



Attitude of Rural Households towards Community Based Health Insurance in Northeast Ethiopia, the Case of Tehuledere District

Molla Yismaw Jembere*

Department of Sociology, College of Social Sciences and Humanities, Wollo University, Dessie, Ethiopia

Abstract

Community Based Health Insurance scheme (CBHI) in Ethiopia initiated to promote healthcare access, quality of services and reduce out of pocket payment by mobilize national and local resources. Consequently, the aim of this research was to determine community attitude towards newly established CBHI scheme on Tehuledere District in south Wollo zone. The study examine attitude, knowledge, benefit package, community participation and ownership in the management and administration of the scheme. To collect factual data from 344 respondents, both quantitative and qualitative research approach employed concurrently. Quantitative data were analyzed using descriptive and inferential statistics while, thematic analysis used to analysis qualitative data. Furthermore, respondents for survey were selected through random sampling and informants for interview were selected using non-random sampling. The study finding revealed that overall; the favorable attitude of households towards CBHI was (93%) which was significantly high. Furthermore, this study found out that socio-economic conditions such as, large family size, high level of education and proper benefit package from the scheme had positive impact on the awareness and attitude of respondents towards the scheme. Moreover, limited community participation and low sense of ownership had negative impact on community attitude towards the scheme. Therefore, implementation of CBHI schemes needed increase awareness of households and design the scheme through collaborative effort by the government and the society full participations. In addition, establishment of strong policy frame work, improving risk pooling (cross subsidization between the poor and the rich) and hold back moral hazards (miss utilization of services) on the base of socioeconomic and cultural milieu is fundamental concern for the scheme to work properly and serve its function.

Keywords: Community based health insurance scheme; Attitude; Mixed research approach; Household; Ethiopia

Abbreviations

ANOVA: Analysis of Variance; CBHI: Community Based Health Insurance; ETB: Ethiopian Birr; CSA: Central Statistics Agency [Ethiopia]; FGD: Focus Group Discussions; FMOH: Federal Ministry of Health; SNNPR: South Nations Nationalities and People; SPSS: Statistical Package for Social Science; USD: United States Dollar; WHO: World Health Organization

Introduction

Recently, some African countries have introduced health insurance in order to improve their citizens' access to health care, provide financial protection of the sick/poor, mobilize resources for quality of service improvement and ultimately contribute to improved quality of health as a strategy for achieving Universal Health Coverage [1].

In sub-Saharan Africa including Ethiopia, formal and well-functioning health insurance schemes commonly exist for the very few who are employed in government, private and non-government organizations. For the majority, healthcare is accessed through out-of-pocket user fees expenditure, which in many instances may lead to use of low standard health care services [2,3]. The health-related expenses of African Population remain determinant factor for households being pushed below the poverty line and impoverishment which account 30%-85% of total health spending in the poorest countries such as Ethiopia [2]. More than 1.3 billion people still lack access to effective and affordable health care services due to weaknesses in the health financing system. Since the late 1990s, to remove out of pocket payment and create universal access, many developing countries have set up CBHI schemes through prepayment risk pooling of resources to cover costs of healthcare services [4,5].

In developing countries including Ethiopia, financing healthcare through CBHI scheme enable households to access affordable, equitable and quality of services [3]. Even through, health insurances has emerged both as way of augmenting financial recourses available for health care and means of provision of services especially in developing countries [6], in Africa, health insurance is relatively limited to few countries.

Besides providing financial protection from the economic consequences of illness, health insurance is meant to improve equitable and affordable access and reduces the cost of health care and thereby, promotes health care seeking behavior CBHI scheme considered as a financial mechanism for most vulnerable (low income and rural) population groups [6,7].

Furthermore, research conducted in India indicates that CBHI scheme are more successful in providing health insurance to poor and rural people and attract more people because people have higher trust in such schemes [8]. Yet, even though the demand is created, it is not indispensable that people enroll for CBHI schemes because of malfunction of CBHI schemes in the past affect households' attitude towards CBHI scheme, lack of trust and ownership, managerial problems

*Corresponding author: Molla Yismaw Jembere, Department of Sociology, College of Social Sciences and Humanities, Wollo University, Dessie, Ethiopia, Tel- +251-912-99-03-8, Email: mollayismaw1@gmail.com

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like poor design, mismanagement and misuse of the recourses, lack of supervision mechanisms, low community involvement in management and administration of the scheme and corruption were main factors that determine enrolment and households view towards the scheme [9].

Since 2011, in Ethiopia CBHI have been implemented based on the premises of risk-pooling that is sharing healthcare costs between frequently sick and healthy. In addition, cross subsidizations or sharing healthcare expenses between poor and wealthy through community solidarity to provide financial security and reduce out-of-pocket payment for healthcare were the main reasons [3,10].

The Government of Ethiopia rolled out a pilot CBHI scheme to rural households and urban informal sector workers in 13 districts located in four main regions (Tigray, Amhara, Oromia and South Nations Nationalities and People (SNNP)) of the country. Currently Addis Ababa, Benishangul Gumuz and other regions have also been added to the implementing regions of CBHI scheme [11]. The benefits packages of CBHI in Ethiopia include all curative and preventive care that are part of the essential health package in Ethiopia [3].

This study therefore, seeks to determine community attitude towards newly established CBHI scheme in Tehuledere District in northeast Ethiopia which is one of the 13 pilot Districts [12].

Methods

Study area

Tehuledere is one of the twenty two Districts in South Wollo Zone administrative located 430 kilometers from the capital city Addis Ababa in northeast Ethiopia. Tehuledere has 117,877 total population, of whom 59,300 are men and 58,577 women; 14,745 or 12.51% are urban inhabitants the remaining majority of the population (87.49%) are rural inhabitants [13]. Tehuledere has nine private clinics, twenty six health posts (healthcare providers for each kebele mainly designed to provided primary healthcare service) and five public health centers that provide healthcare serves for the District population [14].

Study design

Using cross-sectional study design data were collected from 344 CBHI member households and randomly selected informants through interviews. For interviews informants were selected from CBHI scheme workers, healthcare professionals, government officials and community representatives. From March 4th to April 7th, 2017, important retrospective data (data from the past illness episode) about healthcare provision were also collected.

Both quantitative and qualitative approach employed to collect data. Household survey, Focus Group Discussions (FGDs) and interviews were carried out to collect primary data. Cross-sectional study design enables the researcher to collect data relates to a single specified time and also include some historical information [15].

Study population

The study participants were recruited by employing probability sampling (for survey) from CBHI member households. On the other hand, informants for qualitative data were selected using non-probability sampling based on judgment or considering the informants propose from healthcare professionals, rural households, CBHI scheme workers, kebele administrative, religious leaders and elders.

Sample size and sampling

Sample size was determined through different stages. First,

Tehuledere District 21 rural Kebeles were stratified in to three agro-ecological zones (Dega, Woina dega and Kola) assuming illness episode variations across each ecological zone.

Second, three kebeles one from each ecological zone selected. From updated CBHI sample frame there were 2747 total insured households in the three ecological Zones. Finally, 344 sample respondents were selected using Yamane [16] simplified proportion sample size estimation formula;

$$n = N / (1 + N(e)^2) \quad (1)$$

(n=sample needed, N=population, e=sampling error/acceptable and 95% confidence level.

After selecting the required sample, head of the household or the spouse interviewed. The informants for qualitative data were recruited by using purposive sampling technique. Thus, in-depth interview, Focus Group Discussions (FGDs) and key-informant interviews conducted with different informants.

Likert scale to measure attitude

Household interviews were carried out, using pre-test semi-structured questionnaire. Kothari [17] assumptions of summated scale measurement were employed to measure attitude of households. Thus, a ten item statements regarding CBHI were prepared to measure the perceived attitude and view of respondents. Strong agreement to express favorable at one extreme of the scale and strong disagreement to show unfavorable attitude towards the scheme and between them lie intermediate points to show neutral view were considered. Then responses to these items are summed to create an overall score for each respondent.

Accordingly, summated numerical score indicating the least favorable attitude was given (1) and the most favorable attitude given (5) to yield total score that indicated favorableness toward CBHI scheme. Ten items Likert was assumed which yield the following score values.

1. $10 \times 1 = 10$: most unfavorable attitude
2. $10 \times 3 = 30$: neutral attitude
3. $10 \times 5 = 50$: most favorable attitude towards CBHI scheme
4. Consequently, the summated score below 30 shows unfavorable attitude, the score 30 is neutral attitude and the score above 30 shows favorable attitude towards CBHI scheme. While the total score of each individual close to 50 it shows most favorable attitude and when the score close to 10 it shows the most unfavorable attitude towards the scheme.

Procedures of Data Collection

After having formal letter from Addis Ababa University, data gathering was started by asking Tehuledere District administrative office with a formal letter. For data gathering, semi-structured and pre-tested questionnaire was used. After training the data collectors, quantitative data were collected simultaneously with qualitative data. Qualitative data were collected by the researcher.

Data Processing and Analysis

After data collection, numerical data were checked for consistency and completeness then entered into Statistical Package for Social Science (SPSS) version-20 for final analysis, 95% confidence interval was assumed and results were considered significant at the $p \leq 0.05$ significant level. Descriptive statistics such as table, percentage and

frequency used to describe demographic background and attitude of respondents. Statistical tests such as, one way ANOVA and T-Test were employed to examine group differences. The qualitative data were recorded in local language (Amharic) and transcribed to English by the researcher and coded according to theme. Qualitative data were analysed using thematic analysis. Based on the theme and alongside the objective of the study the qualitative data were integrated with quantitative data concurrently.

Ethical Considerations

Ethical clearance was approved by Addis Ababa University. Next, permission letter written by department of sociology provided to Tehuledere District administrative office. Then, after communicating each selected study kebeles, each respondent was informed about the study objective. Finally, issue of confidentiality was clarified and verbal consent was allowed to collect data from participants.

Results

Respondents demographic background

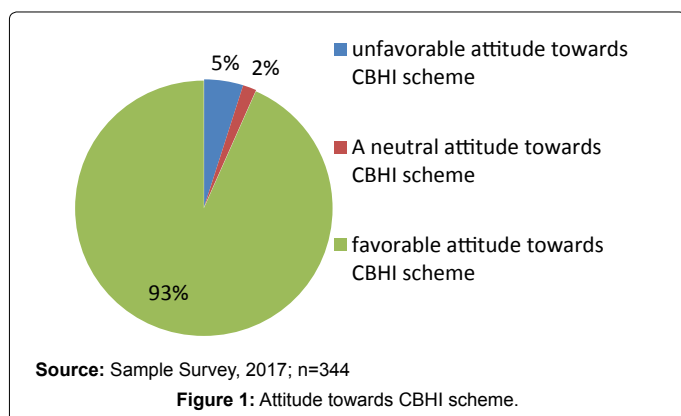
Totally, 344 households who are member to CBHI scheme included in this study. Among respondents majority (77%) of them were male and the remaining (23%) were female. With regard to age of respondents, majority of the respondents' age group was found to be from 36-50. With respect to marital status, majority of respondents (87.5%) are married, significant majority (94.25%) belongs to the same religious category (Muslim). Concerning the household family size, majority households have family size of 4-5 members and more than half respondents can't read and write. Finally, regarding income level, nearly half (46.2%) belongs to low income.

Attitude of member households towards CBHI scheme

To examine and measure the perceived attitude of respondents towards CBH scheme, overall score (summated scales) used to indicate continuum of favorable and unfavorableness towards the scheme.

As a result, summated measure of attitude of respondents about CBHI was classified into three levels of Likert scale. Accordingly, Figure 1, shows that majority (93%) of respondents have favorable attitude towards CBHI scheme while, 17(5%) and 6 (2%) of respondents have unfavorable and neutral attitude respectively. Neutral attitude explains those households who are undecided to say favorable or unfavorable.

Furthermore, informants were asked to investigate their view regarding CBHI scheme. Thus, one interviewee informant narrated her opinion about CBHI scheme as:-



People become equal when it comes to health care after CBHI introduced. After we paid 240 Ethiopian Birr (ETB) (\$8.72 United States Dollar (USD)), hence, CBHI treated everybody equally there is no difference between rich and poor we can access healthcare services equally. It would be good if everything happen to be similar to CBHI scheme. CBHI is life insurance especially, for the poor (female, age 42).

Another in-depth interview support the above reactions and one participant narrated his view as follows:-

Before CBHI scheme introduced, when someone in the family becomes sick, we can't access money immediately. However, after I became member to CBHI scheme, I did not worry to go to health facilities instantly... Now the only thing that we have to worry is having our card [CBHI membership card] and we can access any services any time we want. Therefore, I never left my card from my pocket (male age 39 years).

On the other hand, there were also individuals who have unfavorable attitude towards CBHI scheme due to poor quality of services, long waiting, mistreatment of members by professionals, management and administration problem during re-funding and membership.

Attitudinal variations in various group categories towards CBHI scheme

Inferential statistics were employed to see attitudinal differences and relationship between socio-demographic variables and their attitude towards CBHI scheme (Table 1).

In line with this, one way ANOVA and T-Test were used to test group differences. T-test was used to validate the significance of sex of the respondents and their attitude towards health insurances was statistically significant. Consequently, the test statistics showed that men and women did not have similar attitude towards CBHI scheme. Data from the informant indicated that women do have positive attitude towards the scheme than men; hence, women frequently visit healthcare institutions and CBHI scheme protect them from out of pocket payment.

Furthermore, one way ANOVA was employed to examine attitude towards CBHI scheme in group difference due to predisposing variables such as, age group, level of education and level of awareness about community based health insurance. In view of that, test statistics for

Predisposing factors (characteristics)		Summated scale score values about attitude towards CBHI scheme	
Variable	Response	Frequency and Percentage	Sig.at P<=0.005*
Sex	Male	265(77.0%)	0.000*
	Female	79(23.0%)	
Age	18-35	57(16.6%)	0.608*
	36-50	151(43.9%)	
	51-64	70(20.3%)	
	65 and Above	66(19.2%)	
Level Education	Can't Read and Write	183(53.2%)	0.001*
	Can Read and write	79(23.0%)	
	Primary Education (1-6)	62(18.0%)	
	Secondary Education(7-12)	20(5.8%)	
Awareness about CBHI	Low	44(12.8%)	0.000*
	Moderate	139(40.4%)	
	High	161(46.8%)	

*=significant at p<=0.005, Source: Sample survey, 2017, n=344

Table 1: Attitudinal variations in various group categories towards CBHI scheme.

age was not statistically significant which confirms that variations in age group did not have impact on the attitude of households. According to data from survey significant majority (93%) of respondents have positive attitude towards the scheme regardless of their age categories. However, in various educational levels of respondents the attitude of respondents towards CBHI was different. Head of households who have better educational achievement have positive attitude hence, those participants do have better information about healthcare provisions and benefit package from the scheme. Similarly, level of awareness about community based health insurance is significant at $\alpha=0.005$. This implies that, having different level of awareness (low, medium or high) did have an impact on households view towards CBHI scheme. People who have high level of awareness about the scheme have positive attitude towards the scheme.

On the other hand, members who have low level of awareness about CBHI had unfavorable attitude due to misunderstanding and misconception about the right and responsibilities of members. Furthermore, data from respondents showed that those households who received appropriate benefit package at best, have positive attitude towards the scheme. On the other hand, those households who did not receive appropriate benefit package have unfavorable attitude towards CBHI scheme.

Furthermore, one of the key informants explained her experiences about community perceptions and utilization of modern healthcare facilities as follows.

I was here for nine years and I know the perception of this community. Before the introduction of CBHI, no one come unless their health condition is worse because they expected to pay for any services they get. But know they come frequently because they did not pay out of pocket payment at the time of service; once they paid annual payment for the scheme (key informant, health professional). The above argument supported by most participants of this study. Community based health insurance promote households to seek healthcare services frequently by removing out of pocket payment at the time of use.

On the other hand, some of the participants have unfavorable attitude towards CBHI scheme. For instance, after the introduction of CBHI scheme one interviewee explained the waiting time as:

Among other things, long waiting time is major problem after the introduction of CBHI. Sometimes it may take eight hours to get services after registration... but before the introduction of the scheme we could accessed services within three hours (male interviewee, age 44).

Similarly, one of the professional stated his experiences about general qualities and client perception about health care services as follows:

After the introduction of CBHI, even if there are increments in utilization, there are covert problems. For example, people come when they feel the symptom, we prescribe tablet for them for a week or two weeks but they are not interested to finish their medication. They came after three or four days and say the medication is not working and we have to change the medicine for them; they become the professional not the patient, [but those none members did not come if they did not finish their medication because they paid for it and they understand the value of money]. None compliances of members to the prescription creates medical resistance. For example, Medical Resistance Tuberculosis (MDR-TB) is among the cases which are difficult to treat easily. Conversely, patient needed high cost of care or sometimes difficulties even for recovery at all after medical resistances created (male key informant, 7 years work experiences).

Community awareness, benefit package and participation in CBHI management and administration

As indicated Table 2, below respondents were asked about their level of awareness about CBHI schemes. Although, 161(46.8 %) of respondents have high awareness about CBHI, the remaining 139 (40.6%) and 44(12.8%) of the total respondents level of awareness were moderate and low respectively (Table 2).

Furthermore, the household survey showed that most households in the study area correctly understand the role and concept of CBHI scheme. However, one of the key informants (health professional) stated households awareness as misguided and limited to client perspective.

Most key informants argued that patients (members) did not have better awareness about CBHI scheme and their claim to use health care services. CBHI scheme office did not give adequate awareness how, when and where to use services. Members only claim their right without understanding their responsibility. CBHI officials only concerned on increasing members without creating awareness; this brought problem to provide services and create unfavorable attitude towards the scheme due to misinformation. In addition to the above claim, participant of interview strengthen the argument as follows:

Awareness about CBHI is low, even some people did not know how much they paid because payment collected with other tax payments (for example with land tax, fertilizer payment) this brought even misunderstanding even they thought that they paid more than the payment set on the guideline. Additionally, different payments at once brought inability to pay for every payment (male, interviewee, health care professional, 7 years' experience).

In principle CBHI scheme is voluntary in enrolment and membership. However, regarding condition of membership as depicted in the table, majority of the participants (86.9%) responded that membership for CBHI scheme was voluntary and the rest of respondents (13.1%) responded that membership to the scheme were mandatory.

Similar to the above statement participants of the interviews provided their perspective and consensus on the membership condition and criteria to re-join the scheme as follow: sometimes,

Item		Frequency	Percentage (%)
Level of Awareness about CBHI	Low	44	12.8
	Moderate	139	40.4
	High	161	46.8
	Total	344	100.0
Membership Condition to CBHI scheme	Voluntary	299	86.9
	Mandatory	45	13.1
	Total	344	100.0
Appropriate benefit package received	Yes	274	79.7
	No	70	20.3
	Total	344	100.0
Community Role in Management and Administration of CBHI Scheme	Strongly Disagree	16	4.5
	Disagree	35	10.2
	Neutral	59	17.2
	Agree	177	51.5
	Strongly Agree	57	16.6
	Total	344	100.0

Source: Sample survey, 2017, n=344

Table 2: Level of awareness, membership condition, benefit package and community role in managements and administration of CBHI scheme.

members forced to pay the premium payment even if they did not want to. Kebele leaders forced members to pay both premium payment and other payments together unless they did not accept other payments (like land tax payment, fertilizer payment) if they did not pay the payment of CBHI scheme first. Moreover, if someone failed to afford for one year and withdraw from the scheme, to rejoin he/she forced to pay the back payment/s for services he/she did not use for nothing. These principles discourage households to rejoin CBHI scheme. These types of mechanism to collect payments to the scheme brought suspicion; some people believed CBHI scheme is a means of revenue collection for government like tax's.

Additionally, households were asked their view whether they get the appropriate services they agreed during membership (the benefit package) and, majority (79.7%) responded that they received health care service according to the scheme agreements, while and the remaining (20.3%) claimed that they did not receive the services they have to receive. Another parameter that determines attitude of members and the sustainability of CBHI scheme is community participation in the management and administration of CBHI scheme. Accordingly, among respondents, 51.5% and 16.6% of them agree and strongly agree respectively. 17.7% were neither agree nor disagree and the remaining 10.7% and 4.5% were disagreeing and strongly disagree correspondingly about their role in management and administration of the scheme.

Discussion

Community based health insurance scheme in Ethiopia initiated to promote health care access and quality of services by mobilize national and local resources. Furthermore, CBHI scheme design to mitigate financial consequences of ill health through crosses subsidizations [3,18].

Overall, the positive attitude of households towards community based health insurance was significantly high (93%) in this study. Similarly previous pilot study in the study area indicated that Tehuledere was one of the 13 pilot Districts with 91% average acceptance rate which is significantly higher intake than the national average (52.4%) of the eligible households [12].

Results of some studies carried out elsewhere were also in corroboration with the present study. For example, a survey on willingness and attitudes of households to pay for community based health insurance among households in the rural community of Fogera District, North West Ethiopia stated that the willingness to join the scheme was 94.7% and the poor were willing to pay up to 5% of their monthly income; which is more promising than other countries experiences [19]. This study also indicated that majority of households do have positive attitude towards CBHI scheme.

Furthermore, a research in North Central Nigeria rural community revealed that 87% of the respondents do have positive attitude towards CBHI scheme and were willing to pay for CBHI and the mean amount of money were \$3.26 USD per household per annual [20]. Study in Cameron indicates that rural households were willing to pay \$2.5 per person per month on average; those households do have positive attitude towards CBHI scheme. Average household heads were willing to pay US\$ 8.6 per year in Burkina Faso [5].

Most importantly, community based health insurance is voluntary membership in principle that prone to the so-called adverse selection problem; Ethiopian CBHI scheme become common mechanism to accesses healthcare for chronically ill, high-risk individuals, large

family size households and old aged who anticipate a high need for care. Due to this self-selection, the claims made to the scheme will exceed its revenues by far if premiums are based on the average risks in the community. An evaluation of the community health fund in rural Tanzania found that 52% of the sampled member households reported at least one person suffering from a chronic ailment. But as only about 6% of the target population was insured and premiums were pooled with revenues from user fees paid by the non-insured [21]. In additions, the degree of community participation in the design and running of the CBHI can vary widely and is usually greater if funds are owned and managed by the members themselves than if schemes are run by health facilities to avoid moral hazards [22].

However, different to the finding of the above study, this study revealed that community sense of belongingness and ownership in management and administration of the scheme is limited to Kebele administrative, District officials and some community members; relatively high number of respondents (32.1%) were either disagree or undecided about their participation in CBHI scheme management and administration. The reason for this was having low awareness about rights and responsibilities included in the scheme frameworks. Moreover, the finding of this study found out that most members do have only generalized concept about CBHI scheme. However, most members claim that detailed data about benefit package, membership conditions, role and responsibilities of households were limited.

Similar to the finding of this study limited community participation and low community awareness about CBHI scheme results unfavorable attitude towards the scheme. For example, lack of trust and low level of awareness of the enrollee are reasons that keep them away from enrolling in CBHI schemes [23,24]. Moreover, lacks of adequate knowledge and past appalling experiences with CBHI schemes are main reasons that prevented people's membership [25].

Conclusion and Recommendation

In general, this study revealed that most member households have positive attitude towards CBHI scheme. Hence, CBHI become an opportunity to enhance affordability, access and utilization of healthcare services in the study area. However, some households have unfavorable attitude towards the scheme; especially due to poor treatment by health care professionals and low quality of services.

Furthermore, this study revealed that socio-economic condition such as; large family size, high educational achievement, receiving proper benefit package at best and better awareness about CBHI scheme have positive impact on members' attitude towards the scheme.

However, limited community participation and low sense of ownership had negative impact on community attitude towards the scheme.

Consequently, searching better option and viable experiences, establishment of strong policy frame work for implementation based on national, regional and local demands and supplies in health care provision; improving risk pooling and hold back moral hazards on the base of socioeconomic and cultural milieu is fundamental concern for the scheme to work properly and serve its function.

Moreover, implementation of CBHI schemes in Ethiopia in general and in the study area in particular needed increasing awareness of households about CBHI scheme. Furthermore, sustainability and functioning of CBHI scheme require collaborative effort between government and the society full participations in design and management of the scheme.

Limitation of the Study

Lack of prior research studies on the topic especially in Ethiopian context; there was no any previous study on similar topic both at national and regional level and the research was limited to undertake comparisons on the findings of this study. In addition, the absence of regression in this study affect negativity to decide the most single important determinant factor which affect households attitude towards CBHI scheme.

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Conflict of Interest

The author declares that no conflict of interest exists.

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