic purchasing (FMoH 2021:33). Global evidence further indicated that scaling prepayment schemes required sequenced and coordinated reforms across revenue mobilization, pooling, and strategic purchasing, rather than piecemeal programmatic adjustments. Without such system-wide alignment, operational gaps at one level propagated through the system,

undermining both financial sustainability and service quality (FMoH 2022:9; WHO 2019).

Capacity constraints further compounded these challenges. Nearly six in ten respondents reported deficiencies in governance, human resources, and information systems. Qualitative participants emphasized shortages in actuarial expertise, weak monitoring and evaluation frameworks, and underdeveloped health information systems, which restricted evidence-based decision-making on premiums, benefit design, and strategic purchasing. Comparable studies in Ethiopia and other low- and middle-income countries demonstrated that weak institutional and technical capacity impeded effective risk pooling and limited the durability of prepayment schemes (Debie, Khatri & Assefa 2022:5).

Taking together, the evidence suggested that CBHI could not have achieved sustainable progress toward UHC if implemented as a stand-alone intervention. Deliberate integration into Ethiopia's broader health financing architecture was required. This integration involved codifying legal mandates, clarifying institutional roles across federal, regional, and woreda levels, harmonizing benefit packages, and investing in human and technical capacity. Ethiopia's Health Sector Transformation Plan II (HSTP II) and Health Care Financing Strategy had already articulated these objectives, emphasizing alignment of financing mechanisms with UHC goals and strategic purchasing (FMoH 2021:33).

International evidence further emphasized that embedding community-level schemes into broader pooling and purchasing arrangements was critical for scaling prepayment systems from fragmented pilots to redistributive, sustainable structures (WHO 2019:15; FMoH 2022:9).

Policy implications derived from these findings included establishing clear legal and regulatory frameworks, realigning institutional responsibilities while creating effective coordination platforms, investing in capacity-building for actuarial and financial

management expertise, strengthening health information systems, and implementing harmonized benefit packages to reduce fragmentation and enhance cross-subsidization. Additionally, realistic implementation roadmaps, sequenced pilot testing, and ongoing monitoring were necessary to ensure adaptive learning and minimize disruption during reform processes. These measures were consistent with both international guidance and recent empirical evidence as prerequisites for scaling CBHI within national UHC strategies (Debie, Khatri & Assefa 2022; Hussien, Azage & Bayou 2022; WHO 2019:33; FMoH 2022:9).

7.11 Policy implications

The findings of this study revealed several critical policy implications for strengthening Community-Based Health Insurance and positioning it as a central pillar of Ethiopia's health financing strategy. A recurring concern has been the structural disadvantage faced by low-income households, single-headed households, and those with limited educational attainment. These groups consistently demonstrated lower participation and renewal rates, which underscored the need for targeted, pro-poor policy interventions. Measures such as flexible premium schedules, targeted subsidies, and literacy-sensitive communication approaches were identified as essential to reduce inequities and ensure inclusivity (FMoH 2022:5). Without deliberate interventions, CBHI risked reinforcing existing socio-economic inequalities rather than mitigating them, thereby undermining its equity objectives and its broader contribution to universal health coverage(Assefa, Hill, Gilks, Admassu, Tesfaye & Damme 2020). Another important implication concerned the role of trust and awareness in shaping scheme uptake and utilization. Evidence showed that limited knowledge, misinformation, and low scheme visibility discouraged participation and undermined retention. Accordingly, policy efforts are needed to prioritize transparent, sustained, and context-specific communication strategies. Strengthening the Health Extension Program (HEP), institutionalizing regular community dialogues, and leveraging local media outlets to disseminate accessible and accurate information were considered critical interventions (FMoH 2017; WHO, 2019).

Moreover, the engagement of respected community figures such as religious leaders, kebele officials, and elders as CBHI advocates was shown to enhance legitimacy, reinforce trust, and strengthen collective commitment to the scheme (Assefa, Hill, Gilks, Admassu, Tesfaye & Damme 2020). Administrative inefficiencies have also emerged as persistent barriers to participation and satisfaction. Complex registration processes, long waiting times, and unresponsive services eroded community confidence in CBHI. Addressing these challenges required the simplification of enrollment procedures, the adoption of digital platforms for membership registration and renewal, and the capacity-building of frontline staff to deliver responsive, member-centered services (Mebratie et al., 2019; Debie et al., 2022). In addition, affordability constraints remained significant for vulnerable households. To address this, policymakers were encouraged to adopt progressive premium structures, implement cross-subsidization mechanisms, and integrate CBHI more closely with social protection schemes. Expanding the benefits package to include essential medicines and, where feasible, transport subsidies was recommended to reduce hidden costs that disproportionately burdened the poorest households (FMoH 2022).

The quality and responsiveness of healthcare services had also been decisive for membership retention and scheme legitimacy. Poor service quality undermined household willingness to renew membership and risked eroding confidence in the program. Thus, sustained investments in facility preparedness, supply chain management, and healthcare workforce training were necessary (World Bank 2018). Complementary measures such as the institutionalization of accountability mechanisms including community scorecards, participatory feedback systems, and performance monitoring were also recommended to strengthen responsiveness and trust between communities and healthcare providers.

Governance challenges further hindered effective scheme implementation. Ambiguous policy directives, weak intergovernmental coordination, and inconsistent supervision mechanisms were frequently reported as barriers to efficiency and accountability. These findings suggested the importance of standardized guidelines, robust supervision

frameworks, and clearer policy articulation, particularly with respect to reimbursement and claims processing (FMoH 2021). The clear delineation of responsibilities across federal, regional, and woreda authorities was also highlighted as crucial to reduce duplication, improve coordination, and strengthen accountability in scheme implementation (Assefa, Hill, Gilks, Admassu, Tesfaye & Damme 2020).

Ensuring the financial and institutional sustainability of CBHI remained a pressing policy concern. The study found that delayed reimbursements, inadequate government subsidies, and limited premium contributions posed significant risks to the scheme's long-term viability. Safeguarding sustainability required predictable and timely financial flows, enhanced state subsidies, and diversification of funding sources, including partnerships with donors, private insurers, and community-based solidarity initiatives (Chemouni 2018:92; Debie, Khatri & Assefa 2022:13; FMoH, 2022:3). In addition, strengthening institutional capacity at woreda and regional levels was essential to improve financial management, enhance accountability, and build administrative resilience.

The findings revealed that CBHI challenges were systemic rather than isolated. This suggested that piecemeal reforms would be insufficient to generate lasting improvements. Ethiopia therefore required comprehensive health financing reforms that situated CBHI within the broader national health financing framework (WHO 2019; FMoH 2022). Such reforms needed to include updates to the legal framework, improvements in institutional arrangements, and the fostering of multisectoral collaboration to enhance equity, sustainability, and service quality. Long-term reform commitments, sustained capacity-building investments, and clear legal codification were identified as indispensable if CBHI was to evolve into a resilient pillar of UHC and contribute meaningfully to the delivery of equitable and high-quality healthcare (WHO, 2019:41; FMoH 2022; Assefa, Hill, Gilks, Admassu, Tesfaye & Damme 2020).

7.12 Summary of integrated insights

In summary, the findings of this study revealed that the uptake and utilization of Community-Based Health Insurance in Shaggar, Oromia, were determined by a dynamic interplay of socio-economic, community, institutional, and policy-level factors. At the individual level, higher income and educational attainment facilitated enrollment and continued participation by enabling households to understand scheme benefits and navigate administrative procedures, whereas economically disadvantaged and less-educated households faced persistent barriers (Mebratie et al., 2019:117).

Interpersonal and community-level influences were pivotal. Trust in CBHI administration, awareness of scheme benefits, and perceived value of services shaped sustained membership, with household decision-making, spousal support, and peer influence mediating these effects. Community leaders and health extension workers acted as catalysts, promoting enrollment through awareness campaigns, conflict resolution, and legitimacy reinforcement. Weak or inconsistent leadership, however, undermined participation and trust (Eseta & Sinkie 2022:12; Kebede 2024:607).

Institutional factors, including enrollment processes, administrative efficiency, and service quality, directly influenced satisfaction and retention. Delays, cumbersome procedures, and negative provider attitudes discouraged participation, whereas prompt registration, supportive staff, and consistent availability of essential medicines reinforced trust and perceived value. Service quality emerged as a key determinant linking CBHI participation to healthcare utilization (Worede, Tariku, Asresie & Shibesh 2023:12).

Affordability and hidden costs remained critical barriers. Financial hardship reduced enrollment likelihood, while indirect costs, such as transportation and out-of-pocket payments for unavailable medicines, further impeded participation. Addressing these challenges requires both individual-level financial support and institutional strategies, including flexible premium schedules and targeted subsidies (Yenet, Nibret & Tegegne 2023:444).

Policy-level factors also played a decisive role. Ambiguities in guidelines, inconsistent implementation, and limited financial reserves undermined confidence in the scheme. Strengthening governance structures, aligning local practices with national policies, and enhancing financial management were essential to ensure sustainability, with evidence showing that institutional efficiency and financial resilience mutually reinforced scheme continuity (Mulat, Mao, Bharali, Balkew & Yamey 2022:8).

Overall, the study demonstrated that CBHI uptake and healthcare utilization are shaped by interdependent determinants across all levels of the Socio-Ecological Model. A holistic, multi-level strategy integrating individual financial support, community engagement, institutional strengthening, and policy reform is required to transform CBHI into a sustainable mechanism for equitable health financing in Ethiopia. This integrated perspective emphasizes that isolated interventions are insufficient; coordinated reforms across socio-economic, interpersonal, community, institutional, and policy domains are necessary to achieve meaningful and lasting improvements in scheme performance, utilization, and public trust.

CHAPTER 8

DEVELOPMENT OF INTERVENTION STRATEGIES

8.1 Introduction

The preceding three chapters presented the results and discussion of both the quantitative and qualitative components of this study. Building on those findings, this chapter focuses on the development of evidence-based intervention strategies aimed at improving Community-Based Health Insurance uptake and enhancing healthcare utilization in Shaggar, Oromia, Ethiopia. The proposed interventions are designed to address key challenges identified in the study, strengthen existing practices, and promote sustainable participation in the CBHI scheme. The study revealed a range of factors influencing household enrollment, renewal, and healthcare utilization. These strategies primarily aim to address the key challenges identified in the study, strengthen enabling factors, and promote sustainable participation in the CBHI program.

The development of intervention strategies followed a systematic and participatory process that integrated empirical evidence, theoretical guidance, and stakeholder input.

Both the quantitative and qualitative results served as the foundation for this process, which involved synthesizing the study's empirical findings with insights drawn from existing literature and expert consultations. The researcher conducted a systematic literature review to identify effective interventions and best practices from comparable CBHI contexts, ensuring that the intervention strategies were grounded in both evidence and experience.

The Socio-Ecological Model served as the guiding conceptual framework, providing a comprehensive, multilevel perspective on factors influencing CBHI uptake and healthcare utilization. Its application enabled the design of intervention strategies that is suitable to address individual and household behaviors as well as broader institutional, social, and policy determinants.

To ensure contextual relevance, feasibility, and local ownership, a consultative workshop was conducted with CBHI managers, health leaders, healthcare providers, and health extension workers. This forum facilitated collaborative reflection, validation of findings, and refinement of proposed strategies, ensuring that they aligned with the practical realities of implementers and beneficiaries. The intervention strategies were subsequently reviewed using a structured validation checklist assessing if they meet relevance, feasibility, effectiveness, acceptability, and sustainability (APEASE) criteria.

This chapter outlines the stakeholder workshop; the processes involved in developing and validating intervention strategies considerations for implementation and evaluation; and the limitations of the study.

8.2 Stakeholder workshop

A one-day, face-to-face stakeholders' workshop was conducted with 24 participants, including CBHI managers, health leaders, healthcare providers, and health extension workers from the sub-cities where the study was undertaken, namely Burayyu, Gefersa

Guje, Malka Nono, Furi, Sabeta, and Gelan Guda. Prior to participation, all stakeholders were fully informed about the purpose of the study, and written informed consent was obtained in accordance with the ethical procedures outlined in chapter three.

The target population for this phase comprised sub-city CBHI managers, health leaders, healthcare providers, and health extension workers who were purposively selected based on their technical expertise, operational responsibilities, and sustained involvement in CBHI implementation. This sampling approach ensured balanced representation across the study area and enabled the researcher to gain comprehensive insights into the practical realities of CBHI management and implementation in Shaggar, Oromia. The sample included one CBHI manager, one health leader, one healthcare provider, and one health extension worker from each selected sub-city, resulting in a total of 24 participants.

In preparation for the workshop, the researcher conducted a focused review of existing literature on CBHI implementation, enrolment, renewal, and healthcare utilization, with particular attention to evidence from low- and middle-income country contexts. This preparatory work provided an evidence-based foundation for the workshop and helped to frame discussions around interventions that had demonstrated relevance and feasibility in similar settings.

The primary purpose of the workshop was to present and reflect on the findings from both the quantitative (Phase 1a) and qualitative (Phase 1b) components of the study, and to collaboratively develop intervention strategies to address the identified challenges. The workshop commenced with a presentation of the key findings to establish a shared understanding among participants. Stakeholders, many of whom were directly involved in or familiar with CBHI implementation and data collection processes, confirmed the accuracy and contextual relevance of the findings. Together, they reviewed the major challenges identified in the study, including low enrolment and

renewal rates, limited community awareness, weak institutional coordination, perceived poor service quality, and financial constraints affecting scheme sustainability.

Following the presentation, participants engaged in plenary discussions and small group sessions to propose contextually feasible intervention strategies informed by their professional experience and knowledge of the local health system. These discussions enabled stakeholders to identify behavioural, structural, and systemic barriers to CBHI uptake and healthcare utilization, and to suggest practical actions to address both demand- and supply-side constraints. This participatory process fostered shared learning and ensured that proposed solutions were grounded in local realities.

After the workshop, the researcher synthesized the strategies proposed by stakeholders with evidence-based options identified through the literature review. This process resulted in the development of a single, integrated intervention strategy designed to be practical, context-appropriate, and responsive to the core challenges highlighted by the study. The draft strategy was subsequently shared with a panel of CBHI specialists and health system experts for external review. Their feedback on relevance, feasibility, and appropriateness within the Shaggar context was incorporated to refine and validate the final intervention strategy.

Throughout the strategy development process, the Socio-Ecological Model was used as a guiding framework. The final intervention was designed to address determinants of CBHI uptake and healthcare utilization at multiple levels, including individual, interpersonal, community, organizational, and policy domains, thereby ensuring a comprehensive and systems-oriented response to the challenges identified in this study.

8.3 Approach used for strategy development

The development of the intervention strategies in this study was guided by the Socio-Ecological Model. The SEM was selected because it offers a comprehensive, multi-level

framework capable of addressing the complex and interdependent determinants that influence Community-Based Health Insurance uptake and healthcare utilization. Participation in CBHI is not determined by individual awareness or economic considerations alone; rather, it results from a dynamic interplay among personal characteristics, interpersonal influences, organizational capacities, community norms, and broader policy environments. The SEM therefore provides a structured and theoretically grounded approach for examining these interconnected layers and translating them into targeted, contextually relevant intervention strategies.

Within the SEM, the individual level focuses on personal attributes such as knowledge, perceptions, and motivations that shape enrolment and service utilization decisions. The interpersonal level considers the influence of social networks including family members, peers, neighbours, and community opinion leaders who shape health-related behaviours. The organizational level encompasses the quality, efficiency, and responsiveness of healthcare facilities and CBHI administrative structures, which directly affect members' satisfaction and trust in the scheme, while the community level reflects shared cultural norms, collective beliefs, social expectations, and the influence of traditional and religious leaders that can either promote or hinder scheme participation. Finally, the structural or policy level includes the regulatory frameworks, financing mechanisms, governance arrangements, and institutional commitments that shape how CBHI is implemented, financed, and sustained. Because this study aims to design interventions that operate across these multiple levels of influence, the SEM provides the most appropriate conceptual foundation for strategy development.

Using the SEM as the guiding framework, the intervention strategies were developed through a five-stage process.

8.3.1 Step1: Define the problem and objectives

Although Community-Based Health Insurance uptake and healthcare utilization among heads of households are influenced by multiple factors, this study emphasizes that the first and most critical step in intervention development is the clear identification and definition of the specific problems to be addressed. Accordingly, this study systematically identified and examined the determinants of CBHI uptake and healthcare utilization through an integrated analysis of quantitative and qualitative findings. These determinants were organized and interpreted using the Socio-Ecological Model across individual, interpersonal, organizational, community, and policy levels, with particular emphasis on challenges that fall within the scope of this study and are amenable to intervention.

At the individual level, this study identified personal and socio-economic factors that directly influence CBHI uptake and healthcare utilization. Key individual-level barriers included limited knowledge of CBHI benefits, misconceptions about how the scheme operates, perceived unaffordability of premiums, and inadequate understanding of benefit entitlements. These challenges were further shaped by socio-demographic and health-related characteristics such as age, educational attainment, income level, and health status. The findings indicate that low awareness of CBHI benefits, misunderstandings regarding scheme procedures, and negative perceptions of affordability discouraged initial enrollment, delayed membership renewal, and reduced effective utilization of healthcare services. By identifying these individual-level challenges, this study established a critical foundation for developing targeted interventions aimed at improving knowledge, correcting misconceptions, increasing perceived value, and strengthening informed decision-making related to CBHI uptake.

At the interpersonal level, household and social relationships emerged as important influences on CBHI-related decision-making. Limited awareness of scheme benefits, misunderstandings about coverage and entitlements, affordability concerns, and

negative perceptions of service quality were often reinforced by minimal discussion within households and imbalances in decision-making power. These interpersonal dynamics discouraged initial enrollment, delayed renewal, and reduced healthcare utilization. These findings highlight the importance of accounting for household dynamics and social interactions when designing strategies to improve CBHI uptake and healthcare utilization.

At the organizational level, this study identified several institutional and service-delivery challenges within health facilities and CBHI administrative structures. Perceived poor quality of care, frequent stock-outs of essential medicines, unfriendly provider–client interactions, long waiting times, and administrative inefficiencies consistently emerged as major deterrents to CBHI uptake and healthcare utilization. These findings underscore the need for organizational-level interventions focused on improving service quality, provider responsiveness, and coordination between CBHI schemes and healthcare facilities.

At the community level, shared perceptions and collective experiences strongly shaped attitudes toward CBHI participation. Low levels of trust in the scheme, limited involvement of community leaders, and widely circulated negative narratives about public health services reduced collective support for enrollment and renewal. These community-level influences emphasize the role of social norms, collective experiences, and local leadership in sustaining CBHI participation.

At the policy level, broader structural and governance-related challenges are further shaped CBHI uptake and healthcare utilization. Issues related to premium-setting mechanisms, clarity of benefit packages, enforcement of enrollment policies, subsidy arrangements for vulnerable populations, and inconsistencies in policy implementation created uncertainty and weakened household confidence in the scheme. These policy-level constraints influenced decision-making across all other SEM levels.

This multilevel problem definition illustrates the complex and interconnected nature of the factors influencing CBHI uptake and healthcare utilization. By integrating individual, interpersonal, organizational, community, and policy perspectives, this study establishes a strong conceptual and empirical foundation for the development of intervention strategies that are contextually grounded, theoretically informed, and responsive to the lived realities of households and health system actors.

8.3.1.1 Goal setting

In this study, the primary goal of the intervention strategy is to strengthen CBHI uptake, membership renewal, and healthcare utilization in Shaggar, Oromia, by addressing the financial, informational, service-related, and institutional barriers that currently limit the scheme's effectiveness. Although quantitative findings indicated relatively high reported enrollment, the integrated mixed-methods analysis revealed that these figures do not consistently translate into sustained membership, effective healthcare use, or meaningful improvements in household health outcomes. Many households lacked a clear understanding of CBHI benefit packages, entitlements, and procedural requirements, while others expressed dissatisfaction related to service quality, financial constraints, and administrative inefficiencies. Trust in the CBHI system was shown to be fragile, influenced by recurrent experiences such as medicine stock-outs, delays in receiving care, perceived hidden costs, and variable provider responsiveness.

Building on these findings, the overarching goal of this intervention strategy is to develop a comprehensive and context-sensitive approach that strengthens household participation, enhances trust and perceived value, and fosters a coordinated and supportive institutional environment. By addressing the socio-economic, service delivery, and policy-level determinants identified through this study, the strategy aims to ensure equitable, efficient, and sustainable implementation of CBHI, ultimately improving healthcare utilization and health outcomes in Shaggar.

8.3.1.2 Objectives

To operationalize this overarching goal, the intervention strategy is guided by a set of specific, evidence-based objectives derived from the quantitative, qualitative, and integrated findings of this study. These objectives address the multifaceted determinants influencing CBHI enrollment, renewal, and healthcare utilization in Shaggar, Oromia, and aim to support effective and sustainable scheme implementation.

At the household level, the intervention seeks to increase both initial enrollment and long-term renewal by improving affordability, strengthening trust, and enhancing understanding of the scheme. While general awareness of CBHI is relatively high, a substantial proportion of households demonstrated limited understanding of benefit packages, entitlements, claims procedures, and financial protection mechanisms. Accordingly, the intervention aims to deepen household comprehension through clear, transparent, and accessible communication regarding rights, obligations, benefits, and procedures. By fostering informed decision-making, the strategy seeks to reinforce the perceived value of CBHI membership and encourage sustained engagement.

Improving service satisfaction constitutes another central objective, recognizing the critical role of service quality in shaping both uptake and utilization. The findings indicate that medicine availability, provider attitudes, waiting times, and diagnostic capacity significantly influence user experiences. In response, the intervention aims to enhance provider responsiveness, strengthen accountability mechanisms, ensure consistent access to essential medicines, and improve overall service quality. These measures are intended to create positive healthcare experiences that build confidence in the CBHI system and promote continued utilization.

Addressing financial, social, and logistical barriers is also prioritized. Many households face challenges related to premium affordability, hidden costs, transportation constraints, and unmet expectations regarding service entitlements. The intervention therefore aims to reduce both direct and indirect costs, particularly for economically vulnerable populations, to promote equitable access and minimize dropout risks.

At the institutional and policy levels, the intervention emphasizes strengthening governance, coordination, and administrative efficiency. Key priorities include improving communication across administrative tiers, ensuring timely reimbursements, clarifying operational guidelines, and enhancing accountability and resource allocation mechanisms. By addressing systemic gaps such as weak coordination, inconsistent policy implementation, and delayed financial flows, these objectives aim to create an enabling institutional environment capable of sustaining long-term CBHI performance.

8.3.1.3 Action

The formulation of the action plan was guided by triangulated evidence derived from the quantitative and qualitative findings of this study. To translate the overarching goal and objectives into practice, a comprehensive set of evidence-informed and context-specific actions was developed based on the determinant factors identified through integrated analysis. These actions aim to strengthen CBHI uptake, renewal, and healthcare utilization in Shaggar by addressing household, community, service-delivery, and institutional-level barriers.

At the household and community levels, the strategy focuses on enhancing awareness, understanding, and trust in the CBHI scheme. Structured engagement platforms including kebele meetings, religious institutions, women’s groups, schools, youth associations, and door-to-door outreach by Health Extension Workers are utilized to disseminate accurate information on benefit packages, entitlements, premium structures, and claims procedures. User-friendly materials, visual aids, and radio messages are developed to improve clarity, while participatory dialogue forums and

feedback mechanisms support two-way communication, address misconceptions, and reinforce confidence in the scheme. Incentive mechanisms, such as recognition initiatives and reduced administrative burdens, are introduced to promote timely enrollment and renewal.

To improve service satisfaction and healthcare utilization, actions target key service-delivery challenges identified in this study. These include strengthening essential medicine availability through improved supply-chain monitoring, enhancing diagnostic capacity, reducing waiting times through better patient flow management, and improving provider responsiveness. Continuous training on patient-centered care, ethical practice, and effective communication is implemented, alongside facility-level accountability mechanisms such as service charters, performance monitoring, client satisfaction assessments, and review meetings. These measures aim to rebuild trust in public health facilities and increase the perceived value of CBHI membership.

To address financial and logistical barriers, the intervention introduces flexible premium payment options, including installment-based contributions, and strengthens linkages with social protection programs to support vulnerable households. Clear communication protocols are established to eliminate hidden costs, while targeted outreach supports households facing transportation or referral-related challenges.

At the institutional and governance levels, the intervention outlines actions to improve administrative efficiency, coordination, and policy clarity. Regular coordination platforms are established between CBHI offices, health facilities, sub-city administrations, and city-level leadership to support joint planning and problem-solving. Operational guidelines related to referrals, reimbursements, claims management, and premium collection are clarified and widely disseminated. Reimbursement timeliness is improved through streamlined procedures, digital tracking systems, and strengthened monitoring,

while targeted capacity-building initiatives enhance CBHI personnel skills in financial management, data use, customer service, and scheme administration.

8.3.2 Step 2: Identification of determinants

After defining the problem, the next step was to identify the determinants influencing CBHI uptake and healthcare utilization in this step. This study systematically identified the key determinants influencing Community-Based Health Insurance uptake and healthcare utilization across the levels of the Socio-Ecological Model. This identification was achieved through an integrated analysis of quantitative predictors derived from logistic regression and qualitative insights generated from in-depth stakeholder interviews. By deliberately mapping these findings across individual, interpersonal, organizational, community, and policy levels, this study demonstrates how multiple, interconnected factors shape household decisions related to CBHI enrollment, membership renewal, and the utilization of healthcare services.

At the individual level, this study identified knowledge and awareness of CBHI, perceived affordability, satisfaction with healthcare quality, and trust in the CBHI system as central determinants of uptake and utilization. Quantitative analysis showed that individuals with adequate awareness of CBHI were 2.9 times more likely to enroll and 2.35 times more likely to utilize healthcare services than those with limited awareness. These statistical associations were reinforced by qualitative evidence, in which participants consistently explained how misinformation and limited understanding of CBHI benefits discouraged engagement. Trust in the scheme also emerged as a critical determinant: individuals who expressed trust were 2.05 times more likely to enroll and 2.10 times more likely to seek care. However, this study found that such trust was frequently undermined by inconsistent service quality, medicine shortages, and delays in claims processing. Educational attainment further shaped participation, with individuals who had primary-level education being between 1.8 and 1.95 times more likely to enroll and utilize services. Financial capacity also played a decisive role, as

households earning above 2000 ETB demonstrated higher enrollment and utilization, while those facing financial hardship were less likely to participate.

At the interpersonal level, this study found that the influence of family members, peers, and community leaders played a substantial role in shaping CBHI-related decisions. Quantitative results indicated that households influenced by community leaders were 1.85 times more likely to enroll and 1.75 times more likely to utilize healthcare services. Qualitative findings further revealed that encouragement from trusted individuals including family members, peers, and religious leaders, often strengthened households' willingness to join or renew their CBHI membership. In contrast, this study shows that negative experiences, particularly those related to poor service quality and delayed reimbursements, spread rapidly through social networks and discouraged participation. These interpersonal narratives significantly shaped collective attitudes toward CBHI and often determined whether enrollment increased or declined within specific communities.

At the organizational level, this study identified the performance of healthcare facilities and the effectiveness of CBHI administrative processes as key determinants of both uptake and utilization. Service quality, staff responsiveness, efficiency of claims management, and provider–client communication consistently emerged as influential factors across data sources. Participants frequently described how persistent medicine stockouts, long waiting times, limited diagnostic supplies, and poor communication from health workers discouraged enrollment and renewal. Quantitative analysis further demonstrated that satisfaction with the enrollment process was positively associated with both CBHI uptake and healthcare utilization. This study further indicates that inefficient claims management not only reduced satisfaction but also contributed to mistrust in the system and weakened retention among enrolled households.

At the community level, this study observed that broader social dynamics, cultural norms, and shared community perceptions strongly influenced CBHI participation.

Communities characterized by strong social cohesion and active engagement of local, religious, and traditional leaders exhibited higher enrollment and renewal rates. Households were more likely to participate when respected leaders publicly endorsed the scheme, whereas communities where negative experiences circulated widely experienced reduced uptake. Cultural norms related to healthcare-seeking behavior also influenced utilization; despite being insured, some households continued to rely on traditional healers, thereby limiting effective use of CBHI-covered services.

At the policy and structural level, this study identified governance and institutional arrangements as critical factors shaping the overall functioning of the CBHI scheme. Qualitative findings revealed persistent governance challenges, including inconsistent leadership, weak coordination across city, sub-city, and facility levels, and inadequate supervision. This study suggests that these structural weaknesses contributed to delays in reimbursement, medicine stockouts, and variable service quality, all of which undermined community trust in the scheme. Concerns related to financial and institutional sustainability were also evident, as heavy reliance on member premiums and limited government support raised doubts about the scheme's long-term reliability. Additionally, shortages of trained personnel and inadequate health facility infrastructure constrained service delivery and further discouraged households from enrolling in or renewing CBHI membership.

8.3.3 Step 3: Prioritizing determinants for intervention

In this step, this study systematically identified and prioritized the most critical and actionable determinants that could guide the development of effective intervention strategies. Building on the determinants previously identified across the levels of the Socio-Ecological Model, a set of systematic criteria magnitude of effect, modifiability, and contextual feasibility was applied to determine which factors offered the greatest potential influence on Community-Based Health Insurance uptake and healthcare utilization. This approach ensured that resources and efforts would be directed toward

determinants where interventions could achieve maximum impact within the operational and resource realities of Shaggar's CBHI system.

At the individual level, determinants such as knowledge, awareness, perceived affordability, and trust in the CBHI scheme emerged as high-priority targets. Their strong quantitative effects and high modifiability made them strategically important. Individuals with adequate awareness of CBHI were 2.9 times more likely to enroll and 2.35 times more likely to utilize healthcare services, while those who trusted the scheme were 2.05 times more likely to enroll and 2.10 times more likely to seek care. These findings highlighted the importance of addressing knowledge gaps, improving understanding of benefits, and countering misinformation through targeted health education and communication interventions. Given their modifiability and feasibility through existing community structures, these individual-level determinants were prioritized as immediate leverage points for intervention.

At the interpersonal level, the influence of family members, peers, and community and religious leaders was identified as a substantial driver of household decision-making. Households influenced by trusted leaders were 1.85 times more likely to enroll and 1.75 times more likely to utilize services. These determinants are highly modifiable through deliberate engagement with existing community structures. Accordingly, this study prioritized strengthening interpersonal communication through structured community dialogues, role-modelling by respected leaders, and amplification of positive testimonials to enhance motivation for enrollment and renewal, while mitigating the impact of negative narratives.

At the organizational level, service quality, medicine availability, responsiveness of health workers, and efficiency of claims management were identified as key determinants of trust and continuity in CBHI membership. Persistent service challenges, including stockouts, long waiting times, limited diagnostic supplies, and poor provider

communication were core barriers. While improvements in infrastructure and staffing require substantial investment, determinants such as claims processing, administrative communication, and client handling were found to be highly modifiable. Therefore, organizational-level priorities focused on streamlining claims management, improving provider–client communication, and enhancing service responsiveness to strengthen member satisfaction and retention.

At the community level, determinants including social cohesion, cultural norms, and levels of trust reinforced by local, traditional, religious leaders were recognized as medium-term priorities. Although their magnitude of effect was notable, modifiability tends to be moderate to low in the short term due to the gradual evolution of community norms. Nevertheless, engagement with community associations, traditional structures, and religious platforms was highly feasible, making these determinants valuable for reinforcing collective trust, sustaining behavioural change, and enhancing scheme legitimacy across neighbourhoods.

At the policy and structural level, governance challenges, leadership inconsistency, limited accountability, and financing constraints were identified as critical long-term determinants affecting CBHI sustainability. These factors exerted strong influence over scheme functioning but were less modifiable in the short term due to administrative and political constraints. Addressing them requires system-level reforms, improved supervision, strengthened coordination across administrative tiers, and more predictable funding flows. Consequently, policy and structural determinants were prioritized as long-term focus areas for strategic advocacy and system strengthening.

Mapping prioritized determinants to specific leverage points clarified where interventions could be most effective. Individual and interpersonal determinants aligned with communication-driven interventions, such as intensified health education, targeted awareness campaigns, and structured community dialogues. Organizational

determinants corresponded to administrative improvements, including digitalized claims processes, enhanced service quality, and strengthened staff responsiveness. Community-level determinants informed interventions centered on social mobilization, cultural alignment, and leveraging trusted figures to influence collective behavior. Policy-level determinants required governance reforms, improved resource allocation, and stronger accountability mechanisms to ensure long-term CBHI sustainability.

Through this comprehensive and systematic prioritization process, this study identified trust in the scheme, gaps in knowledge and awareness, perceived affordability, and organizational service quality as the most influential and actionable determinants. Prioritizing these factors ensured that subsequent intervention strategies were not only evidence-based but also contextually grounded, operationally feasible, and aligned with the capacities, challenges, and realities of Shaggar's health and administrative system. This approach also emphasized the interconnected nature of SEM levels, demonstrating that improvements in one domain can catalyse positive changes across others, ultimately supporting more effective CBHI uptake, sustained membership, and enhanced healthcare utilization.

8.3.4 Step 4: Developing multi-level intervention strategies

Building on the prioritized determinants identified in Step 3, this study systematically developed an integrated set of multi-level intervention strategies to address the key factors influencing Community-Based Health Insurance uptake, membership renewal, and healthcare utilization. Guided by the Socio-Ecological Model, these strategies were deliberately structured across the individual, interpersonal, organizational, community, and policy or structural levels. This multilevel organization reflects the study's recognition that sustainable improvements in CBHI performance require coordinated and mutually reinforcing actions rather than isolated or fragmented interventions. The overarching objective of this step was to translate empirical evidence into feasible, contextually responsive, and scalable strategies capable of strengthening Shaggar's

CBHI system. By explicitly aligning each intervention with determinants identified through the integrated quantitative and qualitative analyses, this study sought to enhance the effectiveness, equity, and long-term sustainability of CBHI implementation and healthcare utilization within the local socio-administrative context.

At the individual level, this study prioritized interventions aimed at strengthening knowledge, awareness, motivation, and trust in the CBHI scheme. Quantitative findings demonstrated that awareness (AOR = 2.9), perceived affordability (AOR = 2.35), and trust in the scheme (AOR = 2.05–2.10) were strong predictors of both enrollment and healthcare utilization, positioning these factors as critical leverage points for intervention. To address knowledge gaps, misinformation, and low perceived value, the intervention framework proposed culturally appropriate health education campaigns supported by clear and accessible information, education, and communication (IEC) materials. Mobile-based messaging and locally adapted communication tools were incorporated to clearly explain CBHI benefits, entitlements, and financial protection mechanisms. These strategies were intentionally designed to move households beyond general awareness toward informed and confident participation, thereby strengthening individual motivation to enroll, renew membership, and consistently utilize healthcare services.

At the interpersonal level, this study systematically leveraged the influential role of family members, peers, and trusted community and religious leaders in shaping household decision-making. Given that interpersonal influence significantly increased the likelihood of enrollment and healthcare utilization (AOR = 1.85 and 1.75, respectively), the intervention strategy emphasized strengthening positive social influence within existing social networks. Proposed activities included engaging household heads, women’s groups, and religious leaders as CBHI advocates; encouraging households with positive experiences to share testimonials; and facilitating small-group discussions within trusted social settings. These approaches were designed to normalize constructive dialogue around CBHI, counter negative narratives,

and reinforce supportive environments in which collective decisions regarding enrollment and renewal are made. By strengthening social support and amplifying positive experiences, these strategies also aimed to reduce the circulation of discouraging misinformation within communities.

At the organizational level, this study focused on improving service delivery quality and administrative responsiveness, recognizing these as persistent barriers undermining trust, satisfaction, and continuity of CBHI membership. Qualitative findings consistently highlighted medicine stockouts, long waiting times, poor provider–client interactions, and inefficient claims processing as major contributors to dissatisfaction and dropout. In response, the intervention framework prioritized targeted capacity-building for CBHI staff and healthcare providers, with a focus on claims management, effective communication, and client-centered service delivery. Additional strategies included simplifying enrollment and renewal procedures, reorganizing patient flow within health facilities, strengthening pharmacy and stock management systems, and establishing dedicated CBHI support desks to facilitate timely and efficient assistance. To ensure accountability and continuous improvement, this study incorporated routine feedback mechanisms, internal supervision, and performance monitoring across implementing institutions.

At the community level, this study designed interventions to address shared norms, collective trust, and community-wide perceptions of CBHI. The findings indicated that communities characterized by strong social cohesion and active involvement of local leaders demonstrated higher levels of enrollment, renewal, and healthcare utilization. Accordingly, the intervention framework deliberately leveraged community platforms such as *Iddir*, women's associations, youth groups, and traditional leadership networks as key channels for engagement and mobilization. Core strategies included organizing regular community dialogue forums, integrating CBHI messaging into cultural and religious gatherings, and disseminating model-family testimonials that illustrate the practical benefits of membership. The use of local media, including community radio

and public notice boards, was incorporated to reinforce consistent and credible messaging, while public endorsements from respected elders and influential figures were utilized to enhance legitimacy and collective ownership. Collectively, these strategies aimed to reposition CBHI as a shared community resource rather than an individual financial burden, thereby fostering trust, social accountability, and sustained participation.

At the policy and structural level, this study emphasized interventions targeting governance, coordination, and sustainable financing, which were identified as critical for the long-term functioning of the CBHI system. Structural challenges, including leadership inconsistency, weak accountability mechanisms, financing constraints, and fragmented coordination across administrative tiers were recognized as determinants requiring longer-term, system-level responses. Proposed strategies included strengthening coordination among city, sub-city, and facility-level CBHI structures; enhancing routine monitoring, supervision, and performance review systems; and advocating for timely and equitable budget allocation to reduce operational delays and prevent recurrent medicine stockouts. Policy-oriented interventions focused on improving transparency and accountability, clarifying benefit entitlements and reimbursement procedures, strengthening provider responsibilities, and expanding subsidies for low-income households. More predictable and sustainable financing mechanisms were also prioritized to support equity, retention, and institutional stability.

The multi-level strategies formulated in Step 4 constitute a coherent and integrated intervention framework that acknowledges the dynamic interplay among behavioural, social, organizational, and structural determinants of CBHI participation. Improvements at one SEM level are expected to reinforce progress at others for example, enhanced organizational service quality strengthening individual trust, or community engagement amplifying interpersonal influence and system legitimacy while policy-level reforms provide the governance and financial foundation necessary to sustain lower-level interventions. The strategies formulated in this step offer a contextually grounded and

empirically informed roadmap for improving CBHI enrollment, renewal, and healthcare utilization in Shaggar, translating study findings into actionable, scalable, and sustainable solutions that advance progress toward universal health coverage.

8.3.5 Integrating and aligning strategies

The integration and alignment of multi-level strategies represented a critical phase in ensuring that interventions developed across the Socio-Ecological Model operated in a coherent, mutually reinforcing, and systematically coordinated manner.

This study systematically integrated and aligned multi-level intervention strategies to ensure that actions developed across the Socio-Ecological Model functioned in a coherent, mutually reinforcing, and well-coordinated manner. Rather than treating interventions at each level as stand-alone activities, the researcher deliberately synthesized individual, interpersonal, community, organizational, and policy/system-level strategies into a single unified framework, referred to as the Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy.

The purpose of developing the CICU Strategy was to ensure that interventions addressed the complex and interdependent determinants of CBHI uptake and healthcare utilization in Shaggar in a synergistic way. By consolidating previously distinct actions into one integrated framework, this study sought to promote efficiency, internal consistency, and sustained impact across all levels of the CBHI system.

At the individual level, the CICU Strategy places priority on improving knowledge, awareness, and perceived benefits of CBHI. This emphasis reflects the study's evidence that persistent knowledge gaps, misinformation, and low perceived value remain major barriers to enrollment and renewal. To address these barriers, the researcher aligned health education campaigns, tailored information, education and

communication (IEC) materials, mobile-based reminders, and facility-based counselling into a coordinated package. Together, these interventions strengthen understanding of CBHI entitlements, affordability mechanisms, and practical benefits, thereby enhancing individual motivation to enroll, renew membership, and consistently utilize healthcare services.

At the interpersonal level, the CICU Strategy deliberately leverages the influence of families, peers, and social networks to reinforce positive decision-making and collective commitment to CBHI participation. The researcher integrated household counselling, peer-group discussions, and the sharing of model family experiences to promote peer learning and social endorsement. These aligned actions help counter negative perceptions, reduce misinformation, and foster supportive social environments in which households make informed and collective decisions regarding enrollment and renewal.

At the community level, the integration process focused on addressing shared norms, trust, and the influence of local leadership on CBHI uptake and utilization. The CICU Strategy actively engages community and traditional structures such as women's associations, youth groups, and local leadership networks to mobilize participation and strengthen local ownership of the scheme. Coordinated activities, including community dialogue forums, integration of CBHI messages into cultural and religious gatherings, dissemination of model family testimonials, and use of local media channels (community radio and notice boards), collectively reinforce trust, normalize participation, and frame CBHI as a shared social investment rather than an individual financial burden. These community-level actions were intentionally aligned to complement individual and household-level interventions and support long-term engagement.

At the organizational level, this study aligned service-delivery and administrative interventions to ensure that health facilities and CBHI offices could respond effectively to increased demand generated through awareness and community mobilization.

Integrated strategies included capacity building for CBHI staff and healthcare providers, establishment of dedicated CBHI service desks, reorganization of patient flow, strengthening claims management systems, and institutionalization of routine supervision, monitoring, and feedback mechanisms. Strengthened organizational responsiveness was identified as essential for sustaining trust, reinforcing positive user experiences, and supporting continuous enrollment, renewal, and utilization.

At the policy and system level, the CICU Strategy was aligned with broader Universal Health Coverage priorities, sustainable financing mechanisms, and governance structures. The researcher integrated actions aimed at improving coordination across city, sub-city, and facility levels, advocating for equitable and predictable budget allocation, and institutionalizing monitoring and accountability systems. These system-level interventions were designed to create an enabling environment that supports and sustains lower-level strategies, enhances scalability, and promotes equity and continuity in CBHI implementation.

The CICU Strategy represents an evidence-based and systematically integrated framework in which interventions across SEM levels reinforce one another. Improvements at one level such as enhanced individual knowledge are intentionally supported by complementary actions at interpersonal, community, organizational, and policy levels, thereby minimizing fragmentation and maximizing impact. Through this integrated design, this study ensured that behavioural, social, institutional, and systemic determinants of CBHI uptake and healthcare utilization were addressed cohesively, increasing the likelihood of sustained effectiveness, scalability, and long-term sustainability of CBHI in Shaggar.

8.4 Strengths of the CICU Strategy

The strength of the Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy is that it was developed systematically based on evidence generated from this

study. The strategy directly addresses specific problems affecting CBHI uptake and healthcare utilization in Shaggar, as identified through integrated quantitative and qualitative findings. This means that the interventions were not assumed or borrowed from other settings but were designed to respond to real and locally identified challenges related to awareness, affordability, trust, service quality, and governance.

The CICU Strategy brings together interventions at the individual, interpersonal, community, organizational, and policy levels into one coordinated framework. By doing so, it ensures that information provided at health facilities is reinforced at household and community levels through counselling, community dialogue, and engagement of local leaders. Any CBHI information that may be missed during facility-based counselling can be reinforced through community outreach activities, peer discussions, and local platforms such as Iddir and community meetings. This multi-level approach helps households to better understand CBHI benefits, entitlements, and procedures, which increases informed decision-making and confidence in the scheme.

Another strength of the strategy is the use of standardized and consistent communication approaches. Health education messages, IEC materials, facility counselling, and community engagement activities are aligned to deliver the same CBHI information across different contact points. This reduces misinformation, misunderstandings, and negative perceptions about CBHI. When communities have clear and accurate knowledge, they are more likely to trust the scheme, support each other’s enrollment decisions, and remain members over time.

The CICU Strategy also strengthens service delivery by linking increased awareness and demand with improvements in health facility responsiveness. Capacity building for healthcare providers and CBHI staff, improved claims management, and the establishment of dedicated CBHI service points help ensure that members receive

timely and respectful services. When services are reliable and responsive, household satisfaction increases, which supports renewal and continued healthcare utilization.

In addition, the inclusion of organizational and policy-level actions strengthens the sustainability of the strategy. By addressing coordination, financing, supervision, and accountability mechanisms, the CICU Strategy supports long-term system strengthening rather than short-term behaviour change alone. This increases the likelihood that improvements in CBHI uptake and utilization can be sustained and scaled within the broader Universal Health Coverage agenda.

8.5 Limitations of the CICU Strategy

Despite its strengths, the CICU Strategy may have limitations if it is not implemented correctly and consistently across all levels. One limitation is that the strategy depends heavily on effective coordination among multiple actors, including CBHI officials, health leaders, healthcare providers, and health extension workers. If coordination is weak or roles are unclear, some interventions may not be implemented as planned, which could reduce their overall impact.

Another limitation is related to reliance on frontline implementers. If health extension workers, CBHI focal person, or healthcare providers are not adequately trained or supported, important CBHI information may be delivered inconsistently. For example, if community members are only given IEC materials without proper explanation, they may not read or understand the information, or they may discard it altogether. Similarly, rushed or irregular counselling at health facilities may result in incomplete understanding among households.

The strategy may also be affected by resource and financing constraints. Some interventions, such as improving medicine availability, strengthening claims systems,

and expanding subsidies for vulnerable households, require adequate and predictable funding. If financial resources are limited or delayed, implementation may be incomplete, which could weaken trust in the CBHI system.

In addition, differences in socio-cultural contexts across communities may influence how interventions are received. Community engagement approaches that work well in one area may not be equally effective in another unless they are adapted to local norms, leadership structures, and levels of trust. Without continuous monitoring and adjustment, some population groups may not be fully reached.

Therefore, successful implementation of the CICU Strategy requires proper training of frontline implementers, continuous supportive supervision, strong institutional commitment, and stakeholder buy-in at all levels. Ongoing monitoring and feedback mechanisms are essential to ensure that the strategy is implemented as designed and achieves its intended outcomes.

8.6 Phase 3: Validation of developed intervention strategies

The aim of this phase was to validate the developed intervention strategy for improving Community-Based Health Insurance uptake and healthcare utilization. In this study, the Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy was validated through a face-to-face engagement with sub-city CBHI scheme experts who are directly responsible for CBHI implementation and own extensive contextual experience within their respective sub-cities. All ethical requirements were fully observed as detailed in chapter 3 of this study.

A communicative, stakeholder-based validation approach was adopted to ensure meaningful participation, promote stakeholder ownership, and enhance the likelihood that the developed intervention strategy would be feasible, acceptable, and effective

under routine implementation conditions. The target population for this phase consisted of CBHI scheme experts from Burayyu, Gefersa Guje, Malka Nono, Furi, Sabeta, and Gelan Guda sub-cities, where the study was conducted. These stakeholders were purposively selected based on their technical expertise, operational responsibilities, and sustained involvement in CBHI implementation. The sample size comprised six sub-city CBHI scheme experts, one from each selected sub-city.

The validation was conducted through face-to-face meetings held within CBHI experts in the study area. During these sessions, the researcher presented a summarized version of the study findings together with the developed CICU Strategy. The summary highlighted the key determinants of CBHI uptake and healthcare utilization identified in the earlier phases of the study, as well as the proposed intervention components and their intended outcomes. This approach ensured that all stakeholders had a shared understanding of the evidence informing the strategy and were able to engage actively in the validation process.

The researcher developed a checklist with open-ended questions, which was used to check whether each component of the developed intervention strategy meet the APEASE criteria (see Annexure G). Sub-city CBHI scheme experts were requested to review and evaluate whether the intervention strategy met the APEASE criteria during the face-to-face validation sessions, and to provide both verbal and written feedback based on their professional experience and contextual knowledge.

The feedback generated during the validation meetings was systematically reviewed and analyzed. Comments were compared across respondents to identify areas of convergence, overlapping views, and any concerns regarding the proposed intervention strategy. The findings from the validation process revealed a high level of agreement among stakeholders regarding the relevance, feasibility, and potential effectiveness of the CICU Strategy (see table 8.1 below). Comments and suggestions were carefully

reviewed and incorporated to improve clarity, after which the validated intervention strategies were finalised.

A copy of the finalized CICU Strategy was subsequently shared with the participating sub-city CBHI experts to promote ownership and to support its potential integration into routine CBHI planning and implementation processes.

8.6.1 Comments on the validation of the CICU intervention strategy

In this phase, the CICU Strategy was systematically assessed against the APEASE criteria, using stakeholder feedback as empirical input to inform analytical judgments. The sections below present the interpretation of validation findings across each criterion.

8.6.1.1 Affordability

The researcher asked the stakeholders to confirm if the developed CICU Strategy is affordable when implemented at the intended scale using existing financial resources? Stakeholders indicated that the CICU Strategy is affordable because it relies on existing CBHI and health system structures and does not introduce additional financial burdens for households.

One participant explained that “most of the activities proposed in the strategy, such as community education and household counselling, are already part of the routine work of Health Extension Workers and CBHI focal persons.”

Another participant emphasized that “the strategy does not require households to pay anything extra beyond the CBHI premium, and it uses existing community platforms and health facilities, which reduces costs.”

Participants further noted that the use of existing institutional arrangements minimizes the need for additional funding or new structures. As one stakeholder stated, “because the strategy is integrated into the current system, it is affordable and realistic to implement.” It was therefore agreed that the CICU Strategy meets the affordability criterion.

8.6.1.2 Practicability

The researcher asked stakeholders to assess whether the developed CICU Strategy could be implemented as designed using existing human resources, systems, and infrastructure within the current health system context. Stakeholders indicated that the strategy is practicable and well aligned with ongoing CBHI implementation and health service delivery arrangements.

Participants emphasized that the proposed activities fit within established operational mechanisms. One stakeholder noted that *“the strategy fits well within existing CBHI implementation processes and routine health facility operations,”* suggesting that it complements rather than disrupts current practices.

Another participant explained that implementation would not require the establishment of new administrative structures, stating that *“Health Extension Workers, CBHI focal persons, and health facility staff are already in place and can implement the activities with minimal additional orientation.”* Stakeholders further highlighted that strengthening coordination among these existing actors would enhance implementation efficiency. As one respondent observed, *“clear roles and responsibilities make implementation easier because staff are already familiar with the tasks.”*

The stakeholders confirmed that the CICU Strategy is realistic and feasible within the current system, and it was therefore agreed that the practicability criterion is met.

8.6.1.3 Effectiveness

The researcher further asked stakeholders to reflect on whether the CICU Strategy is likely to improve CBHI uptake and healthcare utilization. Participants indicated that the strategy has strong potential to be effective due to its comprehensive, integrated, and multi-level design.

Stakeholders noted that the strategy addresses multiple barriers simultaneously. One participant explained that *"the strategy addresses awareness, trust, service quality, and administrative challenges at the same time, which is essential for improving CBHI uptake."* This integrated approach was viewed as increasing the likelihood of sustained impact.

Another participant highlighted that *"linking community sensitization with improvements in service delivery and claims management will increase household confidence in the scheme."* Participants also emphasized that addressing both demand-side and supply-side constraints would promote sustained utilization. As one stakeholder stated, *"when people understand the scheme and receive better services, they are more likely to enroll, renew membership, and use healthcare services appropriately."*

Based on these reflections, it was agreed that the CICU Strategy meets the effectiveness criterion.

8.6.1.4 Acceptability

The researcher explored whether the CICU Strategy would be acceptable to communities, health workers, and other key stakeholders. Participants reported that the strategy is highly acceptable, as it builds on familiar community structures and culturally appropriate approaches.

One participant noted that *"the strategy uses trusted community leaders and local communication methods, which makes it acceptable to households."* Stakeholders

emphasized that leveraging existing social structures enhances community trust and ownership.

Health workers expressed strong support for the strategy, highlighting alignment with their existing roles. As one participant stated, *"the proposed interventions align with our existing roles and responsibilities, so we are comfortable implementing them."* Community representatives further emphasized that involving households and local administrators would strengthen acceptance. One respondent explained that *"when communities are actively involved, trust in CBHI improves."* It was therefore agreed that the CICU Strategy meets the acceptability criterion.

8.6.1.5 Safety

The researcher asked stakeholders to consider whether the CICU Strategy might pose any physical, social, or institutional risks to beneficiaries or implementers. Participants indicated that no foreseeable risks were associated with the strategy.

Stakeholders emphasized that the strategy promotes ethical service delivery, transparency, and respectful engagement with communities. One participant explained that *"improving communication and accountability reduces misunderstandings and potential conflicts between households and service providers."*

No participants identified any potential physical, social, or institutional harm arising from the strategy. It was therefore agreed that the CICU Strategy meets the safety criterion.

8.6.1.6 Equity

The researcher asked stakeholders to assess whether the CICU Strategy adequately addresses the needs of poor and vulnerable populations. Participants emphasized that equity considerations are explicitly integrated into the strategy.

Stakeholders noted that targeted community outreach and improved access to information would help reach underserved households. One participant stated that *"focused engagement at community level will help include poor and vulnerable groups who are often missed."*

Another participant stressed the importance of flexible payment arrangements and fair service provision to prevent exclusion. Participants further emphasized that strengthening support mechanisms would enhance inclusiveness. As one stakeholder explained, *"the strategy ensures that no group is left behind in CBHI enrollment and healthcare utilization."*

It was therefore agreed that the CICU Strategy meets the equity criterion.

Table 8.1: Validation of the CICU Strategy

Intervention strategy	**Target population**	**Sample size**	**Methodology for validation**	**Does the intervention strategy meet APEASE criteria?**
Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy	Sub-city CBHI experts	Six CBHI scheme experts from six sub-cities	Structured validation checklist based on APEASE criteria	Yes. The overall agreement among stakeholders was that the CICU Strategy meets the APEASE criteria and is feasible, acceptable, and appropriate for implementation within the local CBHI context.

8.7 Implementation and evaluation of the study

The full implementation and evaluation of the CICU Strategy are beyond the scope of this study; however, the researcher intends to conduct a pilot implementation in the six sub-cities where the study was originally conducted. The pilot will be implemented on a small scale to allow for close monitoring, learning, and refinement. Integration into

existing CBHI and health system processes will be prioritized, avoiding the establishment of parallel structures.

Key implementers, including Health Extension Workers, CBHI focal persons, and selected health facility staff, will receive targeted orientation and short-term training to ensure effective delivery of the strategy within their routine roles. Prior to implementation, formal engagement and buy-in will be sought from relevant health system authorities, including CBHI administrative bodies and local health offices, to ensure institutional ownership and alignment with existing policies, operational guidelines, and health system priorities.

Evaluation of the CICU Strategy will be conducted concurrently with the pilot to assess feasibility, acceptability, reliability, implementation challenges, and preliminary outcomes. Outcome evaluation will focus on changes in CBHI enrollment, membership renewal, and healthcare utilization patterns at the community level. Context-specific evaluation tools will be developed in consultation with CBHI experts, health system managers, healthcare providers, and community representatives, drawing on routine CBHI records, health facility data, and stakeholder feedback to capture both quantitative trends and qualitative experiences.

Through this pilot implementation and evaluation, the researcher aims to generate practical evidence on the effectiveness of the CICU Strategy. The findings will inform further refinement, guide decisions regarding scale-up, and contribute to policy and practice aimed at strengthening CBHI uptake and healthcare utilization in similar settings.

8.8 Limitation of the study

This study has several limitations that should be considered when interpreting the findings.

First, the study focused exclusively on households within six selected sub-cities during the specific period of data collection. This temporal and geographic focus may limit the representativeness of the findings, as households outside these areas or during different time frames may experience different circumstances or healthcare behaviors.

Second, the study was confined to six sub-cities of Shaggar, Oromia. Had additional sub-cities been included, variations in healthcare infrastructure, accessibility, service delivery practices, or community engagement could have produced differing results. Therefore, caution should be exercised when attempting to generalize the findings to other sub-cities or city with different health system dynamics.

Third, the study concentrated on the general aspects of CBHI uptake and healthcare utilization without examining specific subgroups, such as households stratified by socioeconomic status, chronic illness prevalence, or age composition. This focus may limit the ability to capture nuanced patterns or disparities that exist within population segments.

Finally, as with any study relying on self-reported data, there is a potential for recall bias or socially desirable responses, which may affect the accuracy of some reported behaviors or perceptions.

Despite these limitations, the study provides valuable evidence on the factors influencing CBHI participation and healthcare utilization. It offers a conceptual and empirical foundation for future research and practical interventions aimed at enhancing

CBHI enrollment, improving service utilization, and ultimately strengthening the healthcare system in the study area.

8.9 Summary

The intervention strategy was developed through a structured stakeholder workshop guided by the Socio-Ecological Model (SEM). This participatory process ensured that the strategy was strongly grounded in both empirical evidence and local stakeholder perspectives, enhancing its contextual relevance and practical applicability.

The study systematically examined the determinants of Community-Based Health Insurance uptake and healthcare utilization among households in six selected sub-cities of Shaggar, Oromia, using a mixed-methods design. Through the deliberate integration of quantitative and qualitative findings, the study generated a comprehensive understanding of the behavioural, social, organizational, and structural factors influencing CBHI performance and patterns of healthcare service use. The findings demonstrate that CBHI participation is not shaped by a single factor; rather, it emerges from a dynamic interaction of individual awareness and trust, interpersonal influence, community norms, service delivery quality, and broader governance and financing arrangements.

Building on these empirical insights, the study developed multi-level intervention strategies guided by the SEM. These interventions were intentionally designed to operate across individual, interpersonal, community, organizational, and policy levels, ensuring a coordinated and mutually reinforcing response to the complex determinants of CBHI uptake and healthcare utilization. At the individual level, the strategies emphasize strengthening knowledge, trust, and the perceived value of CBHI. At the interpersonal and community levels, they leverage social influence, community engagement, and collective ownership. At the organizational and system levels, the

interventions focus on improving service delivery responsiveness, administrative efficiency, governance coordination, and sustainable financing mechanisms.

These interventions were consolidated into a unified framework the Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy developed to promote coherence, synergy, and sustainability across all levels of implementation. The CICU Strategy was further strengthened through stakeholder consultation and rigorously validated using the APEASE criteria, confirming its affordability, practicability, effectiveness, acceptability, safety, and equity within the local context. Stakeholder feedback informed minor refinements, enhancing both the feasibility of the strategy and its alignment with existing CBHI and health system structures.

Although full-scale implementation and impact evaluation of the CICU Strategy were beyond the scope of this study, a pilot implementation with concurrent evaluation is proposed to generate practical evidence on feasibility, acceptability, and preliminary effects on enrollment, membership renewal, and healthcare utilization. Despite limitations related to geographic coverage, reliance on self-reported data, and limited subgroup analysis, the study makes a strong empirical and strategic contribution. Largely, it offers an evidence-based and contextually grounded roadmap for strengthening CBHI uptake and healthcare utilization, with important implications for policy, practice, and Ethiopia’s progress toward Universal Health Coverage.

The next chapter presents the overall conclusions and recommendations of the study, reflecting the study objectives and addressing the key research questions.

CHAPTER 9

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

9.1 Introduction

The previous chapter presented the development of evidence-based strategies to enhance Community-Based Health Insurance uptake and healthcare utilization, serving as a foundation for policy and programmatic guidance. Building on that foundation, this chapter synthesizes the key findings of the study conducted in Shaggar, Oromia, Ethiopia, drawing together insights from both quantitative and qualitative analyses. This approach enabled a comprehensive understanding of the multi-level determinants influencing CBHI enrollment, renewal, and healthcare utilization at household, community, and institutional levels.

The chapter presents principal conclusions, highlighting how socioeconomic factors, service quality, governance, and behavioural influences shape CBHI participation and service use. It also offers evidence-based recommendations for policy, program implementation, and capacity building, and identifies areas for future research, including digital enrollment, longitudinal retention, and community engagement strategies.

Finally, the chapter emphasizes the scholarly and practical contributions of the study, provides a replicable framework for scaling CBHI interventions, and acknowledges methodological and contextual limitations, setting the stage for the study's broader implications for strengthening Ethiopia's health system and advancing universal health coverage.

9.2 Summary of the study

The purpose of this study is to investigate factors affecting CBHI uptake and healthcare utilization, with a view to develop a sustainable intervention strategy to improve CBHI enrolment and healthcare utilization.

The objectives of the study were all met. The objective included the following:

- To investigate the extent of CBHI uptake, healthcare utilization, and their determinants among households in Shaggar, Oromia.
- To assess the organization and implementation of the CBHI system among health leaders, CBHI officials, experts, and healthcare providers in Shaggar, Oromia
- To develop targeted intervention strategies to improve CBHI uptake and healthcare utilization in Shaggar, Oromia.
- To validate the developed intervention strategies

The research questions were as follows:

- What is the extent of CBHI uptake and healthcare utilization among households in Shaggar, Oromia?
- What are the key factors influencing CBHI uptake and healthcare utilization among households in Shaggar, Oromia?
- How is the CBHI system organized and implemented by health leaders, CBHI officials, experts, healthcare providers, health extension workers, and community leaders in Shaggar, Oromia?
- What challenges do health leaders, CBHI officials, experts, healthcare providers, health extension workers, and community leaders face in implementing the CBHI system in Shaggar, Oromia?
- What intervention strategies can be developed to improve CBHI uptake and healthcare utilization in Shaggar, Oromia?

This study was guided by the Socio-Ecological Model to examine Community-Based Health Insurance uptake and healthcare utilization, recognizing that participation is shaped by interacting influences at the individual, interpersonal, community,

organizational, and policy/system levels. Using this framework, CBHI uptake and healthcare utilization were conceptualized as outcomes influenced by awareness, trust, social relationships, community norms, service delivery conditions, and broader governance and financing arrangements.

A mixed-methods approach with a convergent parallel design was employed. Quantitative data was collected through a household-based cross-sectional survey among heads of households in six sub-cities of Shaggar, Oromia, and analyzed using descriptive statistics and multivariable logistic regression to identify determinants of CBHI uptake and healthcare utilization. Qualitative data was generated through in-depth and key informant interviews with health leaders, CBHI officials, experts, and healthcare providers analyzed thematically to explore contextual experiences and implementation realities.

Quantitative and qualitative findings were integrated during interpretation using the SEM, enabling a comprehensive and nuanced understanding of the determinants of CBHI uptake and healthcare utilization. Based on this integrated evidence, the study developed multi-level intervention strategies through a participatory stakeholder workshop. These strategies were consolidated into the Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy and validated using the APEASE criteria, confirming its feasibility and contextual appropriateness.

9.3 The presentation of conclusion

The conclusions of this study are presented in direct alignment with the specific research objectives, clearly demonstrating the extent to which each objective was achieved. Drawing on a mixed-methods approach, the study generated comprehensive and contextually grounded evidence on Community-Based Health Insurance uptake and healthcare utilization in Shaggar, Oromia, and informed the systematic development of

targeted intervention strategies. The chapter synthesizes the principal conclusions, emphasizing the central role of socio-economic status, awareness, trust, service quality, and governance in shaping CBHI participation and service use. In response to examiner feedback, the conclusions have been carefully refined to strictly reflect the empirical evidence of the study without introducing new interpretations, thereby ensuring full consistency with the research objectives and findings.

Furthermore, the conclusions are now explicitly anchored within the Socio-Ecological Model (SEM), where key determinants such as income, awareness, and access to information are clearly positioned across individual, household, and community levels, strengthening the theoretical grounding and interpretive clarity of the study. Overall, the findings demonstrate that socio-economic factors, awareness levels, and perceived service quality are the most critical determinants of CBHI uptake and healthcare utilization. Each research objective is addressed sequentially, ensuring a coherent and logically structured presentation of the study's contributions.

9.3.1 CBHI uptake, utilization, and determinants in Shaggar

This objective was addressed through a quantitative cross-sectional household survey conducted among heads of households in selected sub-cities of Shaggar. The quantitative design enabled the measurement of the magnitude of CBHI uptake, membership status, renewal patterns, and healthcare utilization, as well as the identification of statistically significant determinants influencing these outcomes.

Data was collected using a structured and pre-tested questionnaire that captured socio-demographic characteristics, household economic conditions, awareness and knowledge of CBHI, perceived affordability, trust in scheme management, perceived quality of healthcare services, and prior healthcare utilization experiences. Descriptive and inferential statistical analyses were employed to examine patterns of CBHI enrollment and healthcare utilization and to determine factors significantly associated with these outcomes.

The findings demonstrated that CBHI uptake and healthcare utilization were shaped by a combination of individual, household, and system-level factors, including education level, income stability, household size, awareness of CBHI benefits, perceived service quality, and trust in health facilities and scheme administration. This objective was fully achieved, as the study generated robust empirical evidence on both the extent and determinants of CBHI uptake and healthcare utilization among households in Shaggar.

9.3.2 CBHI organization and implementation in Shaggar

This objective was addressed using an exploratory qualitative research design, which enabled an in-depth examination of how the CBHI system is organized and implemented from the perspectives of key stakeholders. This approach provided rich contextual insights that could not be adequately captured through quantitative methods alone.

Data was collected through face-to-face in-depth interviews with health leaders, CBHI officials, CBHI experts, and healthcare providers involved in CBHI implementation and service delivery. The interviews explored institutional arrangements, roles and responsibilities, coordination mechanisms, enrollment and renewal processes, provider payment practices, service delivery experiences, and implementation challenges.

Through systematic thematic analysis, several key themes emerged, including strengths and gaps in institutional coordination, variations in leadership commitment, operational and administrative challenges, concerns related to financial sustainability, service quality constraints, and issues of community trust in the CBHI system. These findings illuminated both enabling factors and persistent barriers affecting effective CBHI implementation in Shaggar. Accordingly, this objective was successfully achieved by providing a comprehensive assessment of the organizational and implementation realities shaping CBHI uptake and healthcare utilization.

9.3.3 CBHI Improvement Strategies in Shaggar

The development of intervention strategies was informed by the integrated findings from both the quantitative and qualitative phases of the study. Evidence generated from the household survey and stakeholder perspectives was systematically synthesized to identify priority gaps, leverage points, and modifiable determinants influencing Community-Based Health Insurance uptake and healthcare utilization.

Guided by the Socio-Ecological Model, the intervention development process adopted a theory-informed and evidence-based approach that addressed the multi-level influences shaping CBHI performance. Determinants identified at the individual, interpersonal, community, organizational, and policy/system levels were translated into practical and context-specific intervention components. This process ensured that the proposed strategies responded to both demand-side and supply-side constraints affecting enrollment, renewal, and service utilization.

The intervention development was participatory in nature and conducted through a structured stakeholder workshop, enabling health leaders, CBHI officials, experts, and healthcare providers to contribute contextual insights and implementation-oriented recommendations. The resulting intervention framework, referred to as the Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy, focused on strengthening community awareness and trust, enhancing social and community engagement, improving service quality and provider responsiveness, streamlining enrollment and renewal processes, and reinforcing institutional coordination, governance, and accountability mechanisms.

The CICU Strategy was designed to be feasible, scalable, and responsive to the local health system context of Shaggar. It was subsequently validated using the APEASE criteria affordability, practicability, effectiveness, acceptability, safety, and equity to ensure its appropriateness and feasibility within the study setting. This objective was

fully achieved through the development and validation of a structured, theory-driven, and contextually grounded intervention strategy aimed at improving CBHI uptake and healthcare utilization.

9.3.4 To validate the developed intervention strategies

The developed intervention strategies were validated through stakeholder engagement and expert review. CBHI experts were actively involved in reviewing the relevance, feasibility, acceptability, and potential effectiveness of the proposed strategies.

Stakeholder feedback confirmed that the strategies were contextually appropriate, aligned with existing policy directions, and responsive to the key challenges identified in the study. Constructive recommendations were also provided, particularly regarding implementation sequencing, resource mobilization, and clarification of stakeholder roles. This validation process enhanced the credibility, practicality, and implementation relevance of the intervention strategies. Consequently, this objective was satisfactorily achieved.

9.3.5 Satisfaction of the aim and objectives of the study

The overall aim and specific objectives of this study were successfully achieved. The primary purpose of the study was to examine the determinants of Community-Based Health Insurance uptake and healthcare utilization and to develop and validate an evidence-based intervention strategy to strengthen CBHI performance in Shaggar, Oromia. Guided by a mixed-methods approach and a theory-driven framework, the study generated comprehensive empirical evidence and systematically translated this evidence into a practical and contextually grounded intervention strategy.

All specific objectives were met, as demonstrated by the quantitative assessment of CBHI uptake, healthcare utilization, and associated determinants at the household level; the qualitative exploration of stakeholder perspectives on the organization and

implementation of the CBHI system; and the integration of findings to inform the development and validation of the Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy. Evidence was generated across household, community, and system levels, providing a holistic understanding of the factors shaping CBHI performance.

Beyond advancing empirical understanding of CBHI uptake and healthcare utilization, the study produced actionable and validated intervention strategies with clear relevance for policy, planning, and program implementation. The findings and proposed strategies have the potential to strengthen CBHI performance, improve healthcare utilization, and contribute meaningfully to Ethiopia's progress toward universal health coverage within the study setting.

9.4 Recommendations

Building on the findings of this study on Community-Based Health Insurance uptake and healthcare utilization in Shaggar, Oromia, a set of evidence-based recommendations is proposed to inform policy, strengthen implementation, and guide future interventions. These recommendations are derived from both quantitative and qualitative evidence and are intended for key stakeholders involved in the design, governance, and delivery of the CBHI system, including policymakers, healthcare providers, and researchers. They focus on critical areas such as improving community awareness, enhancing service quality, strengthening trust and governance mechanisms, and promoting equitable access to healthcare services.

To improve clarity and practical relevance, the recommendations are systematically organized. This structure ensures that the recommendations are actionable, context-sensitive, and aligned with the roles and responsibilities of different stakeholders. Collectively, they provide a coherent framework for strengthening CBHI uptake and optimizing healthcare utilization in the study setting.

Regional and local health authorities:

- Strengthen leadership commitment and oversight of the CBHI system to ensure consistent implementation across all sub-cities.
- Clearly define roles, responsibilities, and accountability mechanisms among health offices, CBHI coordinating units, and implementing bodies to reduce fragmentation and operational inefficiencies.
- Institutionalize regular monitoring, supportive supervision, and performance review mechanisms, with a focus on enrollment and renewal processes, claims management, service delivery, and financial sustainability.
- Allocate sufficient financial, technical, and human resources to CBHI coordinating units to enhance operational efficiency and long-term sustainability.
- Promote data-driven decision-making by strengthening routine CBHI data collection, reporting, and utilization for planning and performance improvement.

CBHI scheme administrators and implementing units:

- Intensify community sensitization and awareness programs by providing clear, consistent, and culturally appropriate information on CBHI benefits, contribution mechanisms, entitlements, and renewal procedures.
- Simplify and standardize enrollment and renewal processes and implement community-based mobilization to improve member retention.
- Ensure transparent financial management and timely claims reimbursement to healthcare facilities to build trust among providers and members.
- Strengthen mechanisms for grievance handling, complaints management, and member feedback to enhance accountability and responsiveness.
- Institutionalize continuous capacity-building programs for CBHI staff to improve technical competence, ethical practice, and communication skills.

Healthcare providers and health facilities:

- Ensure equitable, respectful, and non-discriminatory treatment of CBHI members to enhance satisfaction and trust.
- Strengthen service quality initiatives, focusing on medicine availability, diagnostic services, reduced waiting times, and effective provider–patient communication.
- Provide regular training for health professionals on CBHI policies, benefit packages, and administrative procedures to minimize misunderstandings.
- Actively monitor healthcare utilization patterns among CBHI members and use feedback to inform quality improvement measures.
- Reinforce referral systems and continuity of care to maximize the health benefits of CBHI enrollment.

Community structures and households:

- Actively engage community leaders, religious leaders, and other influential actors in promoting CBHI to build trust, acceptance, and sustained enrollment.
- Implement targeted awareness campaigns to address misconceptions, misinformation, and negative perceptions about CBHI.
- Encourage households to participate in community dialogue platforms, feedback forums, and accountability mechanisms to voice concerns and contribute to system improvement.
- Provide special attention to vulnerable and low-income households through tailored communication strategies and supportive mechanisms to ensure equitable access to CBHI.

Policy makers:

- Review and strengthen CBHI policy and regulatory frameworks to ensure consistency, equity, and sustainability of the scheme.
- Promote stronger integration of CBHI within the broader health system and health financing reforms to improve coordination, efficiency, and service delivery.

- Consider revising contribution structures and benefit packages based on local economic realities and community feedback.
- Emphasize community participation, stakeholder engagement, and local ownership as core principles of CBHI implementation in national and regional guidelines.
- Strengthen long-term financial sustainability strategies, including risk pooling and cross-subsidization mechanisms.

Implementation of the developed intervention strategies:

- Adopt and implement the Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy on a pilot basis in selected sub-cities to assess feasibility, acceptability, and preliminary effectiveness.
- Use a phased implementation approach to allow for continuous learning, adaptation, and refinement prior to scale-up.
- Encourage multi-sectoral collaboration involving health offices, CBHI units, healthcare facilities, community organizations, and NGOs throughout implementation.
- Establish clear indicators and monitoring frameworks to track progress and outcomes related to CBHI uptake, membership renewal, and healthcare utilization.

Further research:

- Conduct longitudinal studies to examine trends in CBHI uptake, renewal, and healthcare utilization over time.
- Undertake impact evaluation studies following implementation of the CICU Strategy to assess effectiveness, scalability, and sustainability.
- Explore equity dimensions of CBHI, particularly among vulnerable populations, informal sector workers, and marginalized communities.

- Conduct comparative studies across different regions to identify contextual factors influencing CBHI performance and inform broader policy and programmatic learning.

9.5 Unique contribution of the study to the body of knowledge

The main purpose of this research was to develop evidence-based intervention strategies to improve Community-Based Health Insurance uptake and healthcare utilization in Shaggar, Oromia. While various CBHI schemes and interventions exist in Ethiopia and other low- and middle-income countries, this study makes a unique contribution by systematically examining the problem from the perspectives of multiple key stakeholders, including heads of households, health leaders, CBHI officials, experts, and healthcare providers. The study captured diverse experiences and insights across six sub-cities, encompassing households with varying socio-economic status, educational backgrounds, and cultural contexts.

The study employed a convergent parallel mixed-methods design, integrating quantitative household survey data with qualitative insights from in-depth and key informant interviews. This approach allowed for a holistic understanding of the multi-level determinants of CBHI uptake and healthcare utilization, including individual awareness and trust, interpersonal influence, community norms, service delivery quality, and broader governance and financing structures. By combining stakeholder perspectives with empirical evidence, the study was able to identify gaps in CBHI knowledge, trust, service quality, and administrative processes that were previously underexplored in literature.

Building on these findings, the researcher, in collaboration with CBHI experts and local health authorities, developed the Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy. This intervention is unique in its multi-level design, addressing determinants at the individual, interpersonal, community, organizational, and policy levels. The strategy was validated using the APEASE criteria to ensure

affordability, practicability, effectiveness, acceptability, safety, and equity, making it both contextually relevant and feasible for implementation in Shaggar.

By bridging empirical evidence with practical intervention design, this study contributes uniquely to the body of knowledge on CBHI in Ethiopia. It provides a structured, theory-informed, and stakeholder-validated approach that not only advances understanding of the factors influencing CBHI uptake and healthcare utilization but also offers actionable strategies to strengthen scheme performance, enhance healthcare access, and support progress toward Universal Health Coverage.

9.6 Limitations of the study

This study provides important empirical, theoretical, and practical insights into Community-Based Health Insurance uptake and healthcare utilization in Shaggar, Oromia, yet several limitations should be acknowledged to contextualize the findings and the development of the Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy.

The study was conducted in six selected sub-cities representing a specific urban–rural interface. While these areas were diverse in socio-economic and cultural characteristics, the findings may not fully generalize to other parts of Oromia or Ethiopia, particularly rural regions or areas with different CBHI implementation practices, health system structures, and service accessibility. Validation across other geographic and administrative contexts would strengthen the broader applicability of the CICU Strategy.

The quantitative component employed a cross-sectional design, capturing CBHI enrollment, renewal, and healthcare utilization at a single point in time. This allowed

identification of key patterns and determinants but limits the ability to draw causal inferences or assess changes in participation and service utilization over time.

Data relied on self-reported information from household heads, health leaders, CBHI officials, and healthcare providers. While qualitative triangulation enriched understanding and mitigated bias, recall bias, social desirability, and reporting inaccuracies particularly regarding income, premiums, and healthcare utilization may have influenced some responses.

Resource and time constraints precluded direct longitudinal monitoring of the real-world implementation of the CICU Strategy, limiting the assessment of long-term sustainability, institutionalization, and system-level impact. The study's scope was also restricted to selected sub-cities, reducing opportunities for comparative analysis across wider administrative and service delivery contexts.

Although a rigorous multi-stakeholder validation process was conducted, representation bias may have influenced the perspectives incorporated into the final CICU Strategy. Inclusion of marginalized, low-income, and socioeconomically vulnerable groups could have further strengthened the equity orientation and contextual relevance of the intervention framework.

Acknowledging these limitations does not diminish the contributions of the study. Instead, they provide important context for interpreting the findings and guidance for future research, policy development, and practical implementation aimed at strengthening CBHI uptake, improving healthcare utilization, and advancing progress toward Universal Health Coverage in Ethiopia.

9.7 Summary

This chapter has presented the overall conclusions of the study in relation to its aims, objectives, and research questions. Using a mixed-methods design, the study examined Community-Based Health Insurance uptake and healthcare utilisation in Shaggar, Oromia, by integrating quantitative household-level data with qualitative evidence from health leaders, CBHI officials, experts, and healthcare providers.

The findings demonstrate that CBHI uptake and healthcare utilisation are shaped by interrelated factors operating across multiple levels, including individual awareness and trust, household and community dynamics, quality of health service delivery, and broader organisational and policy contexts. These results highlight the complexity of CBHI performance and underscore the limitations of fragmented or single-level interventions, pointing instead to the need for integrated and context-responsive approaches.

Guided by the Socio-Ecological Model and grounded in empirical evidence, the study developed and validated the Comprehensive Integrated CBHI Uptake and Utilisation (CICU) Strategy. Refined through stakeholder engagement, the strategy translates the study's findings into practical and actionable recommendations aimed at strengthening CBHI implementation, improving service quality, and promoting equitable access to healthcare.

Overall, this study achieved its primary aim by identifying key determinants of CBHI uptake and healthcare utilisation, assessing system organisation and implementation, and linking evidence to intervention design. While limitations related to study design, self-reported data, and geographic scope are acknowledged, the study makes a meaningful scientific, practical, and policy contribution by supporting evidence-informed decision-making and advancing Ethiopia's progress toward Universal Health Coverage.

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List of annexures

Annexure A: Ethical Clearance

UNISA university of south africa

COLLEGE OF HUMAN SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

14 December 2021

Dear Mr Adane Kebede Gutema

Decision:
Ethics Approval from 14 December 2021 to 14 December 2026

NHREC Registration # :
Rec-240816-052
CREC Reference # :
12776149_CREC_CHS_2021

Researcher(s): Name: Mr Adane Kebede Gutema
Contact details: 12776149@mylife.unisa.ac.za
Supervisor(s): Name: Prof.M.M.Ramukumba
Contact details: +27 726302504,

TITLE: Community Based Health Insurance uptake and Utilisation of Healthcare in Ethiopia.

Purpose: PHD

Thank you for the application for research ethics clearance by the Unisa College of Human Science Ethics Committee. Ethics approval is granted for five years.

The ***low risk application*** *was reviewed by* College of Human Sciences Research Ethics Committee, in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the College Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.

University of South Africa
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5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No fieldwork activities may continue after the expiry date **(14 December 2025).** Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:
*The reference number **12776149_CREC_CHS_2021** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,

Signature:

Prof. KB Khan
CHS Research Ethics Committee Chairperson
Email: khankb@unisa.ac.za
Tel: (012) 429 8210

Signature: PP

Prof K. Masemola
Exécutive Dean: CHS
E-mail: masemk@unisa.ac.za
Tel: (012) 429 2298

Annexure B: Research Ethical letter from UNISA Ethiopian learning center

UNISA university of south africa

28 March 2024

UNISA-ET/KA/ST/29/28-03-2024

OROMIA REGIONAL HEALTH BUREAU

ADDIS ABABA

Dear Madam/Sir,

The University of South Africa (UNISA) extends warm greetings. By this letter, we want to confirm that Adane Kebede Gutema (student number 64054756) is a PhD student in the Department of Health Studies at UNISA. Currently, he is at the stage of data collection on his doctoral research entitled "***Community-based health insurance uptake and utilization of healthcare in Ethiopia***".

This is therefore to kindly request your cooperation in assisting the student in any way that you can. We would like to thank you in advance for all the assistance that you would provide to the student. Attached, please find the ethical clearance that the student received from the Department.

UNISA-ETHIOPIA CENTER
P.O.BOX:13836
ADDIS ABABA
TEL+251912191483

Sincerely,

Dr. Tsige GebreMeskel Aberra

Director

University of South Africa
Regional Learning Center
P.O. Box: 13836, Addis Ababa, Ethiopia
Telephone: +251 11 435 2244 / +251 11 435 0078
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www.unisa.ac.za

Annexure C: Permission Letter from Shaggar City Health Office

SHAGGAR

BUL/M/NAANNOO OROMIYAATTI
WAAJJIIRA FAYYAA MAGAALAA SHAGGAR
በኦሮሚያ ክልል መስተዳድር የሸገር ከተማ ጤና ፅ/ቤት
NATIONAL REGIONAL STATE OF OROMIA
SHAGGAR CITY HEALTH OFFICE

Guyyaa Date ቀን 12/3/2025
Lakk Ref.no ቁጥር ሺሃፈ/Sh/6263

To:

Malka Nono Health Office Sub-City

Burrayyu Health Office Sub-City

G/Guje Health Office Sub-City

Furi Health Office Sub-City

G/Guddaa Health Office Sub-City

Sabeta Health Office Sub-City

Shaggar City

Subject: Request to Conduct Approved Research

Dear Sir/Madam,

This letter is to kindly request your support for **Adane Kebede Gutema**, a PhD candidate in the Department of Health Studies. He is currently in the data collection phase of his doctoral research entitled "**CBHI Uptake and Healthcare Utilization**" in Shaggar.

The study proposal has been thoroughly reviewed and approved by the Shaggar City Health Office. The principal investigator has been notified of the approval and is required to report any changes to the study procedures and to submit periodic progress reports to the ethics committee, as required.

We respectfully request your office, facilities, staff, and community members to provide the necessary support to the principal investigator in conducting this approved research.

Regards

0113381166, 0113383933 shagarhealthoffice@gmail.com
Sheger Health Sheger city: Create Healthy city! Saaris A/A (Lumee) Finfinnee

Annexure D: Proofreading Confirmation

Memo

10 February 2026

To Whom It May Concern

RE: Proofreading Confirmation for Mr Adene Kebede Gutema (Student No: 64054756)

This letter serves to confirm that I, Prof P.R. Risenga, have read and provided detailed academic comments on the PhD dissertation titled:

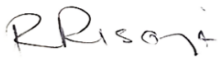
"Community-Based Health Insurance Uptake and Utilisation of Healthcare in Ethiopia"
by **Mr Adene Kebede Gutema**.

I reviewed the document and offered guidance and proofreading support up to and including the chapters covering the presentation of results. My review focused on clarity of argumentation, coherence, academic writing, structural alignment, and the overall quality of the dissertation narrative.

Please note that my involvement was limited to providing comments and suggestions to improve the quality of writing and logical flow; the responsibility for implementing revisions and ensuring academic integrity rests fully with the candidate.

Should you require any further information, please feel free to contact me.

Kind regards,



Prof P.R. Risenga
Department of Health Studies, College of Human Sciences, UNISA
Email address: risenp@unisa.ac.za
Contact number: +27833416000

Annexure E: Turnitin summary and similarity report

Similarity Report

PAPER NAME
CBHI uptake and Healthcare utilization.docx

AUTHOR
ADANE KEBEDE GUTEMA

WORD COUNT
69320 Words

CHARACTER COUNT
451957 Characters

PAGE COUNT
285 Pages

FILE SIZE
4.1MB

SUBMISSION DATE
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COMMUNITY BASED HEALTH INSURANCE UPTAKE AND UTILISATION OF HEALTHCARE IN ETHIOPIA.

By

ADANE KEBEDE GUTEMA

A dissertation submitted in accordance with the requirement for the degree of

DOCTOR OF PHILOSOPHY IN PUBLIC HEALTH

In the subject

HEALTH STUDIES

at the

UNIVERSITY OF SOUTH AFRICA

Supervisor: DR. H. MATAKANYE

January 2026

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Annexure F: Questionnaire

Title of the study: Community Based Health Insurance uptake and healthcare utilization in Shaggar, Oromia, Ethiopia.

Household head's questionnaire No: _____Sub city code: _____

Date of interview (dd/mm/yyyy): _____/_____/_____

Instruction to interviews:

- Greet the respondent warmly and introduce yourself (name, organization, role).
- Explain the purpose of the interview, emphasizing voluntary participation and the right to skip questions or stop at any time. Inform them that the interview will last 30 to 45 minutes.
- Assure confidentiality; responses are for research purposes only. Clarify that names will not be recorded or linked to responses.
- Obtain verbal consent. If applicable, request permission to record for accuracy.
- Start with general, open-ended questions before moving to specifics. Listen attentively, take notes, and use probing questions for deeper insights.
- Thank the respondents for their time and insights.
- Ask if they have any final thoughts or additional points.

Section A: Demographic and Socioeconomic Characteristics			
No	**Questions**	**Choice/options**	**Reponses**
1	Age in year	Add years	_____
2	What is your gender?	Female	1
		Male	2
3	What is your marital status?	Single	1
		Married	2
		Divorced	3
		Widowed	4
4	What is your highest level of education?	No formal education	1
		Primary education	2
		Secondary education	3
		Higher education	4

5	What is your primary occupation?	Farmer Trader Salaried worker Daily labourer Other (please specify)	1 2 3 4 5_____
6	What is your household's estimated monthly income?	In Ethiopia Birr	_____
7	How many people live in your household?	Specify number	_____
Section B: Awareness and Perceptions of CBHI			
8	Have you heard about Community-Based Health Insurance (CBHI)?	Yes No	1 2
9	How did you first hear about CBHI?	Community meetings Health workers Media/Radio/TV Friends/neighbours Other	1 2 3 4 5
10	Have you received any CBHI-related awareness campaigns in your community?	Yes No	1 2
11	Do you know where to enrol for CBHI?	Yes No	1 2
12	Did any community leaders or health workers influence your decision to enrol?	Yes No	1 2
13	Do you understand the benefits of CBHI?	Yes No	1 2
14	If yes, please describe what you think are the benefits of CBHI? (Select all that apply)	Financial protection Access to healthcare Encourages early treatment Covers the whole family Affordable premium Promotes preventive care Others	1 2 3 4 5 6

			7
15	Do you think CBHI is important for your family's health?	Yes No	1 2
16	Do you know how much the annual premium is?	Yes No	1 2
17	How satisfied are you with the CBHI enrollment process?	Very satisfied Satisfied Neutral Dissatisfied Very dissatisfied	1 2 3 4 5
18	Do you believe CBHI helps protect against high medical costs?	Agree Neutral Disagree	1 2 3
19	Do you trust the CBHI system to provide financial protection?	Yes No	1 2
Section C: Extent of CBHI uptake			
20	Are you currently enrolled in CBHI?	Yes No	1 2
21	If yes, for how many years have you been a member?	1 year 2 years 3 years and above	1 2 3
22	If not, what are the biggest challenges preventing you from enrolling in CBHI? (Select all that apply)	Lack of awareness Financial constraints Complex enrolment procedures Limited access to enrolment centers Mistrust in the CBHI system	1 2 3 4 5 6

		Long distance to health facility	
		Inconvenient enrolment schedule	7
		Poor service quality	8
		Administrative barriers	9
23	Did you receive a CBHI membership ID card after enrolling?	Yes	1
		No	2
24	If no, what was the reason for not receiving the ID card?	Delay in processing	1
		Lack of follow-up	2
		Lost the card	3
		Other (please specify): ___	4
25	Have you renewed your CBHI membership this year?	Yes	1
		No	2
26	If yes, what motivated you to renew your CBHI membership? (Select all that apply)	Past illness experience	1
		Financial Protection for healthcare	2
		Health education and promotion	3
		Availability of quality services	4
		Awareness of health risks	5
		Premium is affordable	6
		Other (please specify)	7
27	If not, what is the main reason for not renewing? (Select all that apply)	Poor quality of healthcare services	1
		Medicines/services not available	2
		Poor treatment by healthcare providers	3
		Could not afford the premium	4
		Doubt about CBHI benefits	5
		Health facility too far	6
		Delay in getting services	7
		Don’t trust CBHI management	8
		No need for health services	9

		Prefer other healthcare options	10
Section D: Healthcare utilization, service quality, and accessibility			
28	Did any household member visit a health facility in the past one year?	Yes No	1 2
29	If yes, how many times have your household members used health services in the past year?	Never Once 2–3 times More than 3 times	1 2 3 4
30	How would you rate the quality and availability of healthcare services under CBHI?	Very good Good Fair Poor Very poor	1 2 3 4 5
31	How far is the nearest health facility covered by CBHI?	Less than 5km 5-10km More than 10km	1 2 3
32	How do you rate the attitude of healthcare providers toward CBHI beneficiaries?	Very good Good Fair Poor Very poor	1 2 3 4 5
33	Are you satisfied with the availability of medicines and services under CBHI?	Yes No	1 2
34	Has your healthcare-seeking behaviour changed after enrolling in CBHI?	Yes No	1 2
35	How frequently did you visit a health facility per year before enrolling in CBHI?	Never Once 2–3 times More than 3 times	1 2 3 4
36	How frequently do you visit a health facility	Never	1

	per year after enrolling in CBHI?	Once 2–3 times More than 3 times	2 3 4
37	What are the major challenges in using CBHI-covered health services? (Select all that apply)	Long waiting times Drug shortages Poor staff attitudes Other (Specify:	1 2 3 4
Section E: Financial aspects of CBHI uptake and healthcare utilization			
38	Is your household able to afford the CBHI premium?	Yes No	1 2
39	Have you experienced any difficulty paying the premium on time?	Yes No	1 2
40	Do you feel CBHI has reduced your financial burden on healthcare?	Yes, significantly Yes, somewhat No, not at all	1 2 3
41	Have you ever paid for healthcare services out-of-pocket and then requested reimbursement from CBHI?	Yes No	1 2
42	If yes, did you receive the reimbursement?	Yes, the full amount Yes, a partial amount No Still pending	1 2 3 4
43	How long did it take to receive the reimbursement?	Less than one month One to two months More than two months Did not receive it	1 2 3 4
44	If you did not receive the reimbursement, what was the reason?	Lack of required documents Rejected by CBHI Not eligible for reimbursement I did not follow up	1 2 3 4

		Other (please specify): ___	5
45	How would you rate the reimbursement process?	Very easy Easy Difficult Very difficult I don't know	1 2 3 4 5

Annexure G: Interview guide for in-depth instructions (stakeholders)

Study title: Community-Based Health Insurance Uptake and Healthcare Utilization in Shaggar, Oromia, Ethiopia

Objective: To examine the organization, implementation, and performance of the CBHI system in Shaggar.

Date of Interview (DD/MM/YYYY): _____

Total interview time: Approximately 30–45 minutes

Instructions for interviewers:

Greeting the respondent warmly and introduce yourself by stating your name, organization, and role in the study. Express appreciation for their time and willingness to participate.

Clearly explain that the purpose of the interview is to gather insights into the organization, implementation, and impact of CBHI in Shaggar. Emphasize that participation is voluntary and that respondents have the right to skip any question or stop the interview at any time. Inform them that the interview will take approximately 30 to 45 minutes.

Assure the participant that all responses will remain confidential and will be used solely for research purposes. Clarify that names will not be recorded or linked to their responses.

Provide a brief overview of the key areas covered in the discussion, including experiences with CBHI implementation, challenges and successes in the CBHI system, perspectives on CBHI uptake and healthcare utilization, and recommendations for improving CBHI. Obtain verbal consent to continue the interview, and if applicable, request permission to record the conversation for accuracy.

Begin with general, open-ended questions to encourage natural responses before moving into specific topics. Listen attentively and take detailed notes. Use probing questions when necessary to gain deeper insights into key issues.

Thank the respondent for their time and valuable insights. Reiterate that their responses will remain confidential and will contribute to a better understanding of CBHI. Ask if they have any final thoughts or additional points they would like to share.

Target Participants: Health Leaders, CBHI Officials, CBHI Experts, and Healthcare Providers

Opening Question:

As part of your responsibilities, how would you describe your experience with the implementation of CBHI and its impact on healthcare utilization in your sub-city?

A. Organization and Implementation of CBHI

1.1 Institutional Capacity and Human Resource Limitations

How is the CBHI program structured and implemented in your sub-city?
Probe: What are the main administrative procedures and operational mechanisms involved?

1.2 Poor Coordination and Communication across Stakeholders

What specific roles do stakeholders such as health leaders, CBHI officials, and healthcare providers play in CBHI implementation?
Probe: How effective is coordination and communication among these actors?

1.3 Limited Community Sensitization and Participation

What strategies have been employed to enhance the performance and sustainability of CBHI?

Probe: To what extent have these strategies included community mobilization and awareness efforts?

1.4 Structural and Policy Gaps

Which policies and operational guidelines currently govern CBHI implementation?
Probe: Have there been any recent policy revisions, and how have they influenced local implementation?

1.5 Structural Variation and Implementation Gaps

Are there differences in how CBHI is implemented across woredas or sub-cities?
Probe: What inconsistencies or gaps have you observed in structure or process?

1.6 Policy Influence and Governance

What kinds of support, directives, or reforms have regional or federal authorities to strengthen CBHI implementation have introduced?

1.7 Evolution of CBHI Over Time

How has the CBHI system changed in your area over time regarding its coverage, administration, and efficiency?

Probe: What major milestones, improvements, or challenges have emerged?

1.8 Strategies for Performance Improvement

What improvement strategies have been implemented to boost CBHI outcomes and long-term sustainability?

Probe: Which approaches have shown tangible success or failed to deliver as expected?

B. CBHI Uptake and Healthcare Utilization

2.1 Enrollment Trends

How would you characterize the trends in CBHI membership in your area?

Probe: Has there been an increase, stagnation, or decline in new enrolments or renewals?

2.2 Determinants of Enrollment and Retention

What factors influence households' decisions to enrol in or renew CBHI membership?

Probe: Are there social, cultural, economic, or administrative influences at play?

2.3 Impact on Utilization Patterns

In what ways has CBHI affected the healthcare-seeking behavior of its members?

Probe: Are insured members accessing services more frequently or differently compared to non-members?

2.4 Access Challenges for CBHI Members

What barriers do CBHI members face when attempting to use healthcare services?

Probe: Are there delays, limited-service packages, or concerns about quality of care?

2.5 Quality, Affordability, and Satisfaction

What has been the impact of CBHI on the perceived quality, affordability, and overall satisfaction with health services?

Probe: Have there been improvements in service delivery, patient experience, or financial protection?

C. Financial and Institutional Sustainability

3.1 Funding Mechanisms

What financing structures or mechanisms are in place to support the sustainability of CBHI?

Probe: Are these financial models sufficient to maintain long-term operations?

3.2 Government Support and Role

How does the government contribute to the stability and effectiveness of CBHI?

Probe: Are there adequate financial resources, human capacity, and policy support from public institutions?

3.3 Financial Challenges and Reimbursement Bottlenecks

What financial barriers does the CBHI system face, such as premium collection or delays in reimbursement?

Probe: How is the reimbursement system managed, and where do the major delays or inefficiencies occur?

3.4 Reimbursement Issues for Providers

What challenges do healthcare providers face regarding reimbursement for services delivered to CBHI members?

Probe: What are the underlying reasons for delayed or insufficient reimbursement?

D. Service Delivery and Quality

4.1 Impact on Quality-of-Service Delivery

How has the introduction of CBHI affected the quality of care in your facility?

Probe: What improvements or drawbacks have you observed?

4.2 Service gaps

Are there areas where service delivery falls short in meeting the expectations or needs of CBHI members?

Probe: Which specific services are most affected and why?

4.3 Availability of Medicines and Diagnostics

What impact has CBHI had on the availability and timely access to essential medicines and diagnostic services?

Probe: Are there persistent shortages or stock outs?

E. System-wide Challenges and Recommendations

5.1 Key Implementation Challenges

What are the major barriers encountered in implementing CBHI at the local level?
Probe: Are these challenges primarily administrative, financial, logistical, or social?

5.2 Support Needs

What forms of support are needed from the government or development partners to strengthen the CBHI system?
Probe: Are there needs for training, infrastructure, or resource allocation?

5.3 Policy and Operational Reforms

What operational or policy changes would you propose to enhance CBHI enrollment and utilization?
Probe: What are the urgent priority areas for reform?

5.4 Legal and Policy Frameworks

How do existing legal and policy instruments support or hinder the effective implementation of CBHI?
Probe: Are there contradictions, gaps, or enforcement issues within the legal framework?

5.5 Future Outlook

In your view, what is the long-term future of the CBHI scheme in Ethiopia?
Probe: What strategic innovations, investments, or reforms are essential to ensure its sustainability and relevance?

Annexure H: Development of themes and Sub-themes for the organization and implementation of CBHI

Theme	Sub-Themes	Sample Codes (from participant statements)
Organization and Implementation of CBHI	Institutional Capacity and Human Resource Limitations	"There are not enough trained staff to run CBHI properly." "We need more technical skills at woreda and health center level."
	Poor Coordination and Communication across Stakeholders	"Health office and CBHI don't coordinate well." "Communication between health centers and insurance officials is weak."
	Limited Community Sensitization and Participation	"Many community members don't understand CBHI." "Participation during meetings is very low."
	Structural and Policy Gaps	"Policies keep changing and there are gaps between national and local levels."
	Structural Variation and Implementation Gaps	"Different woredas use different approaches to implement CBHI."
	Policy Influence and Governance	"Government policy decisions influence how we implement CBHI."
	Evolution of CBHI over Time	"CBHI has changed a lot since it was first introduced."
	Strategies for Performance Improvement	"We are applying new strategies such as awareness campaigns to improve performance."
CBHI Uptake and Healthcare Utilization	Enrolment Trends	"Some families renew their membership every year, but others drop out."
	Determinants of Enrolment and Retention	"Poor households cannot afford the contribution." "Trust in the scheme affects whether people join or renew."
	Impact on Utilization Patterns	"We now visit health facilities more often since joining CBHI."
	Access Challenges for	"Even with insurance, people sometimes face

	CBHI Members	challenges accessing care."
	Quality, Affordability, and Satisfaction	"Members complain about affordability and drug shortages."
Financial and Institutional Sustainability	Funding Mechanisms	"The current funding system is not enough to sustain CBHI."
	Government Support and Role	"Government support is essential for the survival of the scheme."
	Financial Challenges and Reimbursement Bottlenecks	"We face serious delays in reimbursement." "Financial bottlenecks threaten the program."
	Reimbursement Issues for Providers	"Providers are frustrated because reimbursements are not timely."
Service Delivery and Quality	Impact on Quality-of-Service Delivery	"CBHI has improved service delivery in some facilities."
	Service Gaps	"There are still many service gaps; some services are not covered."
	Availability of Medicines and Diagnostics	"Essential drugs and diagnostic tests are often not available."
System-wide Challenges and Recommendations	Key Implementation Challenges	"Implementation is very challenging due to resource shortages."
	Support Needs	"We need more support from regional and federal levels."
	Policy and Operational Reforms	"Policy and operational reforms are urgently required."
	Legal and Policy Frameworks	"The legal framework is weak and does not support CBHI fully."
	Future Outlook	"For the future, CBHI needs to be more sustainable, and people centered."

Annexure I: Checklist to validate the intervention strategies (stakeholders)

Title of the study: CBHI uptake and healthcare utilization in Shaggar, Oromia, Ethiopia

Purpose:

The purpose of this checklist was to validate the developed intervention strategy aimed at improving Community-Based Health Insurance uptake and healthcare utilization, and to assess whether the proposed intervention components meet the APEASE criteria. The strategy is aligned with the Socio-Ecological Model (SEM) across all levels, including the individual, interpersonal, community, organizational (institutional), and policy/structural levels.

The Comprehensive Integrated CBHI Uptake and Utilization (CICU) Strategy is informed by behaviour change and health system strengthening approaches and is designed to address multiple levels of influence, including households, community structures, healthcare providers, and CBHI administrative systems. The strategy focuses on strengthening knowledge and trust, improving service quality and administrative efficiency, enhancing social support mechanisms, and promoting institutional responsiveness to improve CBHI enrolment, renewal, and healthcare utilization.

Instruction

Please indicate your assessment of each intervention component by placing a tick (√) under the appropriate APEASE criterion. Where necessary, provide additional comments or recommendations based on your professional experience.

Instruction: indicate your assessment of each component with a tick (✓)

Component	Criteria					
	Affordability	**Practicability**	**Effectiveness**	**Acceptability**	**Safety**	**Equity**
Improve household knowledge and awareness of CBHI benefits, procedures, and entitlements						

Strengthening trust in CBHI schemes and health service delivery						
Promote timely enrolment, renewal, and appropriate healthcare utilization						
Enhance community engagement and social support for CBHI participation						
Improve service delivery quality and client–provider interaction at health facilities						
Strengthen CBHI administrative processes, communication, and responsiveness						
Promote equitable access to CBHI and healthcare services for vulnerable populations						

Annexure J: Participant Information Sheet

Ethics clearance reference number: _____

Research permission reference number: _____

Date: _____

Title: Community Based Health Insurance uptake and Utilization of Healthcare in Ethiopia.

Dear Prospective Participant

My name is Adane Kebede Gutema, and I am studying towards a Doctor of Philosophy degree in Public Health (PhD) at University of South Africa (UNISA) in the department of health studies under the supervision of: **DR. H. MATAKANYE**. We are inviting you to participate in a study entitled **"Community Based Health Insurance uptake and Utilization of Healthcare in Ethiopia".**

PURPOSE OF THE STUDY

The purpose of this study is to investigate factors affecting CBHI uptake and healthcare utilization, with a view to develop a sustainable intervention strategy to improve CBHI enrolment and healthcare utilization.

Furthermore, the study is expected to collect important information that could discover health planers and policy maker's perspectives about CBHI uptake and healthcare utilization, challenges and success factors. In addition, the study will be helpful in contributing much to design appropriate intervention strategies. It will also serve as a baseline for subsequent studies in the country.

The study might add to knowledge and skills of health staff in CBHI uptake and healthcare utilization at public health facilities, towns, and district health offices.

SELECTION CRITERIA

Phase 1

You are invited to participate in a study entitled CBHI uptake and healthcare utilization. The criteria for inclusion in this study are:

1. Willingness to participate in the study.
2. Sub city where CBHI is implemented

3. Head of household who is mentally and physically capable of providing information.
4. Head of household/spouse ≥18 years

The interview questions will not be sensitive in nature but only ask about your knowledge, skills, views and practice regarding the CBHI uptake, healthcare utilization in Ethiopia. A few demographic questions will be asked at the beginning of the interview.

Phase2

You are invited to participate in this study for your experience with CBHI uptake and healthcare utilization both at roles of service provision and management levels. The criteria for inclusion in this study are:

1. Willingness to participate in the study.
2. Individuals directly involved in design and implementation of CBHI at health office.
3. Individuals with an experience of one year and more in CBHI mobilization and service provision.
4. Being a health professional (service provider and head) at service delivery points or managers at health offices, health facilities and districts health offices granted permission for policy makers, designers and implementers to participate in the study.

THE NATURE OF PARTICIPATION IN THE STUDY

You will be asked to provide the researcher with your knowledge, skill, views and experience during you respond to this self-administered questionnaire. The completion of response will be 1 hour long. A few demographic questions will be asked at the beginning of the interview.

SELF DETERMINATION AND VOLUNTARY PARTICIPATION

Participation is voluntary. You are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY

The findings of this study might lead to an increased knowledge and skill about CBHI uptake and healthcare utilization which is very important for quality of health care delivery at health facilities and frontline health offices. The study will assist to develop strategy which strengthens CBHI implementation and healthcare utilization. There might be comfort and reassurance for you as policy makers and planners; you will be able to discuss your challenges of CBHI uptake, healthcare utilization and implementation of CBHI uptake at community level with an impartial party in a non-threatening environment

NEGATIVE CONSEQUENCES FOR PARTICIPATING IN THE RESEARCH PROJECT

The time spent for the interview might lead to minor disruptions in normal routine in the health facilities, district health office. To address this possible adverse effect, data will be collected during less busy times to ensure that there is no disruption in providing services and managing work. You are therefore requested to inform the researcher of a time most suitable. No personal information or intrusive questions will be asked from you, and information will be collected in a private environment and will not be shared with anyone.

CONFIDENTIALILTY AND ANONYMITY

Data collected during the scope of this research will not be shared with people outside the research team. Only the researcher, supervisors and independent coder will have access to the data. Your name will not appear on the interview notes, and the researcher will allocate a code/ pseudonym to represent your responses in the data. The researcher will therefore ensure anonymity. Aggregate data will be reported, and no data will be reported or linked to your name. The publications will be anonymous, and your name will not be mentioned in the publications.

PROTECTION OF THE SECURITY OF DATA

Hard copies of your answers will be stored by the researcher for a period of five years as legally required in a locked cupboard/filing cabinet at the researcher’s office. Electronic data will be stored on a password protected computer.

INCENTIVES FOR PARTICIPATING IN THIS STUDY

No payments or rewards will be received by the participants for participating in this study.

HAS THE STUDY RECEIVED ETHICS APPROVAL

This study has received written approval from the Research Ethics Review Committee of the College of Human Sciences; Department of Health Studies, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

REPORTING OF FINDINGS/RESULTS OF THE RESEARCH

If you would like to be informed of the final research findings and if you require any further information or want to, please contact Adane Kebede Gutema on 0913155524 or email 64054756@mylife.unisa.ac.za. The findings are accessible for five (5) years.

Should you have concerns about the way in which the research has been conducted, you may contact DR.H. MATAKANYE(Supervisor) on 0124293111, or email matakh@unisa.ac.za. Contact the research ethics chairperson of the CREC General Ethics Review Committee, Prof EL Kempen on 011-471-2241 or kempeel@unisa.ac.zaif you have any ethical concerns.

Thank you for taking time to read this information sheet and for participating in this study.

Signature

Adane Kebede Gutema

Annexure K: Consent to participate in this study

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the interview with the researcher.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname…… (Please Print)

Participant Signature……Date……

Researcher's Name & Surname…… (Please Print)

Researcher's signature…… Date……

Annexure L: Confidentiality Agreement

Title of Research Project: **"Community Based Health Insurance uptake and Utilization of Healthcare in Ethiopia".**

Research Assistance: ----------

As a member of this research team, I understand that I may have access to confidential information about study sites and participants. By signing this statement, I am indicating my understanding of my responsibilities to maintain confidentiality and agree to the following:

- I understand that names and any other identifying information about study sites and participants are completely confidential.
- I agree not to disclose, publish, or otherwise make known to unauthorized persons or to the public any information obtained during this research project that could identify the persons who participated in the study.
- I understand that all information about study sites or participants obtained or accessed by me during my work is confidential. I agree not to disclose or otherwise make known to unauthorized persons any of this information, unless specifically authorized to do so by approved protocol or by the local principal investigator acting in response to applicable law or court order, or public health or clinical need.
- I understand that I am not to read information about study sites or participants, or any other confidential documents, nor ask questions of study participants for my own personal information but only to the extent and for the purpose of performing my assigned duties on this research project.
- I agree to notify the local principal investigator immediately should I become aware of an actual breach of confidentiality or a situation which could potentially result in a breach, whether this is on my part or on the part of another person.

---------- ----------

Research assistance Date

Annexure M: Validation of developed CBHI intervention strategies

Structured Consultation and Expert Panel Framework

Purpose Checklist to validate the intervention strategies (stakeholders

This annexure presents the structured frameworks and guiding questions used to collect stakeholder feedback on the developed CBHI intervention strategies. Feedback was gathered through structured consultations and expert panel reviews, guided by the APEASE criteria (Affordability, Practicability, Effectiveness, Acceptability, Safety, Equity).

Table 1: Structured consultation & expert panel discussion framework

APEASE Criterion	Guiding Questions	Notes for Stakeholders
Affordability	1. Is the intervention cost-effective for both the CBHI system and households? 2. Are flexible payment mechanisms feasible? 3. Would subsidies or staggered payments improve affordability?	Assess financial feasibility within current CBHI budgets; suggest mechanisms to reduce economic burden.
Practicability	1. Can the intervention be implemented with existing infrastructure and human resources? 2. What are the operational challenges? 3. Are additional resources or training required?	Consider local infrastructure, staffing, and resource availability; highlight potential bottlenecks.
Effectiveness	1. Will the intervention address the identified barriers to CBHI uptake and utilization? 2. How likely is it to achieve intended outcomes? 3. Should any modifications be made to enhance impact?	Align with evidence from prior studies and stakeholder experience; recommend enhancements.

Acceptability	1. Are the strategies culturally and socially appropriate? 2. Would the target population and community actors support this approach? 3. How can community buy-in be enhanced?	Consider local norms, beliefs, and preferred communication channels; suggest culturally resonant adaptations.
Safety	1. Could the intervention cause harm to participants? 2. Are there ethical or confidentiality concerns? 3. How can risks be mitigated?	Highlight potential ethical, clinical, or social risks; suggest safeguards and monitoring mechanisms.
Equity	1. Does the intervention reach vulnerable and marginalized populations? 2. Are low-income households, rural populations, and seasonal workers included? 3. How can inclusion be strengthened?	Focus on universal health coverage principles and social protection; identify gaps in access or coverage.

Table 2: Worksheet Format for Collecting Stakeholder Feedback

Strategy / Intervention	**APEASE Criterion**	**Stakeholder Comments**	**Proposed Refinements**
Flexible Premium Payment	Affordability	“Seasonal income households benefit from staggered payments. Consider integrating local savings groups.” – CBHI Official	Include mobile payment options and staggered schedules.
Community Dialogues	Practicability	“Easily integrated with existing HEW programs; low-resource requirement.” – Expert	Align dialogue sessions with health outreach campaigns.
SMS & Radio Reminders	Effectiveness	“Effective for awareness but may not reach low-literacy or network-limited areas.” – Community Rep	Supplement with visual aids and local-language messages.

Peer Mentorship & Testimonial Campaigns	Acceptability	“Highly acceptable; elders and religious leaders are trusted messengers.” – Community Rep	Leverage respected local leaders to deliver messages.
Digital Claims Management	Safety	“No harm, confidentiality ensured; routine monitoring recommended.” – Expert	Regular audits to maintain data privacy and patient safety.
Targeted Subsidies & Group Enrollment	Equity	“Ensures low-income and seasonal workers are included.” – CBHI Official	Prioritize outreach to remote rural areas and low-literacy populations.

Acknowledge

The author acknowledges that AI tools were used only for language editing and improving clarity of the thesis. All analysis, interpretation, and findings presented in this thesis are entirely the original work of the researcher, in line with academic integrity guidelines.