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Research Article

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Clients' Knowledge and Satisfaction with Utilizing Healthcare Services in Community-Based Health Insurance Program and its Associated Factors Among Public Health Centers in Addis Ababa, Ethiopia

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Abstract

Background: *Clients' satisfaction is a critical strategic weapon to community-based health insurance (CBHI) program that can make the already enrolled members to be retained, new members attracted and increases program sustainability. However, there is a lack of literature on clients' knowledge and satisfaction with utilizing healthcare services through CBHI program in Ethiopia. This study aimed to determine the knowledge and satisfaction of clients with utilizing outpatient healthcare services in a CBHI program and explores the associated factors among public health centers in Addis Ababa, Ethiopia.*

Methods and Materials: *Facility-based cross-sectional study design was conducted on 785 clients selected using systematic random sampling technique from Dec 15, 2021, to Jan 20, 2022. Data entry was done using Epi-Data version 3.1 and exported to SPSS version 26.0 for statistical analysis. Descriptive statistics-mean and median, bi-variate and multivariable logistic regression analysis were computed. P-value < 0.05 was used to determine significant predictors.*

Result: *The overall clients' satisfaction level on utilizing outpatient healthcare services in CBHI program was 60.2%. The level of clients' knowledge of the benefit package was 66.4%. Factors significantly associated with clients' satisfaction were family size >5 members[AOR=4.28(95%CI 1.87,9.81)]; knowledge about benefits package[AOR=2.27(95%CI 1.31,3.92)]; friendliness[AOR=0.05(95% CI 0.02,0.09)], privacy and confidentiality[AOR=6.05(95%CI 3.55,10.31)], got prescribed drugs[AOR=8.75(95%CI 4.56,16.78)], availability of laboratory services[AOR=12.83(95%CI 6.78,24.28)]; perceived cleanness[AOR=3.32(95%CI 1.69,6.53)], waiting time[AOR=12.98(95%CI 7.02,24.01)], the way queries dealt by staff[AOR=9.41(95%CI 4.91,18.02)]; and agreement with benefits package of CBHI[AOR=0.03(95%CI 0.01,0.22)].*

Conclusion: *The overall level of clients' satisfaction and knowledge in this study were moderate and needs improvement. The results highlighted the importance of awareness about the benefits package, interpersonal care, availability of resources, consensus with the benefits packages, improving complaints handling way, and shortening the overall waiting time in improving clients' satisfaction with utilizing healthcare through the CBHI program. Therefore, special attention from stakeholders should be in place to address these findings.*

Keywords: Addis Ababa, Clients' satisfaction, Community-based health insurance, benefits package, Ethiopia

Introduction

Universal health coverage has been difficult to achieve in many developing countries with large populations remaining over-reliant on out-of-pocket spending (OOPS). The share of OOPS in most African countries is significantly higher (averaged 28% of the total health spending) but it is 31% in Ethiopia in 2016/17 which is considerably higher than the global recommended target of 15-20% in low-income countries and user fees disadvantaged the poor. To overcome this problem, Ethiopia has begun establishing comprehensive risk protection mechanisms like country-wide community-based health insurance (CBHI) schemes [1-5]. Community-based health insurance schemes are becoming increasingly recognized as an instrument to finance healthcare in developing countries including Ethiopia because CBHI schemes significantly championed in improving equity in access to medical care, better-protecting people against (catastrophic) health expenses, building self-belief among participants through community control mechanisms, enhancing utilization of healthcare

system, improving healthcare financing and it gives freedom to healthcare providers to prescribe the relevant medicines [5-8].

Currently, under the era of CBHI, people are increasingly concerned about health facilities' performance because there are increasing questions about quality, effectiveness, and sustainability issues. Service providers believe that assuring clients' satisfaction through evaluation is a great way of maintaining customer loyalty and decreases the cost of attracting new customers and increases sustainability. Research shows a strong relationship between improved service quality, client satisfaction and sustainability of services [9,10].

Client satisfaction is a term that can be used to describe a persons' general orientation towards a total healthcare experience. It reflects the gap between the expectation and experience of the service from the clients' point of view. Poor Clients' satisfaction due to poor health service provision became a significant business challenge for the healthcare insurance industry as it might result in financial losses and sustainability will be in jeopardy [11-13]. There is a difference in clients' satisfaction with healthcare services under CBHI and without CBHI due to beneficiaries' expectations. CBHI clients require that the service is of good quality, delivered on time through fast-track lines, to their satisfaction, with good interpersonal care and with their CBHI cards but not cash.

Although clients' satisfaction with health service utilization has been served as an important aid to monitor the progress of implementation activities of the CBHI program, there are a lot of determinant factors associated with clients' satisfaction with utilizing healthcare services under health insurance programs. Studies from different developing countries including Ethiopia revealed that the key predictors of overall satisfaction of clients' with utilizing healthcare services under health insurance schemes were waiting time, friendliness, the consultation process (the way the health care provider examined the client), socio-demographic factors such as marital status, age, level of income, adequate knowledge of CBHI benefits packages, the availability of diagnostic services and drugs, the surrounding environment of healthcare facility visited [14-20].

Evaluation of the knowledge and satisfaction of clients who are utilizing healthcare services through CBHI program and the determinants can be important in improving the reliability and responsiveness of healthcare services; the attitude and behavior of healthcare providers; the security of services and shaping of health policies [15,21,22]. Although, capturing clients' satisfaction is complex given the large number of factors affecting it and clients may lack the ability to assess the technical aspect of care like logistics and staff competence, clients' satisfaction is a critical strategic weapon to CBHI program that can increase beneficiaries renewal rate by making the already enrolled members to be retained and new members attracted, signals the increased necessity to meet their expectations during services delivery and increases sustainability of the program; and clients' satisfaction survey is essential in providing feedback on the quality, availability, and continuity of care [19, 23-27].

There is, however, a lack of literature in Ethiopia that deals with CBHI clients' knowledge and; satisfaction and its associated factors [14]. Up to the best of our knowledge there is no study conducted in Addis Ababa or similar settings with the same topic. That is why this study was aimed to determine clients' knowledge and satisfaction with utilizing outpatient healthcare services in a CBHI program and its associated factors in public health centers in AA. This indicates to what extent clients were satisfied or not, the determinant factors to clients' satisfaction and the extent that clients are aware of the benefits package offered by CBHI.

Methods and Materials

Study Design, Setting and Period

A facility-based cross-sectional study design was employed for this study. The study was conducted in Addis Ababa, the capital city of Ethiopia, which is geographically located at the heart of the nation, occupying a total area of 540 sq.km. Administratively the city is divided into 11 sub-cities and more than 120 woredas (the smallest administrative unit in the city unlike that of the country, kebele). According to the 2007 census by the Central Statistical Agency (CSA) of Ethiopia, the city has an estimated total population of more than 2.7 million (2,738,248) accounting for 3.7% of the national population. The city has 14 public hospitals, and 97 public health centers all having linked to Addis Ababa CBHI schemes. The CBHI program was pilot tested in 10 model health centers one from each sub-city in 10 sub-cities in the city. The study was conducted from Dec 15, 2021, to Jan 20, 2022, in selected public health centers.

Population of the Study

The source population for this study was all clients who were active beneficiaries of CBHI program in Addis Ababa during the data collection period. All clients who received the outpatient healthcare services from sampled health centers among the source population during the data collection period were the study population. CBHI enrollees who passed through the process of card collection, consultation, laboratory investigation, and pharmacy for drug collection and beneficiaries under 18 years old accompanied by an adult, who consented to participate were included in the study while enrollees referred for hospital services, those with antenatal care and family planning visits and those who were seriously sick and unable to give a response were excluded.

Sample Size Determination

The minimum required sample size (n) for this study was determined using single population proportion formula depending on the following assumptions: prevalence of clients' satisfaction from previous study done elsewhere in the country to be 63.4% [15], and 95% confidence level (Z (α/2)) with 5% margin of error, and multiplied by design effect of 2 to account for the multi-stage sampling method; and adding 10% contingency for non-response rate resulted in the total sample size required for this study to be 785.

Sampling procedures

A multistage sampling technique was employed to select the study participants. In the first stage, 10 health centers in the city (the first pilot tested health centers), one from each sub-city were purposively selected due to their high client flow. In the second stage, clients who were active CBHI beneficiaries and have utilized the outpatient healthcare services were identified. The

investigators took the last year's (2020/21) third quarter monthly average CBHI clients' outpatient flow data as a baseline for estimating the outpatient CBHI client's flow for each selected health center. The outpatient lists were obtained from the quarterly CBHI client's report registration book (the report register book written from health centers to Sub-City health office CBHI Core Process). In the third stage, proportional sizes were used to allocate the sample size that each selected health center has. Finally, interviewees were selected at the 10th sampling interval using a systematic random sampling method and the first interviewee was selected using a lottery method at each selected health center.

Operational Definitions

In this study, the following variables and terms were used and measured in the context defined below.

Clients' satisfaction level- which was considered an outcome variable in this study, was scored using 13 items on a Likert scale with five response categories (strongly agree, agree, neutral, disagree, and strongly disagree) rating from 5 to 1 indicating the highest and lowest levels of satisfaction respectively.

Clients satisfied: - when a respondent scored more than or equal to the median value calculated using Likert scale items to measure clients' satisfaction level with the healthcare services received under CBHI at the visited health center.

Clients not satisfied can also be defined in this study as when the client scored less than the median value on the Likert scale items measuring satisfaction.

Overall waiting time: - can be defined as the length of time from when the patient entered the sampled health facility to the time the patient leaves the pharmacy Department.

Community-based health insurance is a form of health financing which is usually organized at the community level and has outstanding features of being run as a not-for-profit scheme. It targets the informal sectors and applies the basic principles of risk sharing among members and members' participation in the management of the schemes.

Clients are individuals who are patients and active beneficiaries of CBHI and get outpatient healthcare services from sampled health centers during the data collection period.

Knowledge can be defined as the awareness that respondents have of CBHI benefits packages and was measured using the average value as a cut of point. Respondents were classified as having good knowledge if their total score was equal to or above the calculated average value on the knowledge-related yes/no questions otherwise classified as having poor knowledge. Twelve items were used to collect responses from clients about their knowledge of what the CBHI has offered.

Perceived cleanness of health facility is when the study participants were asked to rate the general cleanness of the health facility visited and the rooms (card room, waiting area, consultation room, laboratory, toilets, etc..) using five response categories (strongly disagree, disagree, neutral, agree and strongly agree) as perceived by them and was used to assess whether it has a relationship with clients' satisfaction or not.

The service domain in this study refers to services related to provider and clients' interaction, availability of resources like drugs and laboratory services, perceived quality of services, and CBHI Scheme related.

Data Collection Procedures

Structured questionnaires were developed, after a thorough review of the literatures [5, 16-18, 28-30] for data collection. The questions were designed to capture information on socio-demographic characteristics of respondents (8 items), clients' experience with the CBHI program (8 items), knowledge of clients on CBHI benefits packages (12 items) using yes/no questions, waiting time to get healthcare services (4 items) and clients satisfaction level with the different outpatient service components (13 items). The validity of the questionnaire was tested after translating into Amharic language. The scale items measuring the satisfaction of clients had a good indicator for reliability as indicated by Cronbach's Alpha value of 0.83.

Likert scale with five response categories was used to assess the level of clients' satisfaction. A face-to-face interview was administered to collect the data from respondents. Four data collectors with a health background and one senior public health officer were hired and trained for two days on the objective of the study, the data collection tools, methods of data collection, the importance of obtaining the respondent's verbal consent and respecting their rights to respond and not to any part of a question, ensuring the respondent's privacy and confidentiality and about safety measures to Covid-19 protocols.

Data Quality Control

To ensure the quality of data, the questionnaire developed in English was translated into Amharic, a local working language of the study setting, and then was translated back to English by a separate translator after the data has been collected. A pretest study with a 5% of sample size was conducted to assess the clarity, consistency, understandability, and the total time taken to finish the questionnaire before the real data collection started and the necessary adjustment was made accordingly to the tool. Data quality control was also assured through daily supervision, checks on the spot, and reviewing of the completed questionnaires by supervisors daily and throughout the data collection period for completeness, accuracy, and consistency.

Data Processing and Analysis

The collected data were checked, coded, and entered into a computer using Epi-Data Version 3.1 and were exported to SPSS version 26.0 software for statistical analysis. Double data entry using two computers was made and the frequency distributions of all variables examined to check for data entry errors.

Median was used as a cut of point for scaling decisions. By using SPSS, the median score was calculated from a total score of each respondent after summing up all the responses for questions related to clients' satisfaction to dichotomize the dependent variable either satisfied (if clients score $\geq$ the median value) or not satisfied (if clients scored $<$ median value). This scoring method was adopted from similar studies. [17,31]. The variables on Likert scale items for different service components were dichotomized into agreeing and disagree using the median value. The average value was used to dichotomize clients either have good

knowledge or have poor knowledge in the same way.

Descriptive statistics such as frequencies and percentages; mean and median were calculated. Bivariate analysis was done to assess the association of each independent variable with clients' satisfaction. All variables with a p-value < 0.2 in the bivariate analysis were selected to be included in the final model of multivariate analyses. To control all possible confounders and determine the independent predictors of clients' satisfaction, a multivariable logistic regression model was fitted and an adjusted odds ratio (AOR) with 95% CI was estimated. Multi-collinearity was ruled out using the variance inflation factor (VIF) test. The goodness of fit test was done to make sure whether the model has a good fit or not in the data and showed that the Hosmer and Lemeshow test was not significant (p = 0.263) indicating that the model has a good fit in the data. The Omnibus model of the test was significant (p = 0.000) indicating the total model was significant and 72.6% of the variance in the level of clients' satisfaction was explained by the predictors in the final model (Nagelkerke R Square = 0.726). Those variables with a p-value < 0.05 in the multivariable analysis were considered statistically significant.

Ethical Considerations

The study was ethically approved by the Institutional Review Board (IRB) of St. Paul's Hospital Millennium Medical College (SPHMMC); and the ethical clearance committee of the City Government of Addis Ababa Health Bureau (AAHB) with reference numbers PM23/477 and ፡አ/አ/ጤ/8585/227 respectively prior to the actual data collection started. A formal letter of permission and support was written to 10 Sub-city health offices from AAHB. Then, sub-city health office officials have written a cooperation letter for all health centers in which the study was carried out. The final permission was obtained from health centers heads to access clients at their exit from the drugs dispensary. The study participants were given the details about objectives of the study, the potential side effects, and benefits, that they have the right to participate or not and withdraw from the interview at any time if they feel it is not comfortable. They were also told that their details would be kept confidential, coding instead of personal identifier would be used and used for the intended purposes only. The interviewers read the consent for each of the study participants and signed a form declaring that the appropriate detail was given, and verbal informed consent was received. The main reason for not obtaining written informed consent directly from the respondents was that to follow the Covid-19 safety procedures through reducing the possible contacts in any way during data collection.

Result

The Socio-demographic Characteristics of Respondents

Among the participants planned to be studied 761 clients participated in this study making the response rate 97%. Of these 480(63.1%) were female clients, 251(33%) and 225(29.6%) were 30-39 years old and 50 years and older respectively. The median age of the respondents was 43 years. Most of the respondents 481(63.2%) were married. Nearly half (49.9%) of the respondents had a family size of 4-5 members. The median family size was 4 members. About 567(74.5%) of the respondents had attended formal education. Regarding occupational status, 218(28.6%) of the respondents were housewives, and 203(26.7%) engaged in the business/trade sector. In terms of the self-perceived health status, 367(48.2%) of clients perceived themselves as unhealthy. For the estimated annual income as reported by the clients themselves about 287(37.7%) of them had an estimated annual income of < 24,000.00 Ethiopian birr and the median income was 34,800.00 Ethiopian Birr (Table 1).

Table 1: Sociodemographic characteristics of respondents in Addis Ababa, Ethiopia, 2022 (n=761)

Variables	Descriptions	Frequency	Percent
Age of the respondents	18-29 years old	107	14.1
	30-39 years old	251	33.0
	40-49 years old	178	23.4
	≥50 years old	225	29.6
Gender	Male	281	36.9
	Female	480	63.1
Marital status	Unmarried	62	8.1
	Married	481	63.2
	Divorced/Separated	88	11.6
	Widowed	130	17.1
Family size	≤ 3 members	283	37.2
	4-5 members	380	49.9
	>5 members	98	12.9
Educational Status	Illiterate	127	16.7
	Read and write	67	8.8
	Primary school (1-8)	285	37.5
	Secondary school (9-12)	190	25.0
	College and above	92	12.1

Occupational Status of Respondents	Housewives	218	28.6
	Business/Trade	203	26.7
	Employed	172	22.6
	Others ©	168	22.1
Perceived Health Status	Healthy	394	51.8
	Unhealthy	367	48.2
Estimated annual income (median=34,800.00)	< 24,000.00 EtB	287	37.7
	24,000-48,000 EtB	232	30.5
	>48,000 EtB	242	31.8
Others © = unemployed, pensions, urban farm, students, daily labor EtB = Ethiopian Birr, IQR = Inter Quartile Range			

Experiences of Respondents on CBHI Processes and Services

Five hundred and one (65.8%) of clients had visited more than four times since their enrollment to CBHI and the median enrollment was 3 years. The main source of information for the majority 606(79.6%) of clients about CBHI was word of mouth of health offices staffs and about 718(94.3%) of respondents had no history of CBHI related meetings/seminars. About 672(88.3%) of clients were paying members of CBHI. More than half 397(52.2%) of respondents had visited the health centers for chronic illnesses. According to the data collected, 612(80.4%) and 557(73.2%) of clients reported that they had the experience of having got the drugs prescribed and the laboratory services requested for them respectively (Table 2).

Table 2: Clients' experience on the CBHI program in Addis Ababa, Ethiopia, 2021/22 (n=761)

Variables	Response categories	Frequency	Percent
Length of time since enrollment	< 3 years	233	30.6
	≥ 3 years	528	69.4
Source of information about CBHI	Friends/neighborhoods	57	7.5
	Radio/television	93	12.2
	Health offices staffs	606	79.6
	Workshops/seminars	5	0.7
Involved in CBHI related meetings	No	718	94.3
	Yes	43	5.7
Frequency of visiting the health center since CBHI	Only once	34	4.5
	2-4 times	226	29.7
	>4 times	501	65.8
CBHI membership status	Nonpayer	89	11.7
	Payer	672	88.3
Reason for visiting the health center	Acute case	364	47.8
	Chronic case	397	52.2
Got prescribed drugs	No	149	19.6
	Yes	612	80.4
Received required laboratories	No	204	26.8
	Yes	557	73.2
CBHI= community-based health insurance			

Clients' knowledge about CBHI Benefit Packages

Clients were classified as having adequate knowledge if they scored more than or equal to the average calculated value otherwise, they were labeled as not having adequate knowledge. Here respondents scored a minimum of 2 and a maximum of 12 out of 12 items and the average value calculated was 9.00 after calculating the sum of each respondent and dividing by the number of items. Accordingly, 505(66.4%) of clients had good knowledge about CBHI benefit packages (Figure 1).

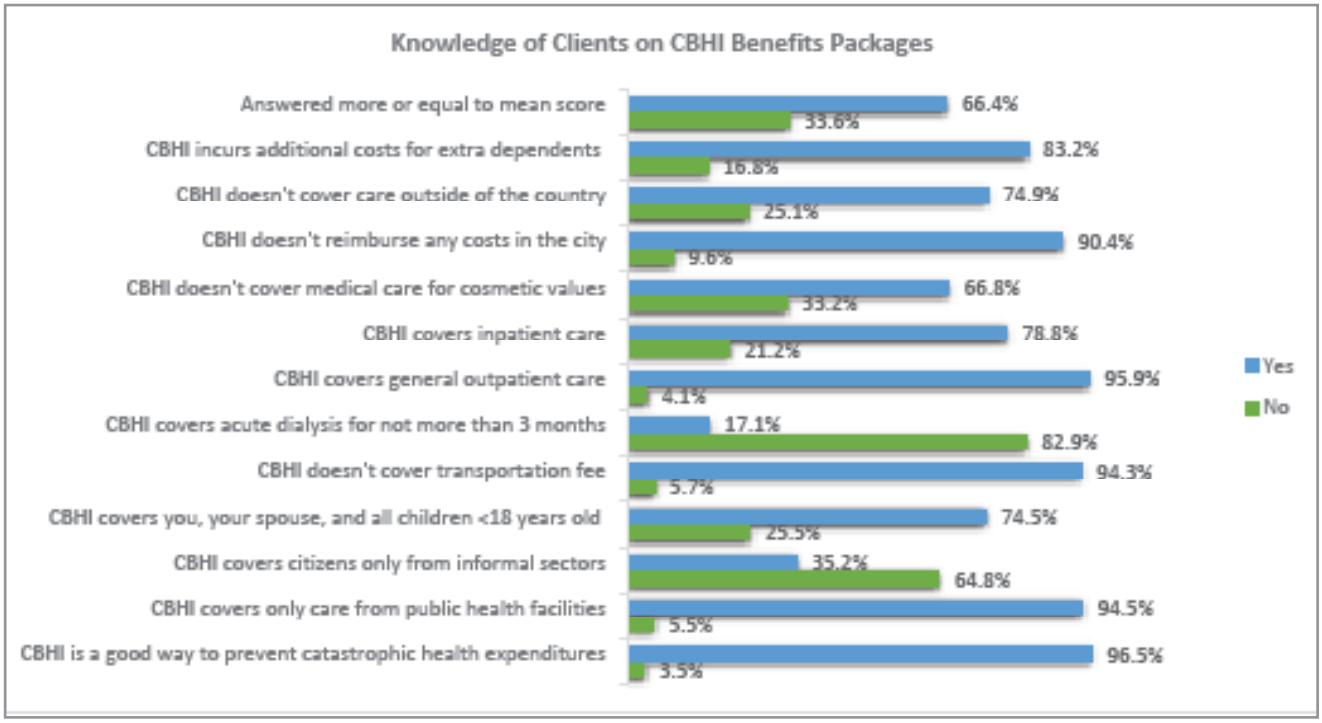

Figure 1: Clients' Knowledge about CBHI benefits package in Addis Ababa, Ethiopia, 2021/22. CBHI= community-based health insurance

The Overall Level of CBHI Clients' satisfaction

This study showed that the median score calculated for clients' satisfaction with utilizing outpatient healthcare services under the CBHI program was 47.00. Therefore, the magnitude of clients satisfied with utilizing outpatient healthcare services through the CBHI program in public health centers in Addis Ababa was found to be 458(60.2%).

Level of CBHI Clients' Satisfaction with Different Service Domains

According to the operational definition stated above, there were four service domains used to classify service components rendered to CBHI clients in public health centers. Depending on this, the highest-rated service domain under CBHI in terms of clients' satisfaction was Provider and client interaction 560(73.6%) while the lowest was Perceived quality of services 414(54.4%) (Table 3).

Level of CBHI clients' Satisfaction with different service components

This study revealed that among the different service components available for clients under CBHI, the most rated one in terms of satisfaction was the benefits package of CBHI 724(95.1%) while the lowest was privacy and confidentiality 357(46.9%). About 599(78.7%) of clients were satisfied with the availability of laboratory services while 210(27.6%) of them were not satisfied with the availability of drugs. Regarding waiting time 182(23.9%) of respondents were not satisfied with the overall waiting time. This study also showed that 292(38.4%) of clients were not satisfied with the overall scheme operations and management system (Table 4).

Table 3: Clients' satisfaction with different service domains in Addis Ababa, Ethiopia, 2021/22(n = 761)

		Level of Clients Satisfaction	
		Satisfied	Not Satisfied
Service domains	Mean±Sd	Freq. (%)	Freq. (%)
Provider and Clients Relationship	15.04 ± 2.69	560(73.6)	201(26.4)
Availability of Resources	7.30 ± 1.83	484(63.6)	277(36.4)
Perceived Quality of Services	13.70 ± 2.65	414(54.4)	347(45.6)
CBHI Scheme related	11.57 ± 2.25	474(62.3)	287(37.7)
Overall	46.61± 7.33	458(60.2)	303(39.8)

CBHI= community-based health insurance, SD= standard deviation

Clients' waiting times at Different service departments

Waiting time was reported more than 30 minutes in card room 464(61%) while 5(0.7%) in the dispensary. More than half 409(53.7%) of clients reported that waiting time was between 15 and 30 minutes in the laboratory room. The waiting time of fewer than 15 minutes reported was 722(94.9%) in the dispensary (Table 5).

Table 4: Clients' satisfaction Level with different service components in Addis Ababa, Ethiopia, 2021/22(n=761)

Service Components	Clients' Satisfaction Level			
	Satisfied		Not Satisfied	
	Freq.	(%)	Freq.	(%)
Friendliness of the healthcare provider	609	80.0	152	20.0
Information provision	631	82.9	130	17.1
Courtesy and respect	625	82.1	136	17.9
Privacy and confidentiality	357	46.9	404	53.1
Availability of laboratory services	599	78.7	162	21.3
Availability of drugs	551	72.4	210	27.6
The overall perceived cleanness of the facility	647	85.0	114	15.0
Consultation process in examination room	645	84.8	116	15.2
The overall waiting time you spent	579	76.1	182	23.9
The way questions/complaints dealt by staffs	608	79.9	153	20.1
The benefits package of CBHI	724	95.1	37	4.9
The overall process of CBHI to be followed	671	88.2	90	11.8
Overall scheme operations and management system	469	61.6	292	38.4

CBHI= community-based health insurance

Table 5: Waiting time at different service departments in public health centers in Addis Ababa, Ethiopia, 2021/22(n=761)

Service Departments	Length of Waiting time	Frequency	Percent
Card Room	Less than 15 minutes	113	14.8
	Between 15-30 minutes	184	24.2
	More than 30 minutes	464	61.0
Consultation Room	Less than 15 minutes	89	11.7
	Between 15-30 minutes	328	43.1
	More than 30 minutes	344	45.2
Dispensary	Less than 15 minutes	722	94.9
	Between 15-30 minutes	34	4.5
	More than 30 minutes	5	.7
Laboratory	Less than 15 minutes	185	24.3
	Between 15-30 minutes	409	53.7
	More than 30 minutes	167	21.9

Factors Associated with Clients' Satisfaction level on Utilizing Outpatient Healthcare Services in a Community-Based Health Insurance program

Bi-variate and multivariable logistic regression analyses were computed. All variables in the bivariate analysis with a p-value < 0.2 were entered into a multivariable logistic regression in the final model.

The findings from the bivariate analysis showed that family size of more than five, estimated annual income of less than 48,000 Ethiopian birr, the reason for visit; the experience of having got prescribed drugs and knowledge about CBHI benefits packages; friendliness, privacy and confidentiality, availability of laboratory services, perceived cleanness of the health facility, overall waiting time, the way queries/complaints dealt with by the staff and benefits packages were the factors significantly associated with clients' satisfaction.

Whereas multivariable results showed that clients with a family size of more than five, knowledge about CBHI benefit packages, and experience of having got prescribed drugs; friendliness of the health care provider, privacy and confidentiality, availability of laboratory services; perceived cleanness, overall waiting time and queries/complaints dealt with by the staff; and CBHI benefits package were the factors significantly associated with clients' satisfaction level under CBHI.

The odds of satisfaction were 4.28 times higher for clients who have more than five family members as compared to clients with a family member of three and/or less [AOR=4.28 (95% CI 1.87-9.81)]. Clients having adequate knowledge of the CBHI benefits package were 2.27 times more likely satisfied as compared with those who do not have adequate knowledge [AOR=2.27; (95% CI 1.31-3.92)]. For clients with the experience of having got prescribed drugs, the odds of satisfaction were 8.75 times higher compared to those without having got drugs [AOR=8.75 (95% CI 4.56-16.78)]. The odds of clients were about 12.83 times higher among those who agreed with the availability of laboratory services as compared with their counterparts [AOR = 12.83 (95% CI 6.78-24.28)].

The likelihood of CBHI clients' being satisfied was about 6.05 times higher among those who agreed with the privacy and confidentiality as compared with their counterparts [AOR = 6.05

(95% CI 3.55-10.31)]. Clients who agreed with the perceived cleanness of the facility were 3.32 times more likely satisfied compared to their counterparts [AOR = 3.32 (95% CI 1.69-6.53)]. The likelihood of CBHI clients' being satisfied with outpatient health care services was 12.98 times higher for those who agreed with the overall waiting time as compared to those disagreed [AOR = 12.98 (95% CI 7.02-24.01)] and clients who agreed with the way queries/complaints handled with by the staff have 9.41 times higher odds of satisfaction than their counterparts [AOR = 9.41 (95% CI 4.91-18.02)]. The odds of clients being satisfied who disagreed with the friendliness of health care providers decreased by 95% as compared to those who agreed [AOR=0.05 (95% CI 0.02-0.09)]. Clients who disagreed with the benefits packages of CBHI had 97% decreased odds of satisfaction compared to their counterparts [AOR=0.03 (95% CI 0.01-0.22)] (Table 6).

Table 6: Multivariable logistic regression analysis results showing independent predictors of CBHI clients' satisfaction

Variables (n = 761)	Clients' Satisfaction Level			
	Satisfied	Not Satisfied		
	Freq. (%)	Freq. (%)	COR (95%CI)	AOR (95%CI)
Family Size				
≤ 3	171(60.4)	112(39.6)	R	
4 to 5	218(57.4)	162(42.6)	0.88(0.64, 1.21)	0.87(0.51,1.48)
>5	69(70.4)	29(29.6)	1.56(0.95, 2.56)	4.28 (1.87,9.81) **
Got prescribed drugs				
No	40(26.8)	109(73.2)	R	
Yes	418(68.3)	194(31.7)	5.87(3.93, 8.76)	8.75(4.56,16.78) **
Knowledge about CBHI benefit packages				
Have poor knowledge	145(56.6)	111(43.4)	R	
Have good knowledge	313(62.0)	192(38.0)	1.25(0.92, 1.69)	2.27(1.31, 3.92) *
Agreed with the friendliness of healthcare providers				
Disagree	26(17.1)	126(82.9)	0.09(0.05, 0.13)	0.05(0.02,0.09) **
Agree	432(70.9)	177(29.1)	R	
Agreed with the privacy and confidentiality				
Disagree	187(46.3)	217(53.7)	R	
Agree	271(75.9)	86(24.1)	3.66(2.68, 4.99)	6.05(3.55,10.31) **
Agreed with the availability of laboratory services				
Disagree	37(22.8)	125(77.2)	R	
Agree	421(70.3)	178(29.7)	7.87□5.26, 11.77)	12.83(6.78, 24.28)**
Agreed with the overall perceived cleanness of the facility				
Disagree	42(36.8)	72(63.2)	R	
Agree	416(64.3)	231(35.7)	3.09(2.04, 4.67)	3.32(1.69, 6.53)*
Agreed with the overall waiting time you spent				
Disagree	41(22.5)	141(77.5)	R	
Agree	417(72.0)	162(28.0)	8.85(5.98, 13.10)	12.98(7.02, 24.01)**
Agreed with the way your queries/complaints dealt with by staffs				
Disagree	38(24.8)	115(75.2)	R	
Agree	420(60.1)	188(30.9)	6.76(4.51, 10.14)	9.41(4.91, 18.02)**
Agreed with the benefits package of CBHI				
Disagree	2(5.4)	35(94.6)	0.03(0.01, 0.14)	0.03(0.01, 0.22)**
Agree	456(63.0)	268(37.0)	R	

COR = crude odds ratio, AOR = adjusted odds ratio, CI = confidence interval, R = reference
** = value significant at 0.001 level, * = value significant at 0.01 level, CBHI= community-based health insurance.

Discussion

This study showed that the overall level of CBHI clients' satisfaction with utilizing outpatient healthcare services in public health centers in Addis Ababa was 60.2%. This finding is somewhat comparable with the finding from a study done in Negele Arsi 63.4% but higher than the findings from studies conducted in Southwest 54.7% and Southern Ethiopia 54.1% [15,17,18]. This higher finding from the current study might most probably be due to the most likely improvements in the quality and availability of resources and services as the study was done in the capital city where more resources and skilled professionals are available, variations in benefits packages, availability of health facilities to the nearest.

The finding is also higher than the findings from Istanbul city (Turkey) 53.3% and Nigeria 42%, but lower than the study from Damotwoyde district (Southern Ethiopia) 91.38% [31,21,16]. The variations from the former two studies might most probably be due to the differences in study settings and sociodemographic characteristics, but the variation with the higher result from South Ethiopia is most likely due to the definition of satisfaction that the satisfaction score calculated was based on the percentage of maximum scale scores, i.e., by taking the percentage value of strongly agree and agree which might make the proportion of satisfaction overestimated. The level of clients' satisfaction found here 60.2% was also higher than the 2020/21 Ethiopian national overall clients' satisfaction with healthcare 46% but still lower than the national target of 75% to be achieved at the end of the second Health Sector Transformation Plan (HSTP-II) in 2024/25 [32]. It shows that it is in the range of the national target but should be improved.

In this study clients with a family member of more than five were found to be more likely satisfied than those with a family member of three and/or less. This could be due to that there is no additional cost incurred from members to CBHI schemes with increasing family sizes in this study area. This finding is supported by a similar study conducted in Southern Ethiopia that family size is significantly associated with CBHI clients' satisfaction but in an inverse way that an average increment in family size decreases the satisfaction score of clients [16]. This could be due to the increased amount of costs as a premium with the increasing family size in that specific area (larger families incur additional fees). Those clients with experience of having got prescribed drugs and agreed with the availability of laboratory services were more likely to be satisfied compared to their counterparts. This finding is in line with the findings from other studies in Ethiopia [17,18]. This might be due to those beneficiaries who have got prescribed drugs and laboratory services in contracted health centers were not enforced to pay additional costs for private pharmacies and laboratories, which might be the causes of more satisfaction.

CBHI clients having adequate knowledge about the benefit packages allowed were more likely to be satisfied than their counterparts in this study. This finding is comparable with reports from other studies conducted in Ethiopia and it is supported by the study from Nigeria showing that clients with more knowledge were satisfied more than those with less knowledge [16-18, 21]. This indicates that CBHI clients' satisfaction level improves only if they have a good understanding of what the scheme has offered, how the scheme performs and their entitlements under the program might help them to access more and be satisfied more.

This study showed that perceived cleanness of the health facility visited was one of the predictors of clients' satisfaction. This finding is supported by similar studies from Bangladesh [14,33]. which indicates that the provision of better general cleanness in the health facility visited is a significant clients' satisfaction factor and can yield greater clients' satisfaction.

According to this study friendliness, privacy and confidentiality, the way queries dealt with by the staff, overall waiting time and the benefits package offered were found to be strong predictors of clients' satisfaction levels. These findings are supported by studies conducted inside and outside Ethiopia [14-16,19]. Accordingly, Clients who agreed with the friendliness of healthcare providers were more likely satisfied compared to their counterparts. This indicates that a healthy interaction between clients and healthcare providers are often positively related with clients' expectations and associated healthcare experiences which also influenced the clients' satisfaction level [14]. CBHI clients who agreed with the privacy and confidentiality, the way queries dealt with by the staff, the overall waiting time and the benefits package offered were more likely to be satisfied compared to their counterparts.

Limitation of the study

This study has explored only the satisfaction level of beneficiaries in the program, but not about healthcare providers and CBHI officials, and there was no temporality as a cross-sectional study design was employed.

Conclusion

This study has shown that the knowledge and satisfaction of clients with utilizing outpatient healthcare services under the CBHI program in Addis Ababa were moderate and needs improvement. Family size of more than five, knowledge about the benefits package, the availability of resources like drugs and laboratory services, friendliness, privacy, and confidentiality, waiting time, perceived cleanness of the health facility, queries dealt with by the staff, and benefits package were the independent predictors of clients' satisfaction.

This study could help bridge the gap in literature, facilitates evidence-based decision making, improve schemes management practices in the contracted health facilities, encourage researchers to conduct more studies. The factors identified might be pertinent in minimizing efforts to attract new members, solve the problem of dropouts, and improve the availability and quality of services, increases program coverage and sustainability of the program.

To further enhance beneficiaries' satisfaction and ensure the sustainability of the program special attention from stakeholders at different levels should be in place to improve knowledge of CBHI benefits package through education, quality of healthcare services to the standards, the availability of drugs and laboratory services and interpersonal care.

Abbreviations

OOPS: Out of Pocket Spending; CBHI: Community-Based Health Insurance; CSA: Central Statistical Agency; AA: Addis Ababa; SPSS: Statistical Packages for Social Sciences; CI: Confidence Interval; OR: Odds Ratio; COR: Crude Odds Ratio; AOR: Adjusted Odds Ratio; HSTP: Health Sector Transformation Plan

Data Availability

The data will be available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that there is no conflict of interest in this study.

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Author Contributions

Designing of the study, conceptualization, methodology, data curation, software, validation, investigation; writing up of the proposal, the paper, and the manuscript; formal analysis and interpretation of the result are the works of Meskelu Haile.

Reviewed, edited, and approved the proposal and the paper: Dr. Fufa Hunduma and Kinfe Haile

Reviewed, edited, and approved the final manuscript: Dr. Fufa Hunduma

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