






## Perceptions and Experiences of Willingness to Pay for Community-Based Health Insurance: A qualitative Study


**Emmanuel Otieno**,  ORCID: <https://orcid.org/0000-0002-8879-2414>  
Master of Public Health, Uganda People's Defense Forces, Kampala, Uganda


**Norman Mukasa**,  ORCID: <https://orcid.org/0000-0001-5197-0136>  
PhD, Graduate School at Muteesa I Royal University, Kampala, Uganda


**Florence Ajok Odoch**,  ORCID: <https://orcid.org/0009-0008-8729-5783>  
PhD, School of Graduate Studies, Bugema University, Kampala, Uganda

**Christopher Ddamulira**,  ORCID: <https://orcid.org/0000-0001-6722-4090>  
PhD, School of Graduate Studies, Bugema University, Kampala, Uganda

**Dezi Nuwagaba**,  ORCID: <https://orcid.org/0009-0001-0215-9774>  
Master of Public Health, Department of Community Health, Mbarara University of Science and Technology, Mbarara, Uganda

**Josephine Namyalo**,  ORCID: <https://orcid.org/0000-0002-7567-3627>  
PhD student, Department of Public Health, Uganda Christian University, Mukono, Uganda

**Aliyi Walimbwa**,  ORCID: <https://orcid.org/0009-0004-9569-3002>  
PhD student, Department of Health Services, Planning, Financing and Policy, Ministry of Health, Kampala, Uganda

**Robert K. Basaza**,  ORCID: <https://orcid.org/0000-0003-3220-5548>  
PhD, Department of Public Health, Uganda Christian University, Mukono, Uganda

**Corresponding author:** Emmanuel Otieno, [otienomdc@gmail.com](mailto:otienomdc@gmail.com)

**Type of manuscript:** research paper

**Abstract:** *The study objective was to explore perceptions and experiences of willingness to pay for community-based health insurance and factors that affect their willingness to pay among farming households in Uganda. A qualitative study was done among 33 participants in Uganda. An explorative study design with the phenomenological approach was employed. Both purposive and snowball sampling techniques were used. Isingiro District was selected because it is geographically serviced by community-based health insurance schemes in a region with the largest proportion of members at 57%. Consequently, there is augmented availability of data and generalized results. Key informant interviews and focus group discussions were conducted via semi-structured questionnaires. A univariate and inductive thematic analysis were done. Findings show low level of awareness, perception of low income, high amount of premium, good perception of health status are the barriers to pay and indicate the elderly population are unwilling to pay for the community-based health insurance scheme. Yet, the scheme is designed to ameliorate healthcare encounters of such vulnerable groups. This study provides timely evidence and impetus for strategies that address the increasing burden of healthcare. In conclusion, there has been low level of awareness about community-based health insurance. This study proposes to expand universal health coverage of informal sector workers through increased sensitization and capacity to pay premium. Also, the age factor highlights the need to customize premium for membership based on demographic landscape of the communities. To effectively address the future of community-based health schemes, it is critical to develop effective community evidence-based policy options for a sustainable scheme model. This intervention could engender access to a holistic healthcare service by the informal sector. Thus, it may fast-track the achievement of universal health coverage agenda by 2030.*

**Keywords:** community-based health insurance, farming household, social capital, Uganda, willingness to pay.

**JEL Classification:** I13, I18, H51

**Received:** 7 October 2024

**Accepted:** 21 March 2025

**Published:** 31 March 2025

**Funding:** There was no funding for this research.

**Publisher:** Academic Research and Publishing UG (i.G.) (Germany).

**Founder:** Academic Research and Publishing UG (i.G.) (Germany).

**Cite as:** Otieno, E., Mukasa, N., Ajok, F. O., Ddamulira, C., Nuwagaba, D., Namyalo, J., Walimbwa, A., & Basaza, R. K. (2024). Perceptions and experiences of willingness to pay for community-based health insurance: A qualitative study. *Health Economics and Management Review*, 5(4), 130-145. <https://doi.org/10.61093/hem.2025.1-08>.



Copyright: © 2024 by the author. Licensee: Academic Research and Publishing UG (i.G.) (Germany). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0>).

## INTRODUCTION

Universal health coverage in the provision of health services in many countries has continued to grow. Therefore, it plays an important role in driving reforms to reduce the healthcare burden and access affordable quality healthcare (Darrudi et al., 2022). Universal healthcare is a key component of human rights (Schwettmann, 2022). Yet, close to 4.5 billion people worldwide have no access to health (WHO, 2023).

Globally, out-of-pocket expenditures for health are at 7.3 trillion dollars every year, accounting for more than 50% of the global health expenditure (Nzowa et al., 2023). Besides, households' unwillingness to pay remains largely a barrier to community-based health insurance enrollment (Biset Wagaw et al., 2022). Originating in the Bismarck economic welfare system, social health insurance was based on the concept of universal health coverage. It was founded on the German solidarity and self-governance in 1883. The modern community-based health insurance scheme (CBHI) evolved in the USA in 1929. These principles still prevail at the core of its continuous development for 142 years (Moseley, 2008; Busse et al., 2017).

The CBHIs have been largely adopted by low-income countries since the late 1980s as a strategy for rallying revenue for health (Hussien et al., 2022). The economic waves and revolution of health systems in the last two decades have driven the growth of health insurance as well as community-based health insurance schemes (Ministry of Health in Uganda, 2021). It has led to numerous health insurance studies ranging from mitigation of out-of-pocket catastrophic expenditures and utilization of modern healthcare services to health outcomes, including health-seeking behavior (Eze et al., 2023; Getahun et al., 2023).

The community-based health insurance scheme is a voluntary arrangement to mitigate health risks and meet healthcare costs at the time of need by pooling funds in the community (WHO, 2022). The CBHI is a renowned pathway to universal health coverage, a means of capitalizing on the health industry. It inspires equity in both formal and informal sector workers (such as farming households) (Babatunde et al., 2016). Also, CBHIs reduce out-of-pocket expenditures, protect from capricious health expenditures, and improve the quality of healthcare (Novignon et al., 2021).

Addressing the universal health coverage aspect is a key element of implementing Sustainable Development Goal 3. CBHI is commonly used as a health financing strategy in the informal sector in settings with limited resource envelopes. Rwanda's achievement of universal health coverage since 2004 through CBHI at 83 percent (the highest in Africa) is a good example of the economic model role for sub-Saharan African healthcare systems (Chemouni, 2018; Lenhardt, 2023). The increased access to affordable healthcare for the population, especially in rural households, is envisaged through CBHI schemes. These contextual drivers have stimulated progress in East Asian countries: Japan in 1961, South Korea in 1989, and China in 2009. Consequently, universal health coverage was achieved (Hondo & Kim, 2023).

The universal health coverage has three dimensions: services, population, direct costs. Various arrangements are taken to make achievements via funding mechanisms as a gateway to healthcare. It concerns social health insurance schemes employed in Korea, Taiwan, Switzerland, Germany, and the Netherlands. On the contrary, the English national healthcare service is nearly entirely funded by the government through tax revenue redistribution. It is similar to the healthcare system in Spain and Italy (Lu et al., 2022).

Thailand used a non-contributory option, while Egypt, Morocco, and Zambia adopted a contributory one (Sumriddetchkajorn et al., 2019; ISSA, 2023). Despite overcoming fiscal challenges of more than two decades since independence in 1962, the government faced an imperative for universal health coverage. For the past decade, the country's expenditure on health as a % of GDP has ranged from 0.8% to 1.7%. That is far less than its commitment to the target of spending 5% of GDP on health to achieve universal health coverage and reduce household out-of-pocket payments, or OOPs (The Republic of Uganda Health Ministry, 2022).

Though Uganda has made great strides in its health sector, budget credibility remains a huge challenge for Uganda's healthcare, with an average of 26% over the past five years (UNICEF, 2023). Thirty-eight years later, after economic reforms and innovations in health policy following the 5-year civil war, the country with a mixed economy still lacks universal health coverage, and its poor population faces 27% of catastrophic health expenditure, or CHE (Garcia-Diaz et al., 2024). The latter is a significant economic metric representing out-of-pocket payment as a share of household income. A household is considered to be experiencing CHE when OOP exceeds 10% of its total household consumption (Nguyen et al., 2023).

CBHIs are suitable for the informal sector at a prevalence of 57% in Southwestern Uganda compared to 0.2% in the national coverage (Namyalo et al., 2023; FSD Uganda, 2018). The willingness to pay for CBHI in developing countries is 2%, whereas in Africa, it is 0.2% (Nosratnejad et al., 2016; De Allegri et al., 2016).

A Ugandan study indicated 70% of willingness to pay, or WTP, among commercial motorcyclists (Basaza et al., 2022). The country has a health financing strategy for the period 2015/2016 – 2024/2025, which

is a policy tool on funding within the health sector towards the achievement of universal health coverage (WHO, 2023). Further, it addresses the out-of-pocket expenditures for utilization of health services (Kwesiga et al., 2020).

Despite the country's journey toward progress in implementing necessary reforms and policies to accelerate growth, the achievement of universal health coverage by 2030 is seemingly not a vibrant wave for socio-economic development. Considering the recommended expenditure of \$86 per person annually, Uganda requires over \$3.8 billion to realize universal health coverage. The tracking towards the achievement of universal health coverage is still low, given that Uganda's health budget for 2024-2025 is UGX 2.946 trillion, or \$792 million (Ggoobi et al., 2024). The latter is 4.1% of the total UGX 72.136 trillion national budget, below 15% of the Abuja Declaration allocation to member states' national health budgets.

Though having widespread application throughout the nation, CBHI schemes in Uganda have not yet been thoroughly studied. Most of the previous studies also used quantitative research methods with the aim of producing data elucidating the characteristics of a particular community and sub-population. Thus, a qualitative method has been used to yield in-depth insights that extend beyond numerical data. This approach enables the exploration of perceptions and experiences related to CBHI. Subsequently, this study explores the perceptions and experiences of WTP for community-based health insurance schemes and factors that affect their willingness to pay among farming households in Uganda.

## LITERATURE REVIEW

### *Theoretical and Conceptual Frameworks on Social Capital and Willingness to Pay*

CBHI's key components – voluntary membership, community participation, and risk pooling largely by community membership – are theoretical constructs for focusing on the contexts at the community level. This study adopted the theory of social capital and Bourdieu's concepts to explore perceptions and experiences of willingness to pay for CBHI schemes in Uganda.

Willingness to pay for CBHI is defined as the valuation of health benefits in monetary terms to community health insurance at a given maximum price (Garedew et al., 2020). The social capital theory is closely associated with WTP, where health consumers purposively maximize payment to healthcare services. Thus, it defines the value that one puts on the healthcare service provided by CBHIs. The theory of social capital and Bourdieu's concepts increase the prospect of CBHI achievement through improved community participation, empowerment, interpersonal trust, and intra-community solidarity (Ko et al., 2018).

The conceptualization of social capital is drawn way back from Karl Marx. In 1916, Lydia J. Hanifan was the first to review details of Karl Marx's work. Social capital is a shared benefit in terms of trust (as contrasting to fear) of others in the social space. It also concerns reciprocity and cooperation that expedite collaboration and joint action for mutual benefits in community networks (Bhandari & Yasunobu, 2009).

Two main theoretical components of social capital are reciprocity and trust in the community. Bourdieu recognized the social capital value, whereas Coleman posited a theoretical framework (Zhang et al., 2006). Putnam suggested the collective method, whereas Coleman and Bourdieu proposed an individualist method to social capital. The approaches promote willingness to engage in social interactions that define social capital.

The social capital recognizes two types: structural and cognitive (Tundui & Macha, 2014). The behavior of an individual is shaped by the social environment. The cognitive social capital is built on the psychology of an individual. The structural social capital is based on the relationship between the individual and the institution (regulations and rules).

Social capital can be classified into bridging, bonding, and linking. Bridging is defined as weak ties (interactions across multiple networks or groups) corresponding to the extra community. Bonding means strong ties (interactions that exist within a given network or group) corresponding to intracommunity, such as families, neighbors, and friends (Fenenga et al., 2018). Linking is regarded as vertical ties, which signifies interactions between various individuals in formal groups or power hierarchies in organizations.

Today, social capital measures are still discussed. However, Wind and Villalonga-Olives (2019) measured reciprocity and trust with assessment approximation to social capital.

Numerous studies show social capital enables maintenance, operation, and CBHI demand enhancement in the community. In light of Donfouet et al. (2011), findings from a study done in rural Cameroon showed social capital is an important process in strongly shaping the behavior of WTP for community-based health insurance. The social capital theory proposes that willingness to pay for CBHI is achieved when social relationships within communities are benevolent. Given that social capital is an enabler in influencing WTP for CBHI, it could potentially predict WTP for CBHI among farming households (Zhang et al., 2006; Negera

& Abdisa, 2022). The same is traced in works by Donfouet et al. (2011), Donfouet & Mahieu (2012). However, this is dependent on attitude towards and perception of the CBHI scheme.

Muchabaiwa et al. (2017) found evidence that low WTP for CBHI is more associated with “weak ties” (less solidarity) in Africa. Having “strong ties” is related to better health effects (Ehsan et al., 2019). From a communitarian view under CBHI, social capital influences access to basic healthcare for households. The scope of social capital is networks of social support (membership to formal and informal groups), trust (scheme management), and norms (scheme rules), which can advance households’ health.

From the health perspective, the three interrelated concepts suggested by Bourdieu maximize utility (Adkins, 2008). They are valuable for linking the theory of social capital with WTP. The concepts of Bourdieu are “capital”, “field”, and “habitus”. They are summed up in the construct between health and community (Cockerham, 2013). It appeals to interactions between the farming households as informal workers and community-based health insurance schemes in a rural setting.

Studies have reported that health interventions, which are public goods, link health outcomes to social capital through social support mechanisms that are health-enhancing among rural communities in the context of CBHI. The latter improves healthcare utilization and resource mobilization with protection from out-of-pocket expenditures (Terefa et al., 2024; Bayou et al., 2024; Joshi et al., 2020). Though little is known about health promotion by social capital, Bourdieu’s theory of capitals posits that the capital held and exhibited comprises the action resources that can be mobilized when there is a need to improve one’s health (Eriksson, 2011; Xu & Jiang, 2020).

Willingness to pay for CBHI schemes is presumed to be enhanced among members in a household and community. Hence, Bourdieu’s conceptual tools explore relationships between constructs and individuals: *habitus*, *capital*, and *field*.

*Habitus* elucidates how individuals accomplish a decision that is acceptable within a community; nonetheless, neither the beliefs, ideas, nor implementations are defined by the community constructs. In agreement with their *habitus*, people involuntarily take actions, as involved in different fields of society, for the development of strategies through social capital (Collyer et al., 2015).

*Capital* implies that individuals advance resources for social interaction. In this context, capital is represented as economic (income), cultural (knowledge and information about CBHI schemes), and social (ownership of personal networks in mutual relationships) forms that individuals develop through socialization.

*Field* means space in a social setting (such as a healthcare field). This usually comprises power dynamics between social networks, which are continuously competitive. Consequently, Bourdieu’s concepts enable positing social capital theory regarding willingness to pay for CBHI schemes.

In this way, willingness to pay can be designed by enhancing or suppressing different dynamics of Putnam and Bourdieu concepts’ configurations as structured in the social space. Thus, it is possible to understand processes of WTP for CBHI schemes in a social structure. The differences in methodologies, as well as the literature body itself, are tied to ensuring that farming households and other informal sector workers would be willing to pay for CBHI schemes, particularly in Uganda.

Considering Putnam and Bourdieu’s concepts, this research explores perceptions and experiences of willingness to pay CBHI schemes as well as factors that affect WTP among farming households.

## METHODOLOGY

### *Study Design*

A qualitative research approach was used. An explorative study design with the phenomenological approach was applied. It focused on describing what all respondents had in common as they experienced the phenomenon: willingness to pay for community-based health insurance.

Explorative design was selected as the most suitable because it provided an opportunity to explore in depth the perceptions and experiences of willingness to pay for CBHI as well as factors that affect their WTP among farming households in Uganda. The study investigated what is experienced by respondents and how it is experienced without the application of pre-existing frameworks or theories. Given the time constraint, the explorative approach provided an efficient method to collect data within the specified time frame. Focus group discussions (FGDs) and key informant interviews (KIIs) were employed to qualitatively collect data.

### *Study Setting*

This study was conducted from 30 January 2022 to 11 April 2022 in Isingiro District, one of Uganda’s 146 administration units. Isingiro District is located in southwestern Uganda. The district lies in the transverse

environmental zone commonly known as the “cattle corridor” and has a high agrarian nature. It is characterized by extreme climatic conditions, particularly intermittent floods and droughts (Egeru, 2015).

Isingiro District is bordered by Rakai District to the east, Mbarara District to the northwest, and Kiruhura District to the north. Ntungamo District is located to the west and to the south near the Republic of Tanzania. The district has a population of 633,844 (The Uganda Bureau of Statistics, 2024). 80% of households are engaged in farming as the main economic activity.

Accessibility to healthcare services is still a challenge because 35.5% of households are 5 km or more distant from the closest public health facility (The Uganda Bureau of Statistics, 2017). The district has 79 health facilities out of 1,367 entities in the southwest region (The Republic of Uganda Health Ministry, 2017). Isingiro is a district with a terrain characterized by mountains and numerous hills, shaping its geography, economy, and access to healthcare service delivery, which is harder. The performance of the health sector is less than the average at 48% (Isingiro District, 2023).

### ***Data Collection***

Four FGDs (two for members and two for non-members of CBHI) were conducted to substantiate key informant interviews. Two FGDs represented women, and the other two men. The aim of conducting these FGDs was to ensure data richness and understand perceptions and experiences of willingness to pay CBHI and factors that affect their WTP among farming households.

We also conducted KIIs to achieve deep case-oriented analysis and avoid “data contamination”. Participants for KIIs were different from those approached for FGDs. Semi-structured questions were used in the process of data collection (Appendix A). The themes were socio-demographic factors, individual experiences, a health system, and scheme-related experiences.

All face-to-face interviews were conducted in private locations. Four research assistants skilled at qualitative research conducted the interviews. In every session, moderators observed, facilitated, recited questions, and recorded responses. All interviews were audio-recorded in English and Runyankore (a local language). The FGD interviews lasted 1-1.5 hours, and KIIs lasted 40-45 minutes.

### ***Sampling and Sample Size***

Isingiro District was purposively selected. Out of 33 districts with CBHI coverage, Isingiro District was chosen because it is geographically serviced by three community health insurance schemes (West Ankole Diocese Health Cooperative Society, Amagara Twetambire under Archdiocese of Mbarara, and Gudie Health Plan). A pretest was done in Mbarara District with similar characteristics to Isingiro District.

Interviews with 33 participants saturated the data, which was the point at which researchers concluded they had collected enough data and no new information had been uncovered (Saunders et al., 2018). Subsequently, 24 heads of farming households participated in the FGDs.

The FGDs with CBHI beneficiaries were selected via the snowball sampling technique. And 9 key informants more knowledgeable about the CBHI scheme were chosen purposively. In particular, there were two CBHI managers, two CBHI focal persons, one health professional, and one policy-maker. The other three persons were local leaders. All of them were chosen for key informant interviews.

### ***Data Analysis***

The KI and FGD data were analyzed via thematic content analysis manually by the iterative inductive approach. The analysis consisted of six steps: familiarization with what the data entails by reading and re-reading transcriptions, establishment of comprehensive codes, synthesis of codes into themes, review of how themes reinforced data to ensure the theme patterns have a precise combination of data, confirmation of the themes, and reporting of the result. The theory of social capital guided the analysis process.

Initially, the fishbone analysis was done to map the information. Each team member cross-checked and completed it in regard to the study objective. Then, subsequent rounds of coding proceeded to sort data into manageable sections iteratively, shifting between data, literature, and interpretative discussions from data. Later, codes were organized and assembled into dominant themes within the data set. The themes were explicitly advanced for consistency. The confirmed themes were described to reflect the study objective.

The data was then interpreted to define the findings. The entire team reviewed the results for reliability and convergence. Quantitative data was entered into Excel and exported to SPSS software (Version 20) for analysis. Univariate analysis was done.

### *Methodological Limitations*

Interpretation of the study findings has multiple perspectives using the qualitative method. Interpretation is subjective to a researcher, and the perceptions and experiences of the participants may be skewed depending on the context. Thus, key informant interviews were done to ensure accuracy in data interpretation. Besides, the limitation of objectivity and the phenomenological approach make it difficult to generalize findings to a wider population because of its emphasis on defined individual experiences without consideration of other contexts: cultural, historical, and social.

### *Ethics Statement*

The study was approved by the National Council of Science and Technology, the School of Graduate Studies of Bugema University, and the Research Ethics Committee by the Aids Support Organization (TASO); reference number TASO-2021-37. Permission for study was obtained from the Isingiro District Authority.

Voluntary participation was encouraged upon informed consent. The privacy and confidentiality of participants were maintained throughout data collection, analysis, and result reporting. The research assistants signed an agreement committing to the required data collection. The study was done according to the Declaration of Helsinki and the Ministry of Health guidelines

## RESULTS

The socio-demographic data of FGD participants was entered into Excel and exported to SPSS software (Version 20) for analysis. Univariate analysis was done to focus on the FGD's socio-demographic data and the interpretation of one variable independently. In this study, we aimed to understand the characteristics of one specific variable. A frequency percentage distribution was generated to provide a summary of the socio-demographic data and to determine the patterns. To obtain a percentage, the frequency ( $f$ ) in each category was divided by the total number of cases ( $N$ ) and multiplied by 100. The percentage of observations that fall into each category was determined. This implies the following statements:

The independent variable is the input feature ( $x_1, x_2, x_3, \dots, x_n$ ).

The dependent variable is the target variable ( $y$ ).

$$\text{Percentage} = f/N \cdot x \cdot 100\% , \quad (1)$$

where  $f$  is frequency for the independent variable ( $x_1, x_2, x_3, \dots, x_n$ );  $N$  is population for the dependent variable ( $y$ ).

In the previously mentioned equation,  $f$  is the parameter of the independent variable ( $x$ ), which was selected based on previous studies of the determinants of WTP for CBHI.

The outcome variable ( $y$ ) was used for the analysis. The willingness to pay for CBHI is measured as 0 (willing to pay) or 1 (not willing to pay).

Table 1 comprises socio-demographic characteristics of the participants. The study successfully enrolled 33 participants, yielding a response rate of 100%. A total of four FGDs, each with 6 members (12 CBHI members and 12 non-members), and 9 KIIs were done.

**Table 1. Socio-Demographic Characteristics of FGD Participants**

Variables	CBHI Members	Non-CBHI Members
Age in years		
18-45	11 (91.7%)	7 (58.3%)
>45	1 (8.3%)	5 (41.7%)
Education		
Formal	3 (25%)	5 (41.7%)
Non-formal	9 (75%)	7 (58.3%)
Occupation		
Farmer	12 (100%)	12 (100%)
Household size		
1-5	4 (33.3%)	2 (16.7%)
>5	8 (66.7%)	10 (83.3%)
Monthly income		
< 250,000 UGX	7 (58.3%)	9 (75%)
>250,000-<1,000,000 UGX	5 (41.7%)	3 (25%)

Note: 1 USD: 3700 UGX

Source: Based on authors' research results

Most of the participants were male (69.7%). All FGD respondents were farmers, and 75% of them were young adults between 18 and 45 years of age. Most of the participants had non-formal education. Three-quarters of the CBHI members (75%) and 58% of non-CBHI members had no informal education. Many of the households for the participants had more than 5 members. The non-CBHI members had the highest prevalence (83.3%), followed by 66.7% of the CBHI members, and the least was 16.7% with less than 5 members among the non-CBHI participants. Finally, 75% of the non-CBHI members earned less than 250,000 UGX monthly, followed by 58.3 % of the CBHI participants (Table 1).

**Themes and Sub-Themes**

In this study, three themes were identified. They are individual, health system, and scheme-related factors, as indicated in Table 2. Several perceptions and experiences were repeatedly expressed in the FGD and KII interviews by both CBHI members and non-members.

**Table 2. Themes and Sub-Themes**

Predetermined Themes	Emergent Themes / Sub-Themes
Individual factors	Knowledge about CBHI Households’ health status (availability and accessibility to care, poor health status) Household income Perception on willingness to pay for CBHI
Health system factors	Household expenditure on CBHI
Scheme-related factors	Trust in CBHI (fears, comfort, satisfactory care)

*Source: Based on authors’ research results*

The sub-themes that emerged were: (I) household heads’ knowledge about the CBHI principles and benefits; (II) perception on WTP for CBHI; (III) household expenditure on CBHI; (IV) household incomes; (V) household health status; (VI) trust in CBHI, healthcare quality offered by the scheme (Table 2).

**Knowledge about CBHI**

Knowledge-related factors, which influence WTP for CBHI, involved both awareness and level of understanding about CBHI. The participants had a good understanding of CBHI and could explain it. In the context of health insurance economics, good knowledge of health insurance positively influences the willingness to pay, leading to high levels of enrollment in CBHI schemes. Besides, describing concepts, such as solidarity and risk sharing to communities and individuals to mobilize for CBHI, demands less effort. This improves WTP and enrollment in CBHI. Thus, there is a contribution to socio-economic development among members of the scheme. One participant said:

*For us as farmers, CBHI is a way of saving some money so that in the future, when one of us needs the health service at the health hospital, you can go and get it at a lesser cost (KI 04, CBHI manager).*

Similarly, several respondents in the focus group discussions had a good understanding of CBHI:

*A situation where members agree on the amount to pay for a year through heads of households. Members can access treatment from a selected health facility and cater to emergencies (P3, FGD 01, CBHI member).*

Another respondent described CBHI:

*It is a good initiative where people collect their money in one pool with an intention to cater to their health (P1, FGD 03, CBHI non-member).*

However, most respondents (both CBHI members and non-members) expressed that most of the community members were not yet aware:

*We need more sensitization for people to increase their savings for health (P6, FGD 04, CBHI non-member).*

**Households’ Health Status**

Most of the participants preferred a benefit package that covers chronic illnesses. They cited as the reasons for this the high prevalence of chronic rather than acute illnesses in their households and communities.

Regardless of the health status, the preference for a benefit package is driven by low-cost and high-quality services. As a result, the inclusiveness of health status in the CBHI schemes is an economic measure of the health insurance market margins and scales of the economy. This perception of economics and risk aspects in relation to health status was well reported by a participant:

*Chronic diseases like peptic ulcers are more common. The scheme helps the poor and the old people since they are the most vulnerable. It reduces the cost of care, improves affordability and quality of services to the beneficiaries (P2, FGD 01, CBHI member).*

Another participant expressed the importance of availability and access to care:

*The scheme has enabled the beneficiaries, particularly those of us with chronic diseases, to easily access healthcare services, which previously was difficult for us (P4, FGD 02, CBHI member).*

### **Household Incomes**

The data gathered from key informants showed that most of the participants are willing to pay for CBHI but are poor. This implies that the contingent's out-of-pocket health utility spending or the well-being of individuals is dependent on their income. While income may increase demand for CBHI, findings in this study show that lack of money does not impede WTP from valuing health insurance services for their well-being. Hence, it is important for CBHI to know the consumers' intended premium payment to ensure the scheme's financial sustainability.

One key respondent said:

*Many people are poor with less income and operate on small budgets to cater to their large family households. This results in a decreased WTP for CBHI (KI 01, Ministry of Health).*

This reason was further emphasized by another respondent:

*Whenever you tell some of them to pay for the scheme, they tell you there is no money to pay for the premium. However, they wish to use its services whenever they seek care (P5, FGD 01, CBHI member).*

### **Perception on Willingness to Pay for CBHI**

Although many participants had dissenting perceptions, they expressed their WTP for CBHI to protect themselves from catastrophic health expenditures. The evidence shows catastrophic health expenditures push individuals to poverty, compromising productivity and decreasing agricultural output and the health of communities. This may lead to an increase in per capita demand for food amidst no substitution. Subsequently, there is increasing inflation and other marginal market effects. Seen in this light, the perception of WTP for CBHI yields greater economic efficiency.

On the other hand, the findings of this study indicate that social capital affects attitudes towards CBHI schemes. Also, it reaffirms that social capital is a shared benefit that expedites the demand for health insurance to mutual benefit. This was stated by a participant:

*Poor attitude towards social solidarity to pool resources, together with no or little sensitization, leads to decreased WTP for CBHI (KI 01, Isingiro District).*

*I enrolled three years ago to reduce the cost of healthcare. Sickness is unpredictable, while family security in terms of health is extremely important (P1, FGD 04, CBHI member).*

Another respondent said:

*It is a good initiative where people collect their money in one pool with the intention to cater to their health (P4, FGD 03, CBHI member).*

### **Household Expenditure on CBHI**

The KII data demonstrate that household health expenditure affects WTP. CBHI is assumed to reduce out-of-pocket expenditure on health. Similarly, it increases investments in the health sector and consequently protects individuals from catastrophic expenditures. However, low health expenditures on health could decrease the health insurance uptake. This may be due to the low perception of risk for healthcare. During the interviews, one key informant noted:

*CBHI reduces healthcare expenditure through paying less fees for health services. Hence, saving lives*

at minimum costs (KI 05, community leader).

Another participant expressed that the scheme was not affordable:

*It is costly! And there is a lack of commitment and poor attitude towards the scheme, which may mutually drive away some people* (P3, FGD 02, CBHI member).

On the contrary, with dissenting views on CBHI household expenditures, a participant expressed optimism in CBHI. He said:

*In Uganda, the spirit of solidarity is high. With such developments in saving for health from the communities, scaling to the national level for the realization of health for all is inevitable* (KI 03, community leader).

And then continued:

*Relatively few CBHI schemes are operational. However, they are putting up meaningful progress toward universal health coverage. Besides, they provide quality and affordable healthcare* (KI 03, community leader).

### **Trust on CBHI**

Most participants have trust in the CBHI schemes. Many scheme members experienced comfort at health facilities and were satisfied with the provided care. In this context, high trust could increase demand for CBHI. This reduces transaction costs and raises the profit of insurers. Similarly, it may attract more individuals who are willing to pay and enroll for CBHI. However, a low trust could yield economic certainty and lesser economic efficiency.

The participants expressed that when they fall sick, they are not worried about the treatment cost since they are assured that they will not have to pay.

*Previously, the management of patients was so difficult. Now, with payment to the scheme, care has improved in aspects of the availability of medicines and staff. There is efficient service delivery. Waiting time is short* (KI 09, medical officer).

On the other hand, some participants expressed challenges of lack of trust in CBHI in the community. A CBHI community desk person confirmed the narrative. He said:

*Experience of lack of trust with previous organizations is a barrier to WTP for CBHI. Some people previously were in similar arrangements that betrayed them, so there is a lot of fear of betrayal* (KI 06, CBHI focal person).

## **DISCUSSION**

This study aims to explore the perceptions and experiences of the willingness to pay CBHI among farmers in Uganda. Heads of farming households, CBHI managers, CBHI focal persons, a health professional, a policy maker, and local leaders highlighted multiple issues during their interviews.

The knowledge of CBHI, perception of WTP for CBHI, household expenditure on CBHI, household incomes, households' health status, and member's trust in CBHI were recognized as the main perceptions and experiences of farmers. Also, it was indicated that despite CBHI members and non-members having good knowledge of CBHI, most persons are not aware of the scheme's benefits and principles. The CBHI idea is a new concept to the bulk of the population. This finding agrees with a similar study, which showed that inadequate knowledge hinders WTP for CBHI (Basaza et al., 2008). In contrast, a Nigerian study reported all farmers to be fully knowledgeable (Babatunde et al., 2016).

Within the social capital theory, constructs of strong and weak ties are likely to improve sensitization and awareness campaigns about CBHI. Thus, it is reasonable to improve knowledge of CBHI. Though strong and weak social ties interact differently, it equally facilitates collective action, which in turn influences willingness to pay CBHI (Negera & Abdisa, 2022; Ko et al., 2018). Strong ties serve more actively and persuasively on the flow of referral information. The referrals received from close family and friends are more trusted than to the contrary.

Thus, sensitization should be rallied more on interactive concerted efforts, including influential locals and farming households. In contrast, there are weak ties and biased information between diverse sub-groups in a larger social system. This implies positive experiences of using CBHI schemes shared as testimonials.

They are likely to be more significant than conventional promotional channels.

Many developing countries with existing health insurance systems tend to experience challenges toward the attainment of universal health coverage, exclusively with the informal sector workers. Similar studies showed negative perceptions of WTP in Ethiopia and Nigeria (Biset Wagaw et al., 2022; Negera & Abdisa, 2022). Poor perception of willingness to pay CBHI is likely due to a myriad of systemic challenges driven by insurance fraud, negative attitudes towards health insurance, low awareness, and high premiums. Therefore, strategies that enhance the sustainability and visibility of CBHI should be planned.

According to this study, household income has been pointed out as one of the constraints for willingness to pay CBHI. Although many people exhibit WTP for CBHI, they are poor and cannot afford to pay. This implies that perceptions of WTP for CBHI are positive. It is similar to a study done in South Africa, pointing out that lacking financial earnings and unstable or uncertain income contribute to unwillingness to pay for schemes (Morestin & Ridde, 2009). However, several reasons promote unwillingness to pay, like poverty, which could result in low agricultural output because of farming practices. This may lead to a lack of or minimum surplus disposed of for CBHI payment. Consequently, there is spiraling into delayed care, low productivity, and increased morbidity.

Living hand-to-mouth every day based on their daily incomes, informal workers cannot afford to pay for healthcare. Subsequently, zero earnings reign over the family. With financial constraints, this circumstance establishes a vicious circle of morbidity and lost productivity. The findings show people find it difficult to meet scheme payments due to high costs. This implies that individuals face financial catastrophe because of paying for healthcare costs. It perpetuates a downward spiral into ill health and poverty. This reduces household productivity and agricultural output to health, increasing morbidity and mortality.

Nonetheless, social capital affects more strongly the willingness to pay for CBHI. So, low stocks of social capital, such as lack of commitment and poor attitude towards the scheme due to lack of solidarity and cohesion in relationship networks, are likely to affect the success and demand for WTP for CBHI. This is supported by a Tanzanian study (Tundui & Macha, 2014).

The findings qualify the trust as an important element for the success of the willingness to pay for CBHI. Several studies show that trust in the scheme is an enabler or barrier to decisions of WTP for CBHI schemes (Hussien et al., 2022; De Allegri et al., 2016; Fadlallah et al., 2018). This is supported by a study that revealed that despite the uncertainty about who is willing to pay for CBHI, schemes are social life-based networks constructed on the trust in schemes (Donfouet et al., 2011; Muchabaiwa et al., 2017; Ehsan et al., 2019). The theory of social capital narrates that social support and networks influence an individual's health lifestyles through health promotion (Lindström, 2008). As such, CBHI networks founded on benefits and mutual trust tend to inspire non-members to pay for health insurance (Kawachi et al., 2008; Hao et al., 2020).

The interface of different concepts of Bourdieu's social capital in our study can support the WTP position. It should be considered as social capital imposing cultural capital. CBHI members will influence non-members to pay for CBHI (Abel & Frohlich, 2012).

### ***Study Limitations***

This study has some limitations. Still, the study setting augmented the data availability to a certain degree of accuracy. It allowed assessment of the sample representativeness and factors influencing WTP for CBHI by comparing household heads who are members of community health insurance to non-members. Also, this study suggests that WTP for CBHI among farmers is shaped not only by the WTP factors but also by their habitus and social structure. Finally, via farming households, largely as a source of information and sample, certain perceptions and experiences of WTP for CBHI were excluded from this study.

### **CONCLUSIONS**

The out-of-pocket expenditures for health as well as access to healthcare services are outstanding challenges among rural households seeking healthcare in developing countries. Community-based health insurance schemes are a known contribution to mitigating the effects of out-of-pocket expenditures and strengthening healthcare. Thus, it is necessary to promote healthcare equity and attain universal health coverage.

The objective of this study was to explore perceptions and experiences of willingness to pay for CBHI and factors affecting that. However, to realize this objective, policy-makers and stakeholders should embrace interventional approaches for willingness to pay CBHI for informal workers with aspects of perceptions and experiences within the social structure. Also, using a socio-ecological model could make known the intricacies of willingness to pay factors for CBHI. Finally, the government must contribute to the development and future

sustainability of CBHI to ensure equity and appropriate utilization of health services. Thus, realizing universal health coverage and reaching goals of sustainable development by 2030 are relevant.

This study identified six factors associated with perceptions and experiences of willingness to pay for CBHI: knowledge of community-based health insurance, perception of willingness to pay for CBHI, household expenditures on the scheme, household incomes, households' health status, and trust in the scheme. These factors provide a possibility that social capital might be used to integrate CBHI schemes into the proposed National Health Insurance Scheme in Uganda. These factors are indicative of the determinants of willingness to pay for CBHI in rural communities and similar settings.

However, we contend that some factors might be more community-enhancing than others with respect to a given network and geographical area. Thus, there is a need to investigate these factors more to fully understand the dimensions of their association with the willingness to pay for CBHI. This could help in increasing the positive attitude towards the willingness to pay for CBHI schemes and demand for the National Health Insurance Scheme. Hence, these factors might show what should be considered and how the integration issue should be put on the national agenda in terms of the willingness to pay and the associated factors.

Furthermore, the findings of this study have indicated community exhibited cohesion. The significant factors are predictors of solidarity, which is a foundational basis for CBHI. This implies that the more useful CBHI is to a community, the more cohesion and solidarity reside in the community. Therefore, this study helps the key actors to pinpoint to the implications concerning the above-mentioned factors regarding the willingness to pay for CBHI.

Within the context of Putnam and Bourdieu's concepts, this study might serve as a conception tool in the design of the proposed National Health Insurance Scheme with respect to the dynamics of communities. The research has shown that there is a relationship between health and social capital within communities seeking affordable healthcare, healthcare financing, and strengthening. Given that, the findings suggest the willingness to pay for CBHI among farmers is shaped not only by the WTP factors but also by their habitus and social structure.

Further studies should consider that the social capital of individuals and communities (both within and between) exists in different scopes by their habitus and social structure. By the same token, we can treat social capital as an independent variable and investigate how it influences the willingness to pay for CBHI in a certain social space. Thus, social capital could possibly envisage willingness to pay for CBHI schemes among varying networks beyond rural boundaries and farming households.

CBHI challenges the role played by the traditional government delivery healthcare systems. It allows patients to tailor benefit packages, both from individual and household units, to what is considered traditionally a government's mandate health for its citizens, as a result establishing health equity for all. This aspect of a changing community compromises the cohesion of the community, contrary to Putnam's notions of trust. The scope of CBHI benefit packages is wide due to increasing patient needs and expectations that are becoming more individualized. That posits the social capital theory of Bourdieu's concepts, arguably to harmonize with modern society configuration dynamics and market demands.

Further studies should also consider social capital and its implications for health utility and willingness to pay for health insurance economics.

#### **Author Contributions**

Conceptualization: E. O., N. M., F. A. O., C. D., D. N., J. N., A. W., R. K. B.; data curation: E. O., F. A. O., C. D., R. K. B; formal analysis: E. O., N. M., F. A. O., C. D.; funding acquisition: E. O.; investigation: E. O., N. M., F. A. O.; C. D., D. N., J. N., A. W., R. K. B; methodology: E. O., N. M., F. A. O., C. D., D. N., J. N.; R. K. B.; project administration: E. O.; resources: O. E.; software: O. E.; supervision: E. O., N. M., F. A. O., C. D., D. N., J. N., A. W., R. K. B.; validation: E. O., N. M., F. A. O.; C. D., D. N., J. N., A. W., R. K. B.; visualization: E. O., F. A. O.; writing – original draft: E. O., N. M., F. A. O.; C. D., D. N., J. N., A. W., R. K. B.; writing – review & editing: E. O., N. M., F. A. O.; C. D., D. N., J. N., A. W., R. K. B.

#### **Conflict of Interest**

The authors declare no conflicts of interest.

#### **Data Availability Statement**

Not applicable.

#### **Informed Consent Statement**

Informed consent was obtained from all individual participants included in the study.

### Acknowledgements

The authors wish to thank all participants in this study. Special thanks to Col. Nathan Kavuma, Joseph Mfitumukiza, and Lydia Nantume for their input to this study. This paper was proofread by Phionah Atukunda, and we are indebted to her.

### References

1. Abel, T., & Frohlich, K. L. (2012). Capitals and capabilities: Linking structure and agency to reduce health inequalities. *Social Science & Medicine*, 74(2), 236-244. [\[CrossRef\]](#)
2. Adkins, L. (2008). Social capital put to the test. *Sociology Compass*, 2(4), 1209-1227. [\[CrossRef\]](#)
3. Babatunde, R., Oyedeji, O., Omoniwa, A. E., & Adenuga, A. (2016). Willingness-to-pay for community based health insurance by farming households: A case study of hygeia community health plan in Kwara State, Nigeria. *Trakia Journal of Science*, 14(3), 281-286. [\[CrossRef\]](#)
4. Basaza, R. K., Kiconco, J. H., Kyasiimire, E. P., & Otieno, E. D. (2022). Determinants of willingness to pay for community health insurance among commercial motorcyclists in Kampala City, Uganda: A contingency valuation study. *Journal of Research and Health*, 12(2), 75-84. [\[CrossRef\]](#)
5. Basaza, R., Criel, B., & Van der Stuyft, P. (2008). Community health insurance in Uganda: Why does enrolment remain low? A view from beneath. *Health Policy*, 87(2), 172-184. [\[CrossRef\]](#)
6. Bayou, F. D., Arefaynie, M., Tsega, Y., Endawkie, A., Kebede, S. D., Kebede, N., Mihiretu, M. M., Enyew, E. B., Ayele, K., & Asmare, L. (2024). Effect of community-based health insurance on healthcare services utilization in Ethiopia: A systematic review and meta-analysis. *BMC Health Services Research*, 24, 1188. [\[CrossRef\]](#)
7. Bhandari, H., & Yasunobu, K. (2009). What is social capital? A comprehensive review of the concept. *Asian Journal of Social Science*, 37(3), 480-510. [\[CrossRef\]](#)
8. Biset Wagaw, G., Tadesse, A. W., & Ambaye, G. Y. (2022). Willingness to join community-based health insurance among households in South Wollo, Northeast Ethiopia: A community-based cross-sectional study. *PLOS ONE*, 17(2), e0261642. [\[CrossRef\]](#)
9. Busse, R., Blumel, M., Knieps, F., & Barnighausen, T. (2017). Statutory health insurance in Germany: A health system shaped by 135 years of solidarity, self-governance, and competition. *Lancet*, 390(10097), 882-897. [\[CrossRef\]](#)
10. Chemouni, B. (2018). The political path to universal health coverage: Power, ideas and community-based health insurance in Rwanda. *World Development*, 106, 87-98. [\[CrossRef\]](#)
11. Cockerham, W. C. (2013). Sociological theory in medical sociology in the early twenty-first century. *Social Theory and Health*, 11(3), 241-255. [\[CrossRef\]](#)
12. Collyer, F. M., Willis, K. F., Franklin, M., Harley, K., & Short, S. D. (2015). Healthcare choice: Bourdieu's capital, habitus and field. *Current Sociology*, 63(5), 685-699. [\[CrossRef\]](#)
13. Darrudi, A., Ketabchi Khoonsari, M. H., & Tajvar, M. (2022). Challenges to achieving universal health coverage throughout the world: A systematic review. *Journal of Preventive Medicine and Public Health*, 55(2), 125-133. [\[CrossRef\]](#)
14. De Allegri, M., Sanon, M., & Sauerborn, R. (2016). To enrol or not to not to enrol? A qualitative investigation of demand for health insurance in rural West Africa. *Social Science & Medicine*, 62(6), 1520-1527. [\[CrossRef\]](#)
15. Donfouet, H. P. P., & Mahieu, P.-A. (2012). Community health insurance and social capacity: A review. *Health Economics Review*, 2, 5. [\[CrossRef\]](#)
16. Donfouet, H. P. P., Makaudze, E., Mahieu, P. A., & Malin, E. (2011). The determinants of the willingness-to-pay for community-based prepayment scheme in rural Cameroon. *International Journal of Health Care Finance Economics*, 11(3), 209-220. [\[CrossRef\]](#)
17. Egeru, A. (2015). *Mental Drought Afflicts Uganda's Cattle Corridor*. [\[Link\]](#)
18. Ehsan, A., Klaas, H. S., Bastianen, A., & Spini, D. (2019) Social capital and health: A systematic review of systematic reviews. *SSM – Population Health*, 8, 100425. [\[CrossRef\]](#)
19. Eriksson, M. (2011). Social capital and health – implications for health promotion. *Global Health Action*, 4(1), 5611. [\[CrossRef\]](#)
20. Eze, P., Ilechukwu, S., & Lawani, L. O. (2023). Impact of community-based health insurance in low-and middle-income countries: A systematic review and meta-analysis. *PLOS ONE*, 18(6), e0287600. [\[CrossRef\]](#)
21. Fadlallah, R., El-Jardali, F., Hemadi, N., Morsi, R. Z., Samra, C. A., Ahmad, A., Arif, K., Hishi, L., Honein-Abou, G. H., & Akl, A. E. (2018). Barriers and facilitators to implementation, uptake and

sustainability of community health insurance schemes in low and middle income countries: A systematic review. *International Journal for Equity in Health*, 17, 13. [\[CrossRef\]](#)

22. Fenenga, C. J., Buzasi, K., Arhinful, D. K., Duku, S. K., Ogink, A., & Poortinga, W. (2018). Health insurance and social capital in Ghana: A cluster randomized controlled trial. *Global Health Research and Policy*, 3, 1-11. [\[CrossRef\]](#)

23. FSD Uganda. (2018). *Report on Uptake of Insurance Services in Uganda 2018*. [\[Link\]](#)

24. Garcia-Diaz, R., Sapkota, V. P., & Flores, G. (2024). Persistency of catastrophic out-of-pocket health expenditures: Measurement with evidence from three African countries – Malawi, Tanzania, and Uganda. *Social Science & Medicine*, 357, 117156. [\[CrossRef\]](#)

25. Garedew, M. G., Sinkie, S. O., Handalo, D. M., Salgado, W. B., Kehali, K. Y., Kebene, F. G., Waldemariam, T. D., & Mengesha, M. A. (2020). Willingness to join and pay for community-based health insurance among rural households of selected districts of Jimma zone, Southwest Ethiopia. *ClinicoEconomics and Outcomes Research*, 12, 45-55. [\[CrossRef\]](#)

26. Getahun, G. K., Kinfu, K., & Minwuyelet, Z. (2023). The role of community-based health insurance on healthcare seeking behavior of households in Addis Ababa, Ethiopia. *Preventive Medicine Reports*, 34, 102234. [\[CrossRef\]](#)

27. Ggoobi, R., Munghinda, A., Shaka, I., Muhumuza, J., Kalyango, O., Sabiiti, J. E., & Ocwinyo, J. (2024). Investing in the people of Uganda. *MoFPED TIMES*, 15, 17. [\[Link\]](#)

28. Hao, L., Xu, X., Dupre, M. E., Guo, A., Zhang, X., Qiu, L., Zhao, Y., & Gu, D. (2020). Adequate access to healthcare and added life expectancy among older adults in China. *BMC Geriatrics*, 20, 129. [\[CrossRef\]](#)

29. Hondo, D., & Kim, Y. (2023). Achieving universal health coverage in developing Asia and the Pacific. *Asian Development Bank Institute*. [\[CrossRef\]](#)

30. Hussien, M., Azage, M., & Bayou, N. B. (2022) A mixed methods study of community-based health insurance enrollment trends and underlying challenges in two districts of northeast Ethiopia: A proxy for its sustainability. *PLOS ONE*, 17(8), e0266583. [\[CrossRef\]](#)

31. International Social Security Association. [ISSA]. (2023). *Reforms in Africa to Extend Health Insurance Coverage*. [\[Link\]](#)

32. Isingiro District. (2023). *Isingiro District Local Government Assessment Report on the Service Delivery Performance of Local Governments*. [\[Link\]](#)

33. Joshi, R., Pakhare, A., Yelwatkar, S., Bhan, A., Kalantri, S. P., & Jajoo, U. N. (2020). Impact of community-based health insurance and economic status on utilization of healthcare services: A household-level cross-sectional survey from rural central India. *National Medical Journal of India*, 33(2), 74-82. [\[CrossRef\]](#)

34. Kawachi, I., Subramanian, S., & Kim, D. (2008). Social capital and health: A decade of progress and beyond. In I. Kawachi, S. Subramanian, & D. Kim (eds) *Social Capital and Health* (pp. 1-26). Springer. [\[CrossRef\]](#)

35. Ko, H., Kim, H., Yoon, C. G., & Kim, C. Y. (2018). Social capital as a key determinant of willingness to join community-based health insurance: A household survey in Nepal. *Public Health*, 160, 52-61. [\[CrossRef\]](#)

36. Ko, H., Kim, H., Yoon, C. G., & Kim, C. Y. (2018). Social capital as a key determinant of willingness to join community-based health insurance: A household survey in Nepal. *Public Health*, 160, 52-61. [\[CrossRef\]](#)

37. Kwesiga, B., Aliti, T., Nabukhonzu, P., Najuko, S., Byawaka, P., Hsu, J., Ataguba, J. E., & Kabaniha, G. (2020). What has been the progress in addressing financial risk in Uganda? Analysis of catastrophe and impoverishment due to health payments. *BMC Health Services Research*, 20, 741. [\[CrossRef\]](#)

38. Lenhardt, A. (2023) Community-Based Health Insurance Contributes to Near-Universal Health Coverage in Rwanda, June 6. [\[Link\]](#)

39. Lindström, M. (2008). Social capital and health-related behaviors. In I. Kawachi, S. Subramanian, & D. Kim (eds) *Social Capital and Health* (pp. 215-238). Springer. [\[CrossRef\]](#)

40. Lu, J. F. R., Sheu, J. T., & Lee, T. J. (2022). A tale of two social insurance systems in South Korea and Taiwan: A financial risk protection perspective. *Health Systems & Reform*, 8(1). [\[CrossRef\]](#)

41. Ministry of Health in Uganda. (2021). *Feasibility Analysis of Community-Based Health Insurance Scheme Structures and Their Integration in the National Health Insurance Scheme*. [\[Link\]](#)

42. Morestin, F., & Ridde, V. (2009). *How Can the Poor Be Better Integrated into Health Insurance*

*Programs in Africa? An Overview of Possible Strategies*. Université de Montréal. [\[Link\]](#)

43. Moseley, G. B. (2008). The U.S. health care non-system, 1908-2008. *The Virtual Mentor*, 10(5), 324-331. [\[CrossRef\]](#)
44. Muchabaiwa, L., Chigusiwa, L., Bindu, S., Mudavanhu, V., Damiyano, D., & Mushanyuri, B. E. (2017). Feasibility and sustainability of community-based health insurance in rural areas. Case study of Musana, Zimbabwe. *Expert Journal of Finance*, 5, 73-85. [\[CrossRef\]](#)
45. Namyalo, P. K., Mutatina, B., Byakika, S., Walimbwa, A., Kato, R., & Basaza, R. K. (2023). The feasibility analysis of integrating community-based health insurance schemes into the national health insurance scheme in Uganda. *PLOS ONE*, 18(4), e0284246. [\[CrossRef\]](#)
46. Negera, M., & Abdisa, D. (2022). Willingness to pay for community-based health insurance scheme and factors associated with it among households in rural community of South West Shoa Zone, Ethiopia. *BMC Health Services Research*, 22, 734. [\[CrossRef\]](#)
47. Nguyen, H. A., Ahmed, S., & Turner, H. C. (2023). Overview of the main methods used for estimating catastrophic health expenditure. *Cost Effectiveness and Resource Allocation*, 21(1), 50. [\[CrossRef\]](#)
48. Nosratnejad, S., Rashidian, A., & Dror, D. M. (2016). Systematic review of willingness to pay for health insurance in low and middle income countries. *PLOS ONE*, 11(6), e0157470. [\[CrossRef\]](#)
49. Novignon, J., Lanko, C., & Arthur, E. (2021). Political economy and the pursuit of universal health coverage in Ghana: A case study of the National Health Insurance Scheme. *Health Policy and Planning*, 36(1), 14-21. [\[CrossRef\]](#)
50. Nzowa, P. G., Nandonde, F. A., & Seimu, S. M. (2023). Mediation effect of trust on willingness to pay for health insurance among co-operative members in Tanzania. *Future Business Journal*, 9, 18. [\[CrossRef\]](#)
51. Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., & Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity*, 52, 1893-1907. [\[CrossRef\]](#)
52. Schwettmann, J. (2022). *Towards Universal Health Coverage: The Cases of Benin, Côte D'Ivoire, Ethiopia, Kenya, Senegal and Zambia*. Friedrich-Ebert-Stiftung. [\[Link\]](#)
53. Sumriddetchkajorn, K., Shimazaki, K., Ono, T., Kusaba, T., Sato, K., & Kobayashi, N. (2019). Universal health coverage and primary care, Thailand. *Bulletin of the World Health Organization*, 97(6), 415-422. [\[CrossRef\]](#)
54. Terefa, D. R., Geta, E. T., Shama, A. T., & Desisa, A. E. (2024). What role does community-based health insurance play in the utilization of health services among households in Ethiopia? A community-based comparative cross-sectional study. *BMJ Open*, 14(2), e078733. [\[CrossRef\]](#)
55. The Republic of Uganda Health Ministry. (2017). *National Health Facility Master List. A Complete List of All Health Facilities in Uganda*. [\[Link\]](#)
56. The Republic of Uganda Health Ministry. (2022). *Annual Health Sector Performance Report: Financial Year 2022/2023*. [\[Link\]](#)
57. Tundui, C. S., & Macha, R. R. (2014). Social capital and willingness to pay for community-based health insurance: Empirical evidence from rural Tanzania. *Journal of Finance and Economics*, 2(4), 50-67. [\[Link\]](#)
58. Uganda Bureau of Statistics. (2017). *The National Population and Housing Census 2014 – Area Specific Profile Series, Kampala, Uganda*. [\[Link\]](#)
59. Uganda Bureau of Statistics. (2024). *The National Population and Housing Census 2024 – Preliminary Report, Kampala, Uganda*. [\[Link\]](#)
60. UNICEF. (2023). *Sustaining Public Investments in Health Sector: Uganda Budget Brief. Financial Year 2023/2024*. [\[Link\]](#)
61. Wind, T. R., & Villalonga-Olives, E. (2019). Social capital interventions in public health: Moving towards why social capital matters for health. *Journal of Epidemiology and Community Health*, 73(9), 793-795. [\[CrossRef\]](#)
62. World Health Organization. [WHO]. (2022). *Financial Protection*. [\[Link\]](#)
63. World Health Organization. [WHO]. (2023). *Health Financing Progress Matrix Assessment: Uganda 2023. Summary of Findings and Recommendations*. World Health Organization. [\[Link\]](#)
64. World Health Organization. [WHO]. (2023). *Tracking Universal Health Coverage: 2023 Global Monitoring Report*. World Health Organization and International Bank for Reconstruction and Development. [\[Link\]](#)

65. Xu, P., & Jiang, J. (2020). Individual capital structure and health behaviors among Chinese middle-aged and older adults: A cross-sectional analysis using Bourdieu's theory of capitals. *International Journal of Environmental Research and Public Health*, 17(20), 7369. [\[CrossRef\]](#)

66. Zhang, L., Wang, H., Wang, L., & Hsiao, W. (2006). Social capital and farmer's willingness-to-join a newly established community-based health insurance in rural China. *Health Policy*, 76(2), 233-242. [\[CrossRef\]](#)

## Appendix A

### Questionnaire: Willingness to Pay for CBHI

*Title: Perceptions and Experiences of Willingness to Pay for Community-Based Health Insurance in Isingiro District, Uganda*

#### A. Focus Group Discussion Guide

Code ID.....

##### Section A: Social Demographic Survey

- Please indicate your sex:  
a. Male b. Female
- What is respondent's age (years):  
a. 18-45 b. above
- Please indicate your highest level of educational attainment:  
a. No formal education b. Formal education
- Which major employment are you engaged in to earn your income?  
a. Farmer b. Business person c. Others (specify)
- How many people stay in your household?  
a. 1-5 persons b. more than 5 persons
- On average, how much is your monthly income?  
a. < 250,000 b. 250,000 – < 500,000 c. 500,000 – < 1,000,000 d. > 1,000,000

##### Section B: Discussion Guide

- What do you know or understand about community-based health insurance (CBHI)?
- What are the benefits expected from a CBHI scheme? Probe for the preferred benefit package in that community; perceived health status (chronic /acute illness).
- Do you really think you need a CBHI in your community? Why do you need CBHI in your community? If you don't need CBHI, why?
- If a CBHI scheme is established in your community, why will you join such scheme? Probe for the preferred enrollment unit (household or individual).
- What are the reasons why some people in your community may not be or are not willing to pay CBHI?
- What will affect the success or failure of CBHI in this community? Probe for the factors that will affect the acceptability and sustainability of CBHI in the community.
- Do you have a health facility in your community? Is it functional? Is it easy or hard to access to such an organization? Is it near or far?

Thank you for your responses and time for discussion!

#### B. Key Informant Interview Guide

Code ID: .....

Name of facility / institution: .....

Sex: .....

- What do you know about CBHI? Please take your time to explain how you understand it.
- What is social acceptability in particular solidarity between different social-economic structures? Probe for different age groups, health and sick, farmers and non-farmers, the poor and rich.
- What are the challenges that CBHIs face? Probe for willingness to pay, household size, income, age, sex, knowledge, quality of healthcare services, trust, affordability, utilization of healthcare services, household health expenditure.
- What do you think needs to be done to ensure high enrollment of farming households in the scheme? Probe for scheme inputs, role of promoters, benefits and affordability.
- In your opinion, do you think it is possible to integrate CBHI into the proposed NHIS? Probe for proposals on how the integration issue should be put on the national agenda (in terms of enrolment, premium collection, renewal, feedback to members)?
- Any other question for the research team?

Thank you!