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Research Article

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

Dagim Dagne*

Department of Public Health, Mattu University, Mettu, Ethiopia

Abstract

Background: Community-based health insurance (CBHI) is a non-profit health risk-pooling system for informal sectors. Its primary goal is to improve access to healthcare and provide financial protection against catastrophic medical expenses. In Ethiopia, 34% of healthcare funding comes from households' out-of-pocket spending. This can lead to dire consequences, including financial ruin, debt, and the need to sell assets or forgo education. Avoiding care can result in long-term illness, disability, or death. Despite the urgent need for a solution, there has been a lack of empirical evidence on the willingness of urban populations in Ethiopia to participate in CBHI schemes, which is why this study was conducted. *Methods*: A mixed-methods, community-based, cross-sectional study was conducted in Mettu town from March 1 to 15, 2022. Quantitative data was collected using a pre-tested, structured questionnaire administered to 406 randomly selected households. For the qualitative portion, 18 participants were chosen via purposive sampling for three focused group discussions (FGDs). The quantitative data was analyzed using EPI Data 3.1 and SPSS ver. 20. Binary logistic regression was used to assess associations; variables with a P-value of $\leq$ 0.25 in the bivariate analysis were included in a multivariable logistic regression model. Variables with a P-value of < 0.05 in the final model were considered statistically significant predictors. The findings from the FGDs were triangulated with the quantitative results. *Results*: The study achieved a high response rate of 94.6%, with 384 of 406 participants completing the survey. The findings revealed a strong inclination towards CBHI, with 88.5% of participants willing to join the scheme. Among those willing to join, 87.6% were also willing to pay, representing 77.6% of the total study population. The statistical analysis identified several significant factors. Daily laborers were more than four times more likely to join than merchants (AOR: 4.15; 95% CI: 1.27-13.52). Households in the high-income quintile were also more than four times more likely to join compared to the middle-income group (AOR: 4.06; 95% CI: 1.18-14.00). Conversely, households in the lower-income quintile and those with a neutral perception of the quality of healthcare services had a statistically negative association with willingness to pay. The qualitative findings supported the quantitative data, with most participants finding the proposed scheme attractive but emphasizing the need to improve healthcare quality before implementation. *Conclusion and Recommendations*: The study concludes there is a high and promising willingness among urban households in Mettu town to join and pay for a CBHI scheme. The willingness to pay is, however, negatively influenced by perceptions of healthcare quality and income level. Despite these challenges, the study identifies a clear potential demand for such a program. Researchers suggest that for the successful execution and sustainability of the scheme, it is paramount to improve healthcare quality and to consider the financial capacity of lower-income families.

*Corresponding author: dagidan3006@gmail.com (Dagim Dagne)

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Keywords

Willingness to Join, Willingness to Pay, Proposed CBHIS, Urban Households, Mettu Town

1. Introduction

Health financing in low- and middle-income countries (LMICs) is a persistent challenge, often characterized by heavy reliance on out-of-pocket (OOP) expenditures. These direct payments at the point of service delivery significantly burden households, leading to catastrophic health expenditures and impoverishment. In Ethiopia, approximately 34% of healthcare funding is derived from OOP payments, leaving a large portion of the population vulnerable to financial hardship when accessing healthcare [1].

Community-Based Health Insurance (CBHI) schemes have emerged as a viable solution to address these challenges. CBHI targets informal sectors, where employment is less stable, pooling resources to cover health risks and improve access to essential services. Unlike formal insurance programs, CBHI is owned and managed by community members, ensuring inclusivity and sustainability [2, 3].

Ethiopia's pilot CBHI programs in rural districts have demonstrated positive outcomes, including increased healthcare utilization and financial protection for members. However, urban areas present unique challenges and opportunities. Rapid urbanization, diverse socio-economic conditions, and varying perceptions of public healthcare quality necessitate tailored approaches for implementing CBHI in urban settings [4].

While significant progress has been made in rural CBHI initiatives, the urban context remains underexplored. Urban households face distinct challenges, including income disparity, informal employment, and skepticism toward public health services. Understanding urban households' willingness to join (WTJ) and willingness to pay (WTP) for CBHI is critical to inform effective policy and program design [5].

This study fills a critical gap by providing empirical evidence on WTJ and WTP for CBHI among urban households in Mettu Town, Oromia. Insights from this research will support the expansion of CBHI to urban areas, aligning with Ethiopia's goal of achieving Universal Health Coverage (UHC). The findings will also guide policymakers in addressing barriers and leveraging enablers for CBHI uptake [6].

2. 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 south west of Addis Ababa, is an emerging urban center with a population of 44,977 and 9,996 households. The town's healthcare infrastructure includes two health centers and several private clinics, making it a suitable setting for studying CBHI.

Population: The study focused on households in the informal sector that had resided in Mettu Town for at least six months before data collection.

Sampling Technique and Sample Size: The study employed simple random sampling to select 406 households for quantitative data collection. A 10% non-response rate was factored into the sample size calculation using single population proportion formula.

So that

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

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)

$$n = \frac{1.96^2\ p(1-p)^2}{0.05^2} = \frac{3.8416\times0.25}{0.0025} = 384$$

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

$$n' = \frac{n*N}{n+(N-1)}$$

Where,

n' = Corrected sample size

n = Initial sample size

N = Total population of households in the town

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

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 [7]. 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.

Therefore, n = 369 +10%*369

n = 369+37

n = 406 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 [3]. 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 [8].

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. 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.

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. 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. 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.

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. 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. 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. 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. 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. 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. 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 analysis. Sampling adequacy was verified using the Kaiser-Meyer-Olkin (KMO) measure, yielding 0.720 and 0.677 for individual horizontal trust and reciprocity, respectively. Principal Component Analysis (PCA) was applied to identify underlying components and reduce items based on eigenvalues greater than one, factor loadings ≥ 0.40, and reliability coefficients ≥ 0.70. Wealth index construction followed PCA, retaining variables with correlations > 0.30 and communalities ≥ 0.5. Binary and multivariable logistic regressions analyzed factors influencing willingness to join (WTJ) and willingness to pay (WTP), using predictors with p-values ≤ 0.25 for further modeling and reporting significant associations at p-values < 0.05. For qualitative data, notes and recordings from focus group discussions were transcribed, coded, categorized, and thematically analyzed, with findings triangulated and compared against quantitative results for consistency.

Ethical Considerations: Ethical approval was obtained from the Mattu University Review Board. Verbal informed consent was secured from all participants, ensuring confidentiality and voluntary participation.

3. Results

Socio-Demographic Characteristics: Among the 384 respondents, the median age was 46 years (range: 20–84), and 59.9% were male. Oromo ethnicity predominated (75%), and 66.7% of respondents were married. Family sizes were typically large, with 62% of households having more than five members.

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
Respondents' Ethnicity	Oromo	288	75.0
	Amhara	59	15.4
	Guragie	12	3.1
	Tigre	10	2.6
	Wolaita	9	2.3

Variables	Category	Frequency	%
Respondents' Religion	Siltie	6	1.6
	Orthodox Christian	217	56.5
	Protestant Christian	131	34.1
	Muslim	22	5.7
	Wakefata	13	3.4
	Jehovah's witness	1	0.3
Marital Status	Married	256	66.7
	Widowed	61	15.9
	Divorce	53	13.8
	Single	14	3.6
Education of respondents	No Education	37	9.6
	Read &Write	108	28.1
	Grade 1-8	129	33.6
	Secondary school & above	110	29.6
Education of Spouses (N= 256)	No Education	38	14.8
	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

Socio-Economic Characteristics: Occupations were varied, with 37.5% engaged in trade and 25.5% as daily laborers. Household incomes showed significant variation, with a mean annual income of 11,767.81 ETB. Income inequality emerged as a key concern, influencing health-seeking behavior and WTP for CBHI.

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
Spousal Occup (N=256)	Housewives	141	55.1
	Merchants	69	27.0
	Daily Laborers	35	13.7
	Farmers	11	4.3

Variables	Categories of variables	Frequency	%
Annual Income Quintile	Lowest Income Quintile (<= 7,800.00 ETB)	78	20.3
	2nd Income Quintile (7,801 – 9,600 ETB)	68	17.7
	Middle Income Quintile (9,601 – 11,400 ETB)	87	22.7
	4th Income Quintile (14,401 – 14,400 ETB)	72	18.8
	Highest Income Quintile (14,401 – 50,400 ETB)	79	20.6
Wealth Quintile	Lowest wealth quintile	68	17.7
	2nd wealth quintile	85	22.1
	Middle wealth quintile	77	20.1
	4Th wealth quintile	78	20.3
	Highest wealth quintile	76	19.8

Table 3*. Health and health related characteristics of the study participants of Mettu town, south west Ethiopia, 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	222	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
Reason for Preferring there (161)	Accessibility of facility	76	47.2
	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	54.0
	> Median Value (150ETB)	74	46.0

Variables	Categories of variables	Frequency	%
Perceived quality on health service (161)	Negative	83	51.6
	Intermediate	52	32.3
	Positive	26	16.1
Satisfaction with health service (161)	Dissatisfied	95	59.0
	Intermediate	35	21.7
	Satisfied	31	19.3

Table 4. *Information about community-based health insurance & Social capital in Mettu town, south west Ethiopia, 2022.*

Variables	Variable categories	Frequency	%
Ever heard about CBHIS	Yes	240	62.5
	No	144	37.5
Source of information about CBHI	Radio	164	42.7
	Health Extension workers	67	17.4
	Television	136	35.4
	Neighbors	54	14.1
	Developmental army leaders	28	7.3
IndividuallevelHorizontalTrust	Low	95	24.7
	Middle	190	49.5
	High	99	25.8
Individuallevelreciprocity	Low	103	26.8
	Middle	186	48.4
	High	95	24.7
"Iddir"participation	Yes	365	95.1
	No	19	4.9

WTJ and WTP for CBHI:

1) WTJ: 88.5% of respondents were willing to join CBHI. Higher WTJ rates were associated with 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).
2) WTP: Among those willing to join, 87.6% expressed WTP. However, low-income households were less likely to pay (AOR: 0.14, 95% CI: 0.03–0.73). Neutral perceptions of healthcare quality negatively impacted WTP (AOR: 0.32, 95% CI: 0.11–0.96).

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)*	

Variables	Var. Category	WTJ for CBHI		COR (95%CI)	AOR (95%CI)
		Yes (%)	No (%)		
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

Table 6. *Factors associated with willingness to pay community-based health insurances 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					

Variable	Categories	WTP		COR (95% CI)	AOR (95%CI)
		Yes (%)	No (%)		
	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					

Variable	Categories	WTP		COR (95% CI)	AOR (95%CI)
		Yes (%)	No (%)		
	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)

4. Discussion

This study highlights significant interest and readiness among urban households in Mettu Town to participate in Community-Based Health Insurance (CBHI). The high willingness to join (88.5%) and willingness to pay (87.6%) underline a strong demand for CBHI in urban settings. Despite this enthusiasm, the analysis identified critical barriers to participation, including financial constraints and perceptions of healthcare quality [3].

The finding that income level significantly influences both WTJ and WTP is consistent with global literature. Households in the higher income quintiles were more likely to participate, while low-income households faced challenges in affording premiums. This underscores the need for tailored financial models to include economically disadvantaged populations [9]. Similarly, neutral or negative perceptions of public healthcare quality emerged as significant deterrents. Issues such as poor infrastructure, lack of essential medicines, and provider attitudes must be addressed to build trust and confidence in the health system [10].

Insights from Qualitative Data: Focus group discussions provided deeper insights into community attitudes. Participants expressed concerns about inequities in service delivery, long waiting times, and the perceived inefficiency of public health facilities. While most respondents recognized the potential financial protection offered by CBHI, there was skepticism about whether contributions would translate into tangible benefits. Transparency in fund management and visible improvements in healthcare services were frequently mentioned as prerequisites for participation [11].

Comparative Analysis with Rural CBHI: The study's findingsis aligned with rural CBHI experiences in Ethiopia, where income and service quality were also significant predictors of enrollment. However, urban contexts present unique challenges. The diversity in income levels and greater access to private healthcare options in urban areas mean that public CBHI programs must compete with private insurance schemes. Additionally, urban residents often have higher expectations regarding service quality, which requires targeted investments in urban healthcare infrastructure [12].

5. Conclusion

The study demonstrates a high willingness among urban households in MettuTown to join and pay for CBHI, signifying strong potential for the scheme's expansion into urban settings. However, affordability and perceptions of healthcare quality present significant challenges. Income disparities and neutral or negative views on public healthcare must be addressed to ensure equitable and sustained participation.

CBHI represents a viable pathway toward achieving Universal Health Coverage in Ethiopia, provided that barriers are mitigated through strategic policy interventions and systemic reforms.

6. Recommendations

Short-Term Recommendations:

1) Pilot Urban CBHI Programs: Introduce pilot CBHI schemes in Mettu Town to test program feasibility and effectiveness, with ongoing monitoring and feedback mechanisms.
2) Focus on Affordability: Implement income-based premium structures to ensure affordability for low-income households.
3) Awareness Campaigns: Launch targeted campaigns to inform urban residents about CBHI benefits, emphasizing financial protection and access to quality healthcare.

Long-Term Recommendations:

1) Policy Integration: Integrate CBHI into national health financing strategies to support Ethiopia's UHC goals.
2) This includes aligning CBHI with existing public health insurance schemes to create a cohesive system.
3) Service Quality Reforms: Invest in systemic improvements to public healthcare infrastructure and services, ensuring that quality concerns do not hinder program uptake.
4) Further Research: Conduct longitudinal studies to evaluate the long-term impacts of CBHI on healthcare access, financial protection, and health outcomes in urban settings.

These recommendations aim to create a sustainable and inclusive framework for CBHI expansion, addressing both

immediate barriers and long-term structural challenges.

Abbreviations

BPR	Business Process Reengineering
CBHF	Community Based Health Fund
CBHI	Community Based Health Insurance
CBHIS	Community Based Health Insurance Schemes
CHI	Community Health Insurance
CVM	Contingent Valuation Method
DAL	Developmental Army leaders
EFY	Ethiopian Fiscal Year
ETB	Ethiopian Birr
FMOH/EthMoH	Federal Ministry of Health/ Ethiopian Ministry of Health
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
LMICs/LICS	Low & Middle Income Countries/Low Income Countries
MDG	Millennium Development Goals
NHIF	National Health Insurance Fund
ORHB	Oromia Regional Health Bureau
OOP	Out- Of – Pocket
PCA	Principal Component Analysis
PHCU	Primary Health Care Unit
SACCO	Saving and Credit Co-Operatives
SHI	Social Health Insurance
SSA	Sub-Saharan Africa
UHC	Universal Health Coverage
US$	United States Dollar
WHO	World Health Organization
WTJ	Willingness to Join
WTP	Willingness to Pay

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Author Contributions

Dagim Dagne is the sole author. The author read and approved the final manuscript.

Availability of Data and Materials

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Conflicts of Interest

The author declares no conflicts of interest.

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