ISSN: 3065-5102
Research Article
Journal of Sexual Health and AIDS Research

Willingness to Join and Pay for Community-Based Health Insurance Among Urban Households of Mettu Town, Oromia, South West Ethiopia in 2022

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Submitted: 10 March 2025 **Accepted:** 17 March 2025 **Published:** 24 March 2025

Citation: *UDagne, D. (2025). Willingness to Join and Pay for Community-Based Health Insurance Among Urban Households of Mettu Town, Oromia, South West Ethiopia in 2022. Jour of Sexu Heal and AIDS Res 2(2), 01-11.*

Crossref **Doi: 10.63620/MKJSHAR.2025.1015**

Abstract

Background: *Community-Based Health Insurance (CBHI) is a non-profit scheme aimed at informal institutions, facilitating collective pooling of health risks. It is managed by its members with the objective of improving healthcare access and protecting households from catastrophic out-of-pocket medical expenses. In Ethiopia, approximately half of healthcare sector funding relies on donor contributions, while 34% comes from household out-of-pocket expenditures. Such costs can deplete family resources, impair future income generation, and have intergenerational consequences, forcing families into debt, asset sales, or educational sacrifices for children. Conversely, delaying or rejecting medical care can lead to chronic illness, disability, or death. There is currently limited empirical evidence on urban households' willingness to join and pay for CBHI in Ethiopia, underscoring the necessity of this study.*

Objective: *To assess the willingness to join and pay for CBHI and identify associated factors among urban households in Mettu Town, Southwest Ethiopia.*

Methods & Materials: *A mixed-method, cross-sectional community-based study was conducted from March 1–15, 2022. Quantitative data were collected using a pre-tested, structured, interviewer-administered questionnaire, while qualitative data were gathered through focus group discussions (FGDs). A simple random sampling technique selected 406 households, and purposive sampling was employed to choose 18 FGD participants across three groups. Quantitative data were analyzed using EPI Data 3.1 and SPSS version 20. Binary logistic regression was applied to assess associations, with variables showing $p \leq 0.25$ in bivariate analysis subjected to multivariable logistic regression. Statistically significant predictors were determined at $p < 0.05$. Qualitative findings were triangulated with quantitative results.*

Results: *Out of 406 sampled households, 384 participated (94.6% response rate). Of these, 340 participants (88.5%) were willing to join the scheme, and 298 (77.6%) expressed willingness to pay. Daily laborers (AOR: 4.15; 95% CI: 1.27–13.52) and households in the highest income quintile (AOR: 4.06; 95% CI: 1.18–14.00) were positively associated with willingness to join. Conversely, households in the lower income quintile (AOR: 0.14; 95% CI: 0.03–0.73) and those with neutral perceptions of healthcare quality (AOR: 0.32; 95% CI: 0.11–0.96) showed negative associations with willingness to pay. The FGDs revealed that participants found the proposed scheme attractive, particularly if improvements in healthcare quality were prioritized.*

Conclusion and Recommendations: *The study revealed high willingness among urban households to join (88.5%) and pay (87.6%) for CBHI. However, perceptions of healthcare quality and household income levels negatively affected willingness to pay. To ensure successful implementation, it is recommended to enhance healthcare service quality and consider subsidizing contributions for lower-income families.*

Keywords: Willingness to Join, Willingness to Pay, Community-Based Health Insurance, Urban Households, Mettu Town

Introduction

Health financing in low- and middle-income countries (LMICs) remains a persistent challenge, characterized by a heavy reliance on out-of-pocket (OOP) expenditures. These direct payments at the point of service delivery burden households significantly, often leading to catastrophic expenses and impoverishment. In Ethiopia, approximately 34% of healthcare financing is derived from OOP payments, leaving many households vulnerable to financial hardship when accessing care.

CBHI schemes offer a viable solution by targeting informal sectors with unstable employment, pooling resources to manage health risks and improve access to essential services. Unlike formal insurance systems, CBHI programs are community-owned and managed, ensuring inclusivity and sustainability.

Pilot CBHI programs in rural Ethiopia have shown positive results, improving healthcare utilization and offering financial protection for members. However, urban environments present unique challenges due to rapid urbanization, socio-economic diversity, and varied perceptions of public healthcare quality. Consequently, tailored approaches are necessary for CBHI implementation in urban areas.

Urban households face challenges such as income disparity, informal employment, and skepticism toward public health services. Understanding their willingness to join (WTJ) and willingness to pay (WTP) for CBHI is essential for informing policy and designing effective programs. This study provides empirical evidence on WTJ and WTP for CBHI among urban households in Mettu Town, supporting efforts toward expanding CBHI to urban areas and aligning with Ethiopia's goal of Universal Health Coverage (UHC).

Methods

- **Study Design:** A mixed-method cross-sectional study was conducted in Holata Town, Oromia, Ethiopia, from March 1–15, 2022.
- **Study Area:** Mettu Town, located 600 km southwest of Addis Ababa, has a population of 44,977 and 9,996 households. The healthcare infrastructure comprises two health centers and several private clinics, making it an appropriate setting for CBHI research.
- **Population:** The study targeted households in the informal sector that had resided in Mettu Town for at least six months before data collection.
- **Sampling Technique and Sample Size:** A simple random sampling method was used to select 406 households. The sample size was determined using the single population proportion formula:

$$\text{So that,} \quad n = \frac{Z\alpha/2\ P(1-P)^2}{d^2}$$

Where,

P = expected rate of willingness to join community-based health insurance scheme = 0.5(this was because there was no urban CBHIS study found in the country)

d = Margin of sampling error tolerated = 5% because the expected "p" value lies between 10% and 90%.

α = Critical value at 95% confidence interval of certainty (1.96)

$$n = \frac{(1.96)^{2*}p\ (1-p)}{(0.05)2} = \frac{3.8416*0.25}{0.0025} = 384$$

Since the total households in Mettu town were less than 10,000, the population correction factor was used to determine the appropriate sample size.

Where,

n' = Corrected sample size

n = Initial sample size

N = Total population of households in the town

$$n' = \frac{384*9370}{384+ (9370 - 1)} \qquad n' = \frac{3,598,080}{9,753} \qquad n' = 369$$

The calculated sample size was for the desired precision or Confidence Interval (CI) width assuming that there was no problem with non-response. If this was the case, it was difficult to achieve the desired precision.

Therefore, it was over sampled by 10% of the computed number required depending on how much the investigator was anticipated these discrepancies [1]. Finally, 10% of possible non- response or missing data were anticipated and the final sample size was;

$$n = n' + 10\%n'$$

Where,

n = final sample size after considering possible non-response data.

$$\text{Therefore, } n = 369 +10\%*369$$
$$n = 369+37$$
$$n = 406 \text{ HHs.}$$

Purposive sampling was used for qualitative data, selecting participants for focus group discussions (FGDs) based on their knowledge and experiences.

Data Collection Tools and process: Quantitative data were collected using pre-tested, structured, interviewer-administered questionnaires, and qualitative data were obtained through focus group discussions (FGDs). The questionnaire, addressing socio-demographic, economic, health-related issues, social capital, CBHIS awareness, income, and wealth index variables, was adapted from prior rural studies due to the absence of urban CBHI research in Ethiopia [2]. It was translated between English and Afan Oromo by language experts to ensure accuracy and grouped logically to align with study objectives. Eight data collectors, six with teaching diplomas, and two supervisors with degrees in Environmental Health and Nursing, underwent two days of training. FGDs were facilitated by degree holders experienced in health education and promotion, with note-taking and recording support from Mettu town health office staff. Quantitative data were gathered through home visits, while FGDs were conducted in secure, unbiased settings to minimize biases, with sessions averaging 45 minutes. Participants were informed about

CBHI benefit packages, and the government-set premium of 500.00 ETB was used as a starting point to assess willingness to join and the premiums participants were willing to pay. [3]

Data quality management: Data collectors and supervisors underwent two days of training conducted by the principal investigator to ensure clarity and uniform understanding of the questionnaire [4]. A pre-test was conducted on 5% of sample households in Badale town, leading to questionnaire revisions based on the results. After data collection, each questionnaire was uniquely coded, and data were entered into Epi Data version 3.1 before being exported to SPSS version 20. Ten percent of the data entries were rechecked against the original questionnaires, and any identified errors were corrected using the assigned code numbers to maintain accuracy [5].

Operational Definitions: Information - households who ever heard about community-based health insurance scheme from at least one of the information sources (radio, television, health extension professionals, developmental army leaders or neighbors?) These were measured by the nominal scales as:

1. Yes
2. No

Illness experience – occurrence of illness among members of households in the past three months before the time of data collection if reported by the respondent [6]. These were measured by the nominal scales as:

1. Yes
2. No

Individual level horizontal trust measured by computing the principal component analysis of five items supposed to measure horizontal trust at individual level [7]. These items were measured by the nominal scales as:

1. Most residents of the kebele can be trusted?
2. Most residents take advantage of you? If they get chance.
3. Most residents would return material to the original owner?
4. Most of your neighbors trusted? And
5. Kebele leaders can be trusted?

The items of the scale were subjected to principal component analysis to identify the underlying components of the individual level of horizontal trust. Finaly the mean score of items retained in the analysis were computed and ranked in to three different individual level horizontal trust of equal proportion by PCA as low, medium and high [8].

Informal sector workers – classes of the community who are engaged in any economic and service division without requirement by other bodies, managing their own farming, trade and small & medium enterprises without participating in routine salary system as well as including those institutions which leads less than ten workers under their organization

Reciprocity - is one of the defining features of social exchange and social life which is measured through five items and analyzed by Principal Component Analysis [9]. These items were measured by the nominal scales as:

1. Residents' concern issues of others
2. Residents' willingness to provide help to others
3. Respondents' willingness to lend money to his/her neighbor to see a doctor
4. Respondents' willingness to be a member if their neighbors are a large family and
5. Respondents' willingness to support a project that might not benefit them most, but benefit other neighbors.

The items of the scale were subjected to principal component analysis to identify the underlying components of the individual level of reciprocity [10]. Finaly the items mean score retained in the analysis were computed and ranked in to three different reciprocities of equal proportion by principal component analysis.

Wealth index – Based on 2016 Ethiopian demographic and health survey (EDHS) households were given scores on the number and kinds of consumer goods they own, ranging from radios, televisions, refrigerator, mobile telephone, fixed telephone, farm land, and farm animals (milk cows, goats, sheep, or chickens), Means of transportation (pedal cycle, motor cycle, car and animal drawn carts) to facilities such as type of floor, piped water, toilets, and electricity [11]. The scores were processed using PCA and finally, households were then ranked according to the total score. The higher the score, the higher the economic status of the household. Assets mean scores will be re-categorized into five different wealth quintiles of equal proportion by principal component analysis [12]. These items were measured by the ordinal scales as:

1. Low wealth quintile
2. Second wealth quintile
3. Middle wealth quintile
4. Forth wealth quintile
5. Highest wealth quintile

Willingness to join (WTJ): was measured by calculating the proportion of households who show their willingness to join community-based health insurance scheme after the explanation of the benefit packages included in community-based health insurance scheme for them by the data collector [13]. These items were measured by the nominal scales as:

0. No
1. Yes

Willingness to pay (WTP) - is the proportion of households who show willingness to pay some amount of premium for community-based health insurance among those households who had WTJ community-based health insurance scheme during data collection period, and avoid out of pocket payment at health care service delivery [14]. These items were measured by the nominal scales as:

0. No
1. Yes

Data Analysis: Quantitative data were cleaned, coded, and entered into EPI Data version 3.1 before being exported to SPSS version 20 for statistical analysis [15]. The adequacy of the sample was assessed using the Kaiser-Meyer-Olkin (KMO) measure, with values of 0.720 for individual horizontal trust and 0.677 for reciprocity, indicating acceptable sampling adequacy. Principal Component Analysis (PCA) was applied to extract underlying components, with items retained based on eigenvalues greater than 1, factor loadings of ≥ 0.40, and reliability coefficients of ≥ 0.70. The wealth index was constructed using PCA, retaining variables with correlations exceeding 0.30 and communalities of ≥ 0.50. Binary and multivariable logistic regression analyses were conducted to identify factors influencing willingness to join

(WTJ) and willingness to pay (WTP). Variables with p-values ≤ 0.25 were included in the multivariable models, with statistical significance determined at $p < 0.05$. For qualitative data, transcripts from focus group discussions (FGDs) were coded, categorized, and thematically analyzed [16]. The qualitative findings were triangulated with quantitative results to ensure consistency.

Table 1: Socio demographic characteristics of study participants in Mettu town, south west Ethiopia, 2022 (N=384)

Variables	Category	Frequency	%
Sex	Male	230	59.9
	Female	154	40.1
Age	18-29	21	5.5
	30-44	132	34.4
	45-64	203	52.9
	>=65	28	7.3
Relation to HH head	Head	333	86.7
	Spouse	51	13.3
	Oromo	288	75
	Amhara	59	15.4
Respondents' Ethnicity	guragie	12	3.1
	Tigre	1000%	2.6
	Wolaita	900%	2.3
	Siltie	6	1.6
Respondents' Religion	Orthodox Christian	21700%	56.5
	Protestant Christian	131	34.1
	Muslim	22	5.7
	Wakefata	13	3.4
	Jehovah's witness	1	0.3
	Married	256	66.7
Marital Status	Widowed	61	15.9
	Divorce	53	13.8
	Single	14	3.6
	No Education	37	9.6
Education of respondents	Read & Write	108	28.1
	Grade 1-8	129	33.6
	Secondary school & above	110	29.6
	No Education	38	14.8
Education of Spouses (N= 256)	Read & Write	93	36.3
	Grade 1-8	95	37.1
	Secondary school & above	30	21.8
Family size	> 5 family members	238	62
	=< 5 Family members	146	38

Ethical Considerations: Ethical approval was obtained from the Mattu University Review Board. Informed verbal consent was secured from all participants, with assurances of confidentiality and voluntary participation [17].

Results

Socio-Demographic Characteristics: Among the 384 respondents, the median age was 46 years (range: 20–84), with 59.9% being male [18]. The majority were of Oromo ethnicity (75%), and 66.7% were married. Household sizes were generally large, with 62% comprising more than five members.

Socio-Economic Characteristics: Occupations varied, with 37.5% engaged in trade and 25.5% employed as daily laborers. Household incomes showed substantial variation, with a mean annual income of 11,767.81 ETB. Income disparities emerged as a key determinant of healthcare-seeking behavior and willingness to pay for CBHI [19].

Table 2: Socio economic characteristics of study participants in Mettu town, south west Ethiopia, 2022 (N=384)

Variables	Categories of variables	Frequency	%
Respondent Occupation	Merchants	144	37.5
	Daily Laborers	98	25.5
	Housewives	75	19.5
	Farmers	56	14.6
	Students	11	2.9
	Housewives	141	55.1
Spousal Occup(N=256)	Merchants	69	27
	Daily Laborers	35	13.7
	Farmers	11	4.3
	Lowest Income Quintile (<= 7,800.00 ETB)	7800%	20.3
Annual Income Quintile	2nd Income Quintile (7,801 – 9,600 ETB)	68	17.7
	Middle Income Quintile (9,601 – 11,400 ETB)	8700%	22.7
	4th Income Quintile (14,401 – 14,400 ETB)	72	18.8
	Highest Income Quintile (14,401 – 50,400 ETB)	79	20.6
	Lowest wealth quintile	68	17.7
	2nd wealth quintile	85	22.1
Wealth Quintile	Middle wealth quintile	77	20.1
	4Th wealth quintile	78	20.3
	Highest wealth quintile	76	19.8

Willingness to Join (WTJ) and Willingness to Pay (WTP) for CBHI:

- **WTJ:** 88.5% of respondents expressed willingness to join CBHI. Higher WTJ rates were observed among daily laborers (AOR: 4.15, 95% CI: 1.27–13.52) and households in higher income quintiles (AOR: 4.06, 95% CI: 1.18–14.00) [20].
- **WTP:** Among those willing to join, 87.6% were also willing to pay. However, households in lower income quintiles were less likely to pay (AOR: 0.14, 95% CI: 0.03–0.73). Neutral perceptions of healthcare quality were negatively associated with WTP (AOR: 0.32, 95% CI: 0.11–0.96) [21].

Table 3: Health and health related characteristics of the study participants of Mettu town, 2022

Variables	Categories of variables	Frequency	%
Self reported health status of the family(384)	Very Poor	55	14.3
	Poor	33	8.6
	Medium	84	21.9
	Good	134	34.9
	Very good	78	20.3
Chronic Illness/disability in the Households(384)	Yes	55	14.3
	No	329	85.7
Illness experienced within three months before data collection(162)	Yes	162	42.2
	No	22200%	57.8
Number of family ill in households (162)	One illness	125	77.2
	Two illness	37	28.8
Family members sought treatment(161)	Yes	198	99.5
	No	1	0.5
Place preferred for treatment(161)	Private health institutions	96	59.6

	Public health institution	65	40.4
	Accessibility of facility	76	47.2
Reason for Preferring there(161)	Affordability of service	13	8.1
	Absence of overcrowded	6	3.7
	Better service	48	29.8
	Respectful service	7	4.3
	Free service for indigents	11	6.8
Health care cost of three months(161)	=< Median value(150ETB)	87	54
	> Median Value(150ETB)	74	46
	Negative	83	51.6
Perceived quality on health service (161)	Intermediate	52	32.3
	Positive	26	16.1
	Dissatisfied	95	59
Satisfaction with health service(161)	Intermediate	35	21.7
	Satisfied	31	193

Discussion

This study reveals a strong interest and readiness among urban households in Mettu Town to participate in CBHI, as evidenced by high WTJ (88.5%) and WTP (87.6%) rates. Nevertheless, critical barriers to participation include financial constraints and perceptions of healthcare quality [22]. The association between income level and both WTJ and WTP aligns with global findings, indicating that higher-income households are more likely to participate, whereas low-income households face affordability challenges. This highlights the need for income-sensitive premium structures to enhance accessibility. Additionally, neutral or negative perceptions of public healthcare quality emerged as significant barriers, emphasizing the importance of addressing issues such as infrastructure, availability of essential medicines, and provider attitudes to foster trust in the system [23].

Table 4: Information about community-based health insurance & Social capital in Holata town, 2018

Variables	Variable categories	Frequency	%
	Yes	240	62.5
Ever heard about CBHIS	No	144	37.5
	Radio	164	42.7
Source of information about CBHI	Health Extension workers	67	17.4
	Television	136	35.4
	Neighbors	54	14.1
	Developmental army leaders	2800%	7.3
	Low	95	24.7
Individual level Horizontal Trust	Middle	190	49.5
	High	99	25.8
Individual level reciprocity	Low	103	26.8
	Middle	186	48.4
	High	95	24.7
“Iddir” participation	Yes	365	95.1
	No	19	4.9

Insights from Qualitative Data: FGDs revealed community concerns about inequitable service delivery, long waiting times, and perceived inefficiencies in public healthcare facilities [24]. While participants acknowledged the potential financial benefits of CBHI, skepticism remained regarding whether contributions would result in tangible improvements. Transparency in fund management and visible enhancements in healthcare services were identified as prerequisites for participation.

Comparative Analysis with Rural CBHI: The findings are consistent with rural CBHI experiences in Ethiopia, where income and healthcare quality significantly influenced enrollment [25]. However, urban contexts introduce additional challenges, such

as greater income diversity and competition from private health insurance options. Urban residents also tend to have higher expectations regarding healthcare quality, necessitating targeted investments in urban healthcare infrastructure.

Table 5: Predictors of households WTJ CBHIs in Multivariate logistic regression model, Mettu town, south west Ethiopia, 2022 (N=384)

Variables	Var.Category	WTJ for CBHI		COR (95%CI)	AOR (95%CI)
		Yes (%)	No (%)		
Relation of respondent to household head					
	Head¥	298(87.6%)	35(79.5%)		
	Spouse	42(12.4%)	9(20.5%)	1.824(0.819,4.063)*	
Respondents'occupation					
	Merchants¥	123(36.2%)	21(47.7%)		
	Daily laborer	91(26.8%)	7(15.9%)	2.220(0.905,5.444)*	4.148(1.273,13.519)**
	House wives	65(19.1%)	10(22.7%)	1.110(0.493,2.497)	3.437(0.699,16.902)
	Farmer	61(17.9%)	6(13.6%)	1.736(0.666,4.523)	2.395(0.744,7.714)
Spousal Occupation					
	Housewives¥	123(55.4%)	18(51.4%)		
	Merchant	63(28.4%)	7(20.0%)	1.317(0.523,3.319)	
	Laborer	28(12.6%)	7(20.0%)	0.585(0.223,1.536)	
	Farmer	8(3.6%)	3(8.6%)	0.390(0.095,1.608)*	
Spousal Education					
	Grade 1-8¥	86(38.7%)	10(28.6%)		
	Only read & write	75(33.8%)	18(51.4%)	0.484(0.211,1.114)*	
	No education	34(15.3%)	4(11.4%)	0.988(0.290,3.367)	
	Second. & above	27(12.2%)	3(8.6%)	1.047(0.268,4.080)	
Household Annual Income quintile					
	Middle¥	73(21.5%)	14(31.8%)		
	Higher	72(21.2%)	7(15.9%)	1.973(0.752,5.172)*	2.353(0.746,7.417)
	Lower	72(21.2%)	6(13.6%)	2.301(0.838,6.320)*	2.231 (0.606,8.212)
	High	67(19.7%)	5(11.4%)	2.570(0.878,7.519)*	4.060(1.177,14.002)**
	Low	56(16.5%)	12(27.3%)	0.895(0.384,2.086)	0.878(0.296,2.605)

¥ - Reference category (Category with highest frequency taken as reference category)
*Significant at P-Value <= 0.25, **statistically significant at P-Value < 0.05

Ethical Considerations: Ethical approval was obtained from the Mattu University Review Board. Informed verbal consent was secured from all participants, with assurances of Discussion This study reveals a strong interest and readiness among urban households in Mettu Town to participate in CBHI, as evidenced by high WTJ (88.5%) and WTP (87.6%) rates. Nevertheless, critical barriers to participation include financial constraints and perceptions of healthcare quality [26]. The association between income level and both WTJ and WTP aligns with global findings, indicating that higher-income households are more likely to participate, whereas low-income households face affordability challenges. This highlights the need for income-sensitive premium structures to enhance accessibility. Additionally, neutral or negative perceptions of public healthcare quality emerged as significant barriers, emphasizing the importance of addressing issues such as infrastructure, availability of essential medicines, and provider attitudes to foster trust in the system [27].

Insights from Qualitative Data: FGDs revealed community concerns about inequitable service delivery, long waiting times, and perceived inefficiencies in public healthcare facilities. While participants acknowledged the potential financial benefits of CBHI, skepticism remained regarding whether contributions would result in tangible improvements [28]. Transparency in fund management and visible enhancements in healthcare services were identified as prerequisites for participation.

Comparative Analysis with Rural CBHI: The findings are consistent with rural CBHI experiences in Ethiopia, where income and healthcare quality significantly influenced enrollment. However, urban contexts introduce additional challenges, such as greater income diversity and competition from private health insurance options [29-32]. Urban residents also tend to have higher expectations regarding healthcare quality, necessitating targeted investments in urban healthcare infrastructure.

Table 6: Factors associated with willingness to pay community-based health insurances in in Mettu town, south west Ethiopia, 2022 (N=384)

Variable	Categories	WTP		COR(95% CI)	AOR (95%CI)
		Yes (%)	No(%)		
Age					
	45-64¥	160(88.4 %%)	21(11.6%%)		
	30-44	102(87.7%)	13(11.3%)	1.030(0.494,2.147)	
	>=65	19(79.2%)	5(20.8%)	0.499(0.169,1.476)*	
	18-29	17(85%)	3(15%)	0.744(0.201,2.754)	
Relation of respondant to head					
	Head¥	258(86.6%)	40(13.4%)		
	Spouse	40(95.2%)	2(4.8%)	3.101(0.721,13.334)*	
Occupation of the respondents					
	Merchants¥	111(9.2%)	12(9.8%)	1	
	Daily laborer	77(84.6%)	14(15.4%)	0.595 (0.261,1.355)*	
	House wives	59(90.8%)	6(9.2%)	1.063(0.380,2.977)	
	Farmer	51(83.7%)	10(16.4%)	0.551(0.224,1.359)*	
Annual income					
	Middle¥	65(89.1%)	8(10.9%)	1	
	Higher	68(94.5%)	4(5.5%)	2.092(0.601,7.284)*	1.198(0.155,9.275)
	Lower	56(76.8%)	16(22.2%)	0.431(0.1721.082)*	0.136(0.025,0.732)**
	High	60(89.6%)	7(10.4%)	1.055(0.361,3.086)	.311(0.053,1.818)
	Low	49(87.5%)	7(12.5%)	0.862(0.293,2.537)	0.213(0.035,1.313)
Individual level horizontal trust					
	Middle¥	149(77.7%)	21(12.3%)	1	
	High	72(82.8%)	15(17.2%)	0.677(0.329,1.390)	
	Low	77(92.8%)	6(7.2%)	1.809(0.701,4.668)*	
Individual level reciprocity					
	Middle¥	143(87.2%)	21(12.8%)	1	
	Low	77(83.7%)	15(16.3%)	0.754(0.368,1.546)	
	High	78(92.9%)	6(7.1%)	1.909(0.740,4.928)*	
Health status					
	High¥	103(88%)	14(12%)		
	Medium	65(84.4%)	12(15.6%)	0.736(0.321,1.690)	
	Very High	63(92.7%)	5(7.3%)	1.713(0.589,4.984)	
	Very Poor	43(91.5%)	4(8.5%)	1.461(0.455,4.693)	
	Poor	24(77.5%)	7(22.5%)	0.466(0.170,1.280)*	
Health care cost					
	=< Median value¥	67(88.2%)	9(11.8%)	1	
	> Median value	52(77.6%)	15(22.4%)	0.466(0.189,1.148)*	
Perception on health care					
	Negative¥	64(85.9)	9(14.1)	1	
	Intermediate	38(73.7)	10(26.3)	0.534(0.199,1.432)*	0.323(0.109,0.960)**
	Positive	17(70.6)	5(29.4)	0.478(0.142,1.615)*	0.375(0.103,1.361)
How to get health care cost					
	Very difficult	28(71.4)	8(28.6)	0.438(0.153,1.247)*	
	Difficult	19(63.2)	7(36.8)	0.339(0.112,1.029)*	
	Not difficult¥	72(87.5)	9(12.5)	1	

Information about CBHIS					
	Yes¥	181(83.4)	30(16.6)	1	
	No	117(89.7)	12(10.3)	0.619(0.305,1.257)*	

*Significant at P-Value <= 0.25
**statistically significant at P-Value < 0.05
¥ Reference category (Category with highest frequency taken as reference category)

Conclusion

The findings demonstrate a high level of willingness among urban households in Mettu Town to join and pay for CBHI, suggesting significant potential for expanding the scheme in urban settings [33-36]. However, affordability and healthcare quality perceptions remain substantial obstacles. Addressing income disparities and improving perceptions of public healthcare are essential for equitable and sustained participation.

CBHI offers a promising pathway toward achieving Universal Health Coverage (UHC) in Ethiopia, provided barriers are mitigated through targeted policy interventions and systemic reforms [37-40].

Recommendations

Short-Term Recommendations:

1. **Pilot Urban CBHI Programs:** Implement pilot schemes in Mettu Town to assess feasibility and effectiveness, incorporating continuous monitoring and feedback.
2. **Focus on Affordability:** Develop income-based premium structures to ensure accessibility for low-income households.
3. **Awareness Campaigns:** Launch targeted initiatives to educate urban residents about CBHI benefits, highlighting financial protection and improved healthcare access.

Long-Term Recommendations:

1. **Policy Integration:** Incorporate CBHI into national health financing strategies, aligning with existing public health insurance schemes to form a cohesive system.
2. **Service Quality Reforms:** Invest in enhancing public healthcare infrastructure and services to address quality concerns.
3. **Further Research:** Conduct longitudinal studies to assess the long-term impact of CBHI on healthcare access, financial protection, and health outcomes in urban settings.

- **Strengths of the Study:** Utilization of validated data collection tools and robust data analysis methods.
- **Limitations of the Study:** The elicitation method may introduce starting point bias by influencing respondents' WTP estimates.
- The study primarily focuses on the demand side of CBHI, without assessing supply-side factors.
- The study emphasized mostly the demand side rather than assessing both the demand and supply side of the scheme

Consent for Publication

Not applicable.

Availability of Data and Materials

Data will be available upon the request of the corresponding author.

Competing Interest

The author's declare that they have no competing interests.

Funding

No funding was received for this particular study

Authors' Contributions

All authors made significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Ethical and Legal Aspect of Study

The study protocol was approved by the Ethical Research Committee (ERC) of Mettu University, Collage of public health and medical sciences. Following the approval, an official letter was written by Mettu University, Collage of public health and medical sciences to the Mettu town health office. The study objective of the research was explained to the concerned personnel to the Mettu town health office. Data was collected after assuring the confidentiality nature of responses and obtaining written consent from the study participant.

Acknowledgments

The author thanks Mattu University, Mettu Town Health Office, and data collectors for their support. Special gratitude to study participants for their invaluable contributions.

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