Health Seeking Behavior among Community-Based Health Insurance Insured and Non-Insured Households: Evidence from Abraha WeAtsbeha Village in Rural Tigray

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Abstract

Background: The government of Ethiopia has undertaking various initiatives of public health reforms towards universal health care. Community Based Health Insurance (CBHI) is a new practice introduced to the rural population with the intention of accessing quality health care service.

Objective- the main objective of this study is to examine whether the scheme enhance health seeking behavior of the rural people.

Methods- it employed mixed research design. Participants were selected using both probability and non-probability sampling techniques. Survey questionnaires, FGD and key informant interviews were used as data collection methods. The reliability of the survey questions was checked with Cronbach's alpha and measures of equivalence item analysis methods in pilot testing and found to be strong consistent *($r=0.78$ & $\alpha=0.769$)* respectively. Data obtained from survey questionnaires was analyzed quantitatively using Pearson product coefficient, mean, standard deviation, two sample t-tests and multiple regressions. Qualitative data was analyzed thematically based on similar experiences and challenges observed in the scheme.

Results- the major finding indicates, the introduction of CBHI as health care package brings significant change in health seeking behavior of the rural people for $t(88)= 0.0324$, $P<0.05$ and $t(88)= 0.0218$, $P<0.05$ with 95% CI for both "when" and "where" to seek care core values. Poor service quality, moral hazards among scheme members, lack of community participation were identified as bottlenecks in the scheme for $F (5, 40) = 4.01$, $F =0.035$, $P<0. 05$.

Conclusions-The study tried to show how the introduction of CBHI scheme increased the health seeking behavior of the insured households as compared to the non-insured households. This is evident with the significant variation rated responses towards the leading assumptions of where and when to seek care for both the insured and non-insured households.

Keywords: Health, Behavior, Care, Rural, Scheme, Seeking

Background

Ethiopian public health reforms: nutshell view

Over the past decade, Ethiopia has recorded notable progress in a number of population health outcomes. These changes have been accompanied by a rapid expansion of healthcare infrastructure at all levels. As part of both Growth and Transformational Plan (GTP) and MDGs, the government of Ethiopia has been undertaking a number of activities to expand coverage of health services and to enhance the health seeking behavior of the rural population. Among these, construction of health facilities, equipping them with the necessary equipment and human resource, developing health extension programs and providing training to health personnel are few worth mentioning. In line with the expansion of health service provision and developing the health seeking behavior, efforts are being made to alleviate the financial barrier of the community towards accessing health services through implementation of community based health insurance. According to the (1) health sector financing reform project report indicates, in Ethiopia it was since 2008 that community based health insurance introduced with the assumption of piloting in four regions (Tigray, Amhara, Oromia and SNNP) in 12 selected *Woredas*.

In 2008, the Government of Ethiopia elaborated upon its health care financing strategy with the adoption of two-pronged health insurance strategies includes Social Health Insurance (SHI) and Community-Based Health Insurance (CBHI). Social Health Insurance is a mandatory health insurance program for employees of the formal sector and is financed by earmarked payroll contributions from employees and employers. The CBHI is an innovative health service delivery program that aims at universal health coverage by using community mobilization and premium packages.

As the exiting literature indicates, while common in many developing countries, CBHI is new in Ethiopia. Pertinent to this, (2) and (3) stated the concept of micro insurance and payment of premiums in advance to meet the costs of health care is not known in many developing countries. It is generally believed that, health care financing in most countries typically combines diverse sources and mechanisms of financing to improve financial access to health care and financial protection in the

health sector. The study by (4) and (5) indicates, national health services financed through general taxes like CBHI and social health insurance systems, share desirable characteristics that contribute to better financial access to health care and financial protection in the health sector.

Community-based health insurance is designed to addresses the need of majority of the population in the rural areas and engaged informal economic sectors. This type of insurance is aimed at promoting incrementally the health service provision to the target population in rural area, starting with a pilot phase and it is now scaled up to other districts in the region. The other concepts need to be explained is, the notion of health seeking behavior. Health seeking behavior has been defined as any action undertaken by individuals who perceive themselves to have a health problem or illness for the purpose of finding an appropriate remedy. It represents the sequence of remedial that individuals undertake to rectify perceived ill-health (6). Health seeking behavior can be explained by people's health behavior as signs and symptoms by which the illness is recognized; presumed cause of the illness and prognosis established. These are in turn interpreted by individuals and/or significant others and on labeling the problem, proceed to address it appropriately through recommended therapies (7).

The effectiveness of CBHI depends on uptake of members, creating access to healthcare services, and financial protection is among other factors of the scheme. However, individual studies in the CBHI impact evaluation literature tends to focus on the effect of the scheme on various outcomes like out of pocket payment, beneficiaries' contribution and scheme benefit packages and pay relatively little attention to the role of the program in enhancing the health seeking behavior of the beneficiaries. The study by (8) on the impact of CBHI on utilization and cost of care in Ethiopia taking samples from four regions and shown that enrolment leads to a 30–41% increase in utilization of outpatient care, a 45–64% increase in the frequency of visits and at least a 56% decline in the cost per visit. However, this paper failed to clearly show if the introduction of the scheme generally impacted the health seeking behavior of the community. Other study of (9) on health seeking behavior among self-help group of rural community confirms that in collective schemes like that of CBHI,

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members are intended to check about reputation of provider, cost and ease of access were important in influencing provider choice. In this study, despite the main intent of the paper is health seeking behavior among members, yet it totally ignore whether such community based health initiatives affect the members health seeking behavior. Therefore, coupled these and other issues inspired the researcher to study the impact of implementing CBHI in affecting the health seeking behavior of the rural population with the insured households in focus.

Leading objectives

Generally, this study tried to compare and contrast the health seeking behavior of insured and non-insured households in *Tabiya Abraha We'Atsebaha.*

- To examine the level of health seeking behavior significance differences of the insured and non-insured households as a result of implementing CBHI
- To identify the variables those synergistically determine the health-seeking behavior
- To explain the effects of those identified factors on the health-seeking behavior of the study population

Method

The study adopted mixed research design; meaning that both qualitative and quantitative research approach were used. As (10, p. 23) explained, "Mixed method provides the opportunity for presenting a greater diversity of divergent views." From such point view, using a combination of quantitative and qualitative methods of analysis also reduces the limitation of each approach or helps to get more reliable data.

In addition, (10) indicates that "It is advantageous to use mixed research for analysis as together the data analyses from the two methods are juxtaposed and generate complementary insights that together create a bigger picture" (10, p.24).

Therefore, the researcher proposed to use the mixed approach to get the advantage of the two at a time. On top of that, the topic also invites to follow a mixed approach. In terms of purpose, the study was descriptive by which an attempt had been made to come up with the clear picture of the issues under investigation, "when and where" to seek care (patterns of the health seeking behavior) of the study population.

Eligibility criteria for selection of qualitative participant

Participants of this study were household members of the community based health insurance scheme in *Kelte' Awalelo* district *Abraha weAtsebha Tabiya* and have a membership card and service duration with more than one year. In addition, for the sake of computational analysis noninsured households were also included. To have better insight and empirical evidence about the health seeking behavior of the study participants, district and village levels CBHI coordinators were included as key informants.

Population, sample size and respondents

Population: Defining the study population, sampling size and techniques are very important in conducting research (11). Relevant to this study, out of the 11 CBHI insured villages (*Gotes*) in the *Tabiya Abreha we Atsbeha* is selected randomly. Information from Tigray, regional Health Bureau CBHI coordinating office indicates, out of the total population of the village (689 households) only 90 households are insured members of the CBHI. Since the time that this data collection was made, the scheme enrollment rate was very low only 13%. As a result of this the researcher was forced to take 50% of the total insured households.

Sampling technique and sample size: Determining respondents, sample size and technique is one of the most important parts of the method section. There are different ways of determining sample size from a given population. As (12) developed a means of determining a proportional sample size, if the target population is two hundred fifty (250) a total of 132 participants are selected. In case of this study, similar sample determination process was used. Therefore, out of the total insured households' members' of CBHI by taking ½ (50% CI 95%) of the sampling fraction, then forty-five (45) sample participants were selected. Besides this, forty-five (45) non-insured households were also selected to make proportional comparison (equal variance is assumed) between the two groups. Efforts were exerted to select proportional sex distribution in the insured and non-insured households. In selecting the sample size of the insured household's, probability sampling technique was employed. Of the probability sampling techniques, the simple random sampling technique with lottery type was used (fig 1). However, it has to be noted that taking the

samples from both the insured and non-insured households don't intended to convey issue of representativeness. It only refers to magnify the lived experiences of the participants.

In simple random sampling, each member of the population under study has an equal chance of being selected and the probability of a member of the population being selected is unaffected by the selection of other members of the population, i.e. each selection is entirely independent of the next (13). The beauty of simple random sampling is that the larger the sample is, the more closely it will mirror the percentages in the overall population.

Participants: Apart to the above survey participants, two Focus Group Discussions (FGDs) were organized. The FGDs have seven (7) participants each (Insured and non-insured households). With regard to determining the number of FGD participants, various scholars provide different viewpoints. For instance, (14, p.4) explains, "The ideal number for FGD is between six and eight." On the other hand, (15, p.11) described that, "A good size for a discussion group is between eight to ten participants per session." Considering the above views of scholars, the researcher was certain to take an average of seven participants. Besides, two key informant interviews were conducted with village and district level CBHI coordinators considering their experience on the service provision and their contact with the members. Here special care was given not to select respondents those who are already participated on FGD and survey. All these respondents were selected purposefully assuming that they are potential source of data for the study.

*Data collection tools***:** To collect important data for the study different tools were employed. Semi- structured interview guide item which comprises of eight questions; FGD guiding items consists of six questions. Ostensibly, twenty-five structured questionnaires (for both insured and non-insured) were prepared and distributed to evaluate and assess the health seeking behavior. In the survey, leading items of "where and when" to seek care, determinant factors associating with health seeking behavior of the insured members were investigated. Pertinent to this, counter items also distributed to the non-insured households to grasp the basic difference between them. The survey questionnaires consisting of three major core composite values and each of them have seven to

eleven individual items rated on a five-point Likert scale ranged from "strongly agree" to "strongly disagree. The first composite value is measures of perceived HSB reduced to when to seek care with sample items include, “When I feel sick I immediately visit health centers," and “When I have any health problem, initially I either don’t do anything or try some home remedy.” Separate items were prepared to measure time perception on HSB of participants with a set of five alternatives ranging from “immediate” to “more than a week later”.

The second composite value is measures of perceived HSB reduced to where to seek care with sample items include, “When I feel sense of illness, I visit traditional healer” and “During my illness, I have no trouble making health centers my first choice.” The third composite value is measures of perceived HSB reduced to access to health care services and out of pocket payment with sample items include “Health expenditures cause financial burden on my family” and “I feel I can have a better access for health care services.”

From previous works of (16) multidimensional health seeking behavior determinant factors are adopted as best reflects the CBHI scheme in Tigray. These are developed under three major themes with eight items measuring of perceived determinant factors of HSB on a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The scale includes separate measures of health center related and the scheme specific perceived factors (institutional/system related factors) with sample items include: “Health care providers at HCs are competent and are trained well” and “Physicians at HCs provide enough care and time to patients.” In addition the individual/households related perceived factors with sample items include “members of the scheme are visiting contracted health centers even for minor illness”. Sample items for socio-cultural determinants factors include, “In my view, the community participation in the scheme is low and will affect the HSB” and “In my opinion, resource mobilization in the scheme can affect the success and sustainability of the scheme.”

*Data quality assurance***:** Reliability of the questionnaire were cheeked by Cronbach Alpha, (α) and test- retest methods in 50 (25 insured and 25 non-insured households) in other village in the same district in pilot study before the actual dissemination (two

weeks) two times with one week interval. The reliability of the survey questionnaires was found to be α= .769 by Cronbach Alpha and r= 0.78 with the test- retest methods which was a strong and consistent. For the interview and FGD items trustworthiness was assured by avoiding double barreled, long and complex questions. Efforts were also made to avoid leading items and questions with false premises. In tandem to this, four peers were invited to comment and debrief on the prepared questions (Peer debriefing). Triangulations by method and data source were held to keep the trustworthiness of the data. In other words, different methods were used to collect the qualitative data. To authenticate genuineness of the data, the researcher was established good rapport relationship between study participants during the data collection period.

Content validity or inter judge validity was conducted to find out if the questions were representing what they intended to measure in a proportional way. In doing so, the variables of CBHI and components of health seeking behavior of study participants were well defined and then the questions were given to four raters, two of them were colleagues in the department of Psychology, and the other two raters were employees in the regional health bureau CBHI coordinating office. The rating for the questions were 1= bad, 2= good, and 3= excellent questions. By doing so, out of the initially prepared thirty items, five of them were discarded and final data collection was done with twenty -five items. The questionnaires were translated in to Tigrigna by professionals in collaboration with the researcher for ease of communication and to get genuine data from participants.

Data analysis methods

To analyze the information obtained from the survey, descriptive and inferential statistics were employed. Mean and standard deviation were employed to see the discrepancy level of health seeking behavior of insured and non-insured households as a result of the CBHI scheme. Two sample T-test was used to look if the implementation of CBHI scheme could bring statistically significant effects on the insured household's health seeking behavior. Linear regression analysis was computed to predict if "the identified" factor in the scheme could influence the health seeking behavior of beneficiaries. Multiple regressions was used to predict states and conditions of CBHI implementation process could either deter or

enhance the health seeking behavior of insured households of the scheme. Percentage used to know if the participants` health seeking behavior is changed after the scheme implemented and how many of them choose health care providers over other options after the scheme came to action. In doing so, the Social Sciences Statistical Software (SPSS V.19) and STATA V. ed 11software's were used. For ease understanding the results of statistical analysis are displayed by tables. On the other hand, the qualitative data analysis was guided by the steps in the previous works of (17) and (18). Accordingly, the dataset from the interviews and focus group discussions were classified on themes, transcribed and presented in a narrative form through the following steps such as pre-coding (data transcription was done repeatedly until the intended main points of the interview is achieved, significant quotes and statements of informants was highlighted), coding (the pre-coded statements or ideas were summarized and structured in to meaningful experiences), categorizing (bringing texts in to meaningful units), themes (concepts that explain how ideas were connected) and write up (generating meaning out of the themes developed).

Ethical consideration

Professional and research ethical values of this research were fully recognized and assured. *Informed consent*: Ethical clearance letter was given from college of social sciences research and post graduate coordinating office and the *Woreda* administration health office. All participants in this study were decided their participation willingly and the researcher let them know the purpose of the study; give them all necessary information regarding the research. Participants were get pre- informed that, they could quit their participation if they felt discomfort without looking permission from the researcher. Participants were not forced to sign contractual agreement with the researcher at the beginning of their participation. Conducting interview, document analysis of CBHI insured households and their families profile were done only after the researcher has got consent of the participants. Moreover, issues of confidentiality, anonymity and privacy were communicated well. The researcher also explained them that the information they gave could be considered for further publications. All personal information was locked in a private folder and would be destroyed ones the research is completed. An agreement was reached with participants

that their true name is not written and represented by code. They were also communicated the expected benefit of their participation and the value of the data they gave, to themselves, community, to the CBHI coordinators and other concerned bodies. The FGD and key informant interview participants were given with transportation allowance and health break refreshments. The time duration of the FGD and key informant interviews were explained in the consent and the place of interview and discussion were decided by the respondents and participants. Other possible research ethical considerations and norms were maintained.

Results

The purpose of CBHI is wide range from reducing individuals' expenditure in health care as the expense of their illness, increase public health expenditure to promote individual health, risk pooling among the community and to enhance health seeking behavior of the community.

Self-reported health seeking behaviors

With regard to the importance and relevance of the scheme members of the program outlined that this scheme is very fundamental in increasing their health seeking behavior and have strong belief that the scheme gives them backup in monitoring their health. Measures of perceived health seeking behavior among CBHI insured and non-insured households eleven items reduced

to "When to seek care" as composite value of HSB (table 1). To see whether introducing the scheme increase health seeking behavior of the insured households under the 'when to seek care' core items two sample T-test with equal variance was computed. It showed that there is significant effect on the health seeking behavior between the insured and non-insured households for $t\ (88) = 0.0324, P<0.05$ with 95% CI. When specifically looking, insured participants loading in this core items show significant difference in favor of visiting health care centers, compared to the non-insured households. In this composite value items are computed for HSB comparison between the two households under the when to seek care core value. The mean and standard deviation distributions also supported this result.

The time when to seek care is found with immediate response to any health concern for Q4 $t\ (88) =0.0398$, Q5 for $t\ (88) =0.0333$, $P<0.05$. In addition, insured households also show significant differences as compared to non-insured households for

items of seeking care rarely from health centers. This means insured households are shown higher interest of visiting health centers during time of illness as immediate as possible, compared to the non-insured household. This is proven by lower responses of non-insured households for making visits to health centers immediately during illness Q7 for *t (88) =0.0125, P<0.05.* Even the *M=2.5, SD=0.0284* for non-insured households is higher than *M=1.4, SD=0.159* of the insured households for not making visit to HC immediately during illness.

Table 1. Measures of perceived HSB among insured and non-insured household (When to seek care core value of HSB)

Measures of Perceived Health Seeking Behavior (When to Seek Care)	Insured (N=45)		Non-insured(N=45)		Independent t-tests		
	Mean	SD	Mean	SD	df	sig	P<|t|**
Q1. I visit health centers when I am really ill	3.8	.0431	1.7	.0193	88	0.05	.0238
Q2. I only visit health centers for vaccination of my children	1.2	.0136	3.9	.0443	88	0.05	.0307
Q3. For simple illness like flu I visit health centers	3.5	.0397	0.9	.0102	88	0.05	.0295
Q4. For any illness, I make an early consultation to avoid further risks	4.2	.0477	0.7	.0079	88	0.05	.0398
Q5. When I feel sick I immediately visit health centers	4.2	.0477	1.3	.0147	88	0.05	.0333
Q6. During my illness, I rarely Seek help from professionals.	1.3	.0147	3.3	.0375	88	0.05	.0228
Q7. No matter the type of illness, I used to see health center after days	1.4	.0159	2.5	.0284	88	0.05	.0125
Q8. When I feel, ill I am almost certain to visit health center.	4.6	.0522	1.4	.0159	88	0.05	.0363
Q9. When I have any health problem, initially I either do not do anything or try some home remedy	1.2	.0136	4.1	.0465	88	0.05	.0329
Q10.My family has good value for usual check up	4.5	.0511	1.3	.0147	88	0.05	.0364
Q11.I do whatever is necessary to be as healthy as I possibly can be	4.6	.0522	3.6	.0409	88	0.05	.0113

Note. ** Measures of Perceived HSB statement significant at< 0.05 for when to seek care

Generally, the measures of perceived health seeking behavior items show significant difference between insured and non-insured households for making health care centers visits for all types of problem with immediate response during the time of illness and making the health centers are their primary option to seek care. In other words, non-insured households are shown lower favor to seek care during health complications with immediate response and considering health centers as their prime choices.

Besides, insured households have shown doubled level of health seeking behavior with average mean score of (*M= 4.4(Max*

5), n = 45) as compared to the non-insured households with average mean score of (*M*=2.17(Max 5), n=45) (table 2).

Table 2. Two sample t-test value for health seeking behavior of participants

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]		T	(T>t)
Insured	45	4.466667	.2169578	0.455397	4.029417	3.903916	-2.6029	0.0324
Non-insured	45	2.177778	.1660257	1.113734	3.843175	4.512381		
combined	90	3.822222	.1409596	1.33726	3.542139	4.102306		
diff		2.288887	.2731945		-1.254028	-.1681944		

Combing the above observations, it is sound to say that, the introduction of CBHI scheme tends to increase the health seeking behavior of the insured households.

As part of this, one FGD participant explained that "*CBHI scheme is based on solidarity, mutual interest, values and democratic principles. We owned and managed it directly, it makes us no difference*." The participants realized that the introduction of CBHI helps members of the scheme to utilize the health care packages with ease accessibility and immediacy service provision. With regard to this one participant add the following idea:

> CBHI member patients who have been consulted by health care providers and are prescribed diagnosis for treatment are able to access the service smoothly. If it was privately, we cannot afford the cost. Without CBHI, we couldn't have been improved and our access to health care utilization might be in difficultly. In fact, CBHI is not only improving our health and habit of using health care treatments but also save our out of pocket payment for any health service it costs us (Insured FGD Participant, 2015).

As the participants described, CBHI is very pivotal since members define the benefit packages based on their perceived needs and preferences. Contribution policies are defined by members, based on their ability to pay and their specific economic circumstances. Managers of a CBHI scheme are elected among members and are accountable to the members of the scheme. Besides, one key informant interview at the village *(Tabiya)* level coordinator outlined this as, "*Community-based health insurance is an emerging and promising concept, which addresses health care challenges faced in particular by the rural poor*".

The second composite value is measures of perceived health seeking behavior among CBHI insured and non-insured households consisting of seven items reduced to "Where to seek care".

The overall t-test computation shown significant difference between the insured and non-insured households where to seek care during health-related complications for *t (88) = 0.0218, P<0.05* with 95% CI. Coming to each measure of where to seek care items, the insured as compared to non-insured households are recorded with lower preference for other options of treatment including tradition healers, holy water and religious prayers. This means, the non-insured households are often depend on other alternatives than health centers to seek care. On the other hand, insured households show high tendency of visiting health centers and significant difference is observed.

Table 3. *Measures of perceived health seeking behavior among insured and non-insured household (reduced to "Where to seek care" core factor of HSB.*

Measures of Perceived Health Seeking Behavior (Where to Seek Care)	Insured (N = 45)		Non-insured (N = 45)		Independent t-tests		
	Mean	SD	Mean	SD	Df	Sig	P<|t|**
Q1. When I feel sense of illness, I visit traditional healer	0.9	.0102	4.8	.0545	88	0.05	0.0345
Q2. When I feel sick, I prefer to go to nearby holy water	1.1	.0103	4.3	.0488	88	0.05	0.0385
Q3. Health centers are my prime option for treatment.	4.8	.0545	1.6	.0181	88	0.05	0.0364
Q4. During my illness, I have no trouble making health center my first choice	4.7	.0534	1.2	.0136	88	0.05	0.0398
Q5. At the time of illness, I turn to local religious institutions (eg. Church, mosque) for relief	0.8	.0090	3.9	.0443	88	0.05	0.0353
Q6. I do not have compliant with the waiting time for having services at health centers	4.6	.0522	2.3	.0261	88	0.05	0.0261
Q7. When I feel sick, I do not have any reason to wait & seek care in the health centers	4.7	.0534	0.5	.0056	88	0.05	0.0478

Note**.** ** Measures of Perceived HSB statement significant at< 0.05 for where to seek care,

Insured households showed less frequent visits to other optional health services providers and prefer to seek care in modern health care services. They show minimal use of other alternative services as compared to the noninsured households observed with frequent visits to other options of seeking care. This is evident for *M=0.9, SD=0.0102* of insured households is lower than *M=4.8, SD=0.0545, p<0.05* of non-insured households visiting traditional healers during illness.

In further analysis depending on their response, both insured and non-insured households were asked when they would seek care and offered a set of five alternatives ranging from immediate to more than a week later. For where to seek care question four common alternatives are given including (Traditional herbals, holy water or religious prayers, health care centers and stay at home).

The responses are designed with the view that immediate care-seeking at health centers options may be considered the appropriate course of action that has strong connection with better health seeking behavior. Response rates, for where to seek care and when to seek care are high in the insured households, *95.5 %(* health center) and *97.7 %(* immediately). As contrary to this, the rated response of non-insured households for the same question is found to be, *24.4%* and *28.8 %*(table 4).

Table 4. *Where and when do you to seek care at the time of health complications*

Item	Alternative	Insured, n=45	Non-insured, n=45
Where to seek care when you feel sick	Health Center	43(95.5%)	11(24.4%)
	Traditional Herbals	1(2.2%)	15(33.3%)
	Holy Water (religious relief)	1(2.2%)	19(42.2%)
	Stay at home	---	---
When to seek care at the time of your sickness	Immediately	44(97.7%)	13(28.8%)
	Day after	1(2.2%)	9(20%)
	After two days	---	3(6.6%)
	After three or four days	---	10(22.2%)
	After a week	---	10(22.2%)

The health seeking behavior items reduced to core values where and when to seek care rated responses are higher among the insured households as compared to the non-insured ones. It is understood that the recorded variation in the responses and significance difference shown between the two households above is not because that the scheme is not important in the eye of the non-insured respondents. It is rather because there is still variation towards response time to illness, preference of when and where to seek care and ability of coping with health care spending among the insured and non-insured households at the time of illness. Assuming the privilege of their membership in the scheme, the insured households show better response to all the measure of perceived HSB items. It is also true that

such reactions improve the pattern of health seeking behavior among the rural people.

The third composite value is measures of perceived health seeking behavior consisting of seven items reduced to "Access to health care services and out of pocket payment". The score for insured households show significance difference to the non-insured households for *t (88) = 0.011 P<0.05 with 95% CI*. Each item of measuring perceived HSB to access and out of pocket payment show the insured are in favor of better health access with less financial pressure to seek care. This means that insured households experience insignificant financial pressure to seek care and believed that they can afford the cost of care during major illness. Contrarily, non-insured households are exposed to high health care spending and felt in pressure when they seek care.

In other items, limited access to health care services and high cost of spending for seeking care; the non-insured households show high score as compared to the insured households (table 5).

Table 5. Measures of perceived HSB (reduced to "Access to health care services and out of pocket payment" core value of HSB.

Measures of Perceived Health Seeking Behavior (Access to care, out-of-Pocket Payment)	Insured (N = 45)		Non-insured (N = 45)		Independent t-tests		
	Mean	SD	Mean	SD	df	sig	P<|t|**
Q1. Health expenditures cause financial burden on my family	0.7	.0079	4.6	.0522	88	0.05	0.0443
Q2. In my view, families who can afford the expenditure prefer health facilities	4.5	.0511	4.6	.0522	88	0.05	0.0011
Q3. Since I can't afford the cost of modern health service, I prefer other alternative health care	0.9	.0102	4.9	.0556	88	0.05	0.0454
Q4. I have financial pressure with regard to health-related costs	0.8	.0090	4.8	.0545	88	0.05	0.0455
Q5. I feel comfort no matter the money I invest to improve my health	4.3	.0488	1.3	.0147	88	0.05	0.0341
Q6. I feel I can have a better access for health care services	4.9	.0556	1.0	.0113	88	0.05	0.0443
Q7. As far as I can afford the cost I have the access to health care access	4.5	.0511	4.4	.0543	88	0.05	0.0032

Note. ** Measures of Perceived HSB statement significant at< 0.05 for access to health care services and out of pocket payment

In other words, the non-insured households are challenged to access health care services and are exposed to high spending to seek care as compared to the insured households with easy access and few spending for the same items.

In addition, participants were asked to rate their view with regard to the importance of the scheme in saving out of pocket payment and found to be *87%, n=45* with mean of *M= 4.79* max *5* of the insured households hold their level of strong agreement with the question, whereas the non-insured households' response to the same question with *23.7%, n=45* with mean of *M= 1.99* max=*5* of agreement. This means, there is still different in health care spending between the insured and non-insured households. The insured households are accessing the health care services with little cost as compared to the non-insured households irrespective of the nature of illness. To substantiate the idea, the same question was raised to the FGD participants of both the insured and non-insured households. One female participant from the insured households explained the importance of the scheme from various dimension as follow:

> First of all, we insured members no longer have to search for credit or sell our assets. We also recover more quickly from our illness; there are no delays in seeking care. Considering the fact that we people in rural areas rely mainly on our labor productivity and on assets such as livestock for income generation, a serious decline of income can be prevented as productive assets are protected and we can return to work sooner. Our income is stabilized and may even counting the sum throughout the year be increased (Insured FGD participant, 2015).

Other FGD insured participants were also show their agreement with this view, as the program is useful since children are accessing health care facilities when they faced any health problem having the advantage of their family membership in the scheme and they did not worry about the payment. To have the non-insured households view point, the same question is asked in the other FGD session. One non-insured FGD participant responds; "*The insured households cannot suffered to get health care service, unlike the non-insured households, like me. They can be treated within short period of time and even if they buy medicine privately they are re-paid back (reimbursed) their money immediately*".

Determinants of health seeking behavior in the scheme

Health-seeking behavior studies look at illness behavior more generally and focus in particular motivating factors of illness perception and health belief of individuals. Pertaining to this, insured households were offered list of possible hypothetically drawn determinant factors of health seeking behavior on the scheme. Respondents were

asked to rate which variable is frequently observed as problem and which is less frequent. In this regard, lack of quality health care services in the contracted health centers, poor resource utilization (moral hazard), skill and capacity of professionals and lack of community participation (dropout of members) are identified as major challenges.

To see whether the above and other related factors could influence insured households' health seeking behavior and success of the CBHI program; multiple regression was computed and showed that overall insured households health seeking behavior is influenced by various variables in which expressed as, $F\ (5, 40) = 4.01$, $F = 0.035$, $P<0.05$. When specifically coming to which component of members' health seeking behavior best predictors, contracted health center related problems, skill and capacity of the staffs in the health center, followed by contracted health centers general service quality provision. Resource utilization and lack of community participation in the scheme respectively are the fourth and the fifth predictors (table 6).

This means that problems related to the contracted health center, skills and capacities of professionals in the CBHI contracted centers and quality of service provision generally categorized as institution/ system based factors are found to be high predictors of health seeking behavior for success of the scheme *r= -0 .71(71%), -0.46(46%), -0.44(44%)* respectively. Poor resource utilization (socio-cultural factors) and lack of community participation in the scheme (individual/households factors) (fig 2) decrease overall beneficiaries' health seeking behavior and effectiveness of the program for *(r= -0.39(39%), -0.30(30%), P<0.05* for all *n=45*), respectively. However, factors like relationship between coordinators and members, membership selection criteria have found with no negative effect in the health seeking behavior of beneficiaries and success of the scheme.

Table 6: Over impacts of variables on the insured households service satisfaction

Number of obs =45 F (5, 40) =4.01
Prob > F= 0.035 R-squared = 0.658
Root MSE = .98038 Adj R-squared = 0.0891

Overall Insured HH_ HSB	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
CBHI linked center problems	-.7175738	.0935795	3.61	0.001	.1514807	.5236668
CBHI resource utilization	-.3998576	.1420889	-0.96	0.031	-.418545	.1465735
CBHI service quality	-.445501	.0871776	-0.14	0.026	-.1859124	.1608121
Lack of Community Participation	-.3077801	.1126589	0.50	0.046	-.1672545	.2808147
Skill and capacity of the staff	-.4658986	07762	-0.06	0.029	-.1592546	.1494574
cons	3.299255	1.098415	3.00	0.004	1.114935	5.483574

Predictor variables: CBHI contracted health center related factors, CBHI resource utilization, quality of service provision, lack of community participation and skill and capacity of staff are identified as predictor variable for health seeking behavior of insured households.

Criterion variable: Overall insured households (n=45) health seeking behavior and success of the scheme.

This research is not experimental design which it lacks the chance to control extraneous variables; so, other co-founding variables that may affect the criterion variables are not examined and the researcher duly acknowledged this drawbacks. Yet, the researcher tried to focus on the major variables that could have direct impact on the HSB. On the other hand, variables like accessibility and better health care utilization for the rural people; reducing out of pocket payment for health care spending and increase sense of solidarity in the community to pool out risks are observed as advantages of the scheme.

Discussions

The WHO working protocol on community based health schemes (19) indicates, it is universally accepted that the current thinking in major international development agencies reflects community-based health insurance (CBHI) as a transitional mechanism to achieve universal health coverage in low income countries through enhancing seeking health behavior of the rural people.

The policy link between CBHI and universal health coverage is explicitly determined by the historical experience of mutual health insurance in a number of countries. “When

to seek" and "where to seek" care are basic defying features of health seeking behavior (as consisting of individual items on measures of perceived HSB in each of them). The early recognition of symptoms, accessibility to health facilities and compliance with effective treatment should reduce the health complications as early as possible. According to (20) and (21), conditions on choosing modern care (where to seek) and the timing of seeking care (when to seek) are the common assumptions of health seeking behavior. In the current study, these two questions are used as leading assumptions (as reduced to core composite values) to determine the expected variation on the health seeking behavior of the insured and non-insured households.

The self-reported responses on health seeking behavior of insured households indicating that despite downsides in the implementation, the introduction of CBHI as health package increased and enhanced the health seeking behavior of the insured households as compared to the non-insured households. This is indicated by the two-sample t-test with equal variance for both when and where to seek care core values. This is also supported with the average mean score of the two variables. In other words, the descriptive statistics suggest that members of the scheme use hospitalization services more often than non-members do. Other factors having an influence on the use of hospitalization services seem to less significant other than becoming a member on the scheme.

Supporting this, (22) show that the analysis of the impact of community based health insurance on access to health care and health seeking behavior has shown that members frequently visit the hospital more often than non-members and pay less for every visit. The results seem to confirm the current finding of this research that community based health insurance through pre-payment and risk-pooling reduce financial barriers to seek health care and increase health seeking behavior as it is demonstrated by higher utilization and frequent visit with lower out-of-pocket payment from the insured members. Other studies of (4, p.284) revealed that participation in insurance schemes and local organizations is not cost-free but requires a minimum of income which the most disadvantaged people often do not at their disposal and the CBHI practice can be considered as means of empowerment to the poor.

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Supporting to the above findings, (23) indicates that CBHI is directly targeting at benefiting the minority and poor whom they could face difficulty to afford health related expenditures. Hence insured households with better income are discouraged from visiting other health care facility options other than the contracted health centers in the scheme, it can reduce health seeking behavior. Besides, the risk pooling system is manly benefiting the poor insured households as compared to the rich and/or the middle income insured households. This view is totally contrary to the current finding and it could be either because there is difference in research designs or the study where the place and the time conducted.

The very fact that HSB is patterned is suggestive of the role of social influence or sociocultural factors in determining or influencing decision on where and when to seek care. Many studies (24) coined cultural, personal and institutional factors are repeatedly mentioned as determinant of health seeking behavior on community based health schemes. Although prepayment schemes are being hailed internationally as part of a solution to health care financing problems in low-income countries and aimed at increase the health care utilizations, literature has raised problems that affect the success of such schemes. As the work of(25) indicates, community based schemes are usually susceptible for moral hazard (ineffective resource utilization), poor service quality provision, and lack of community participation(dropouts of members) are commonly identified as determinant factors for health seeking behavior in community based health schemes.

In addition, problems associated with the locally contracted health care provider (man power, skill and capacity of staffs, access to and shortage of medication, commitment of staff) are also identified as factors that deter the success of the scheme and health seeking behavior of members. The current study is concurrent with the findings of (26) in such a way that the mentioned variables are identified as major influencing factors for the scheme. The multiple regression indicates *(5, 40) = 4.01, F = 0.7648, P<0.05),* problems related with contracted health center, misuse of resources like medication (moral hazard), lack of community participation in the scheme, service quality provision of the scheme, and poor skill and capacity of the staffs are mentioned as main deterring factors of the HSB and success of the scheme.

Other study by (16, p.9) shown traditional HSB theories (for example, the health belief model or notions of 'locus of control') essentially base the determinants of health seeking behavior within the individual or the household. However, HSB actually extends beyond personal and household factors, to include community and health system factors. In their further analysis, (16, p.11) confirmed that the figurative model of determinant factors of health seeking behavior (fig. 2) has strong connection with the current finding of this study.

This has direct connection with this study as the above identified determinant factors of HSB of insured households and effectiveness of the scheme are generally categorized at individual/household, socio-cultural and system/institution level factors. Similarly, Wiesmann and Jutting (cited in, 26) show that given the very nature of community based health insurance schemes geared towards risk pooling and reducing out of pocket payment, it can be susceptible for moral hazard and adverse selection of members. The aforementioned variables have a direct impact on the health seeking behavior of the insured households in particular and the sustainability of the scheme in general. In the current study, moral hazard and poor utilization of scheme resources are identified as negatively impacting the health seeking behavior of the insured households and effectiveness of the scheme.

Conclusion

Limitations

Given the strong sides of the article, there are also inevitable limitations need to be acknowledged. First, this study relied on self-report data of health seeking behavior, which might be open to socially desirable responses. However, research studies indicate that it is often impossible to evaluate health seeking behavior under other conditions other than self-reports about health care access and utilization of beneficiaries. Besides, to minimize the methodological concern I tried to triangulate the data through various data collection tools however, since the study was done with few number of households it may not suit for population generalization but possible for theoretical generalization. The main intent of theoretical generalization is to magnify the lived experience of participants conceptually than issue of representativeness.

The unreserved effort undertaking by the government to improve the public health reform and health seeing behavior of the rural people is supported by the strong response of the community. High out of pocket payment especially for pharmaceuticals and access to health care services in past times is some of the conditions which make insurance arrangement such as CBHI acceptable by the community in which it enables them to share risk in the form of risk pooling. The study tried to show how introduction of CBHI scheme increase the health seeking behavior of the insured households compared to the non-insured households. This is evident with the significant variation rated responses towards the leading assumption of where and when to seek care for both the insured and non-insured households. Despite the recorded improvement in the health seeking behavior of the insured households, individual/household, socio-cultural and system related factors are identified as determinant factors of the health seeking behavior in the scheme.

Practical implications

- ***Resource and community mobilization*:** Mobilization of additional resources for the effectiveness of the scheme is one of the main objectives of setting up CBHI. Mobilizing resources and making the scheme sustainable needs strong community participation and mobilization works at all levels and hence dropout of members is considered as risk on the sustainability of the scheme.
- ***Supervision and monitoring***: Improper resource utilization (moral hazard, poor utilization of prescribed medicines), and seeking untimed referral service are major problems in the scheme. The coordinators and the contracted health centers should pay attention to these critical issues to protect the financial stability of the scheme.
- ***Further research:*** The scheme gives promising green lights in increasing the health seeking behavior of the insured households. However, this research is done with limited number of households which has limited room for generalization. So, further research needs to be conducted to bridge this gap. Despite the fact that this research applies statistical measures, studying such issues using advanced techniques

like logistic regression and Eta-square (η2) that gives room to analyze the effect of interrelated variables is worth to consider.

List of abbreviations

CBHI- community based health insurance

FMoH- federal ministry of health

GTPs- growth and transformation plan

HC-health center

HSB-health seeking behavior

MDGs- millennium development goals

SHI- social health insurance

SNNP- south nation, nationalities and people

WHO- world health organization

CI- confidence interval

Competing interests

The author has no any completing interest

Author contribution

The sole author of this paper is entirely responsible for the work.

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Annex:

Figures

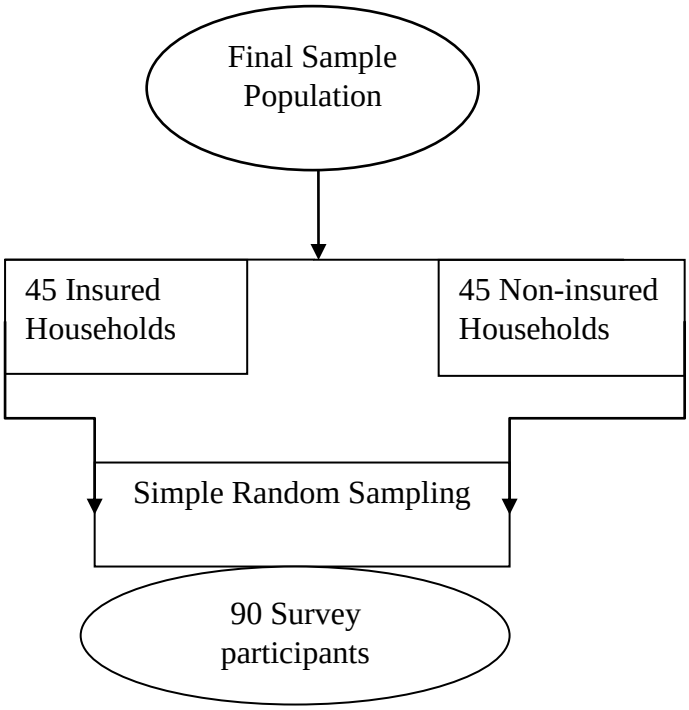

Figure 1. *Sampling procedure of the study participants in simple random sampling*
Source: Own Design

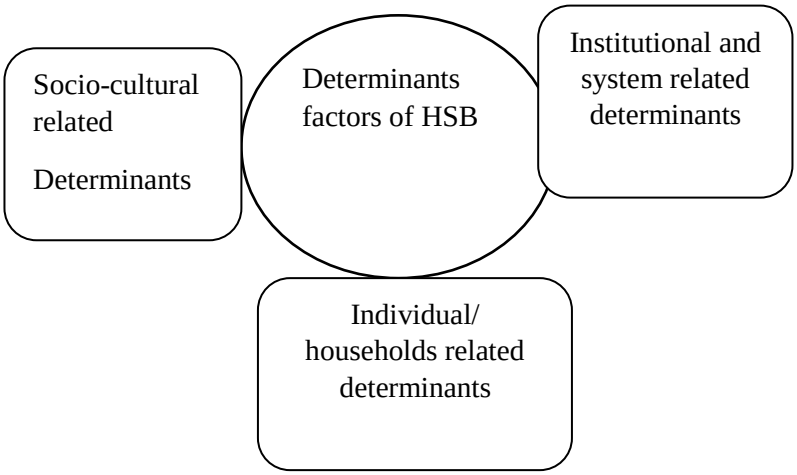

Figure 2. *Multidimensional determinants of health care-seeking behaviors*
Source: Grundy and Annear (2010)

Table

Table 7. *Measures of perceived multidimensional health seeking behavior determinant correlate factors*

Dimensional HSB determinant Factors		Mean n= 45	SD	r. MDF/HSB
Institution/ System factors	Q1. In my view, health care providers at HCs are competent and are trained well	1.1	.0244	-0.671
	Q2. In my belief, physicians at HCs provide enough care and time to patients	4.3	.0888	0.621
	Q3. I believed provision of health education in the center is enough	3.8	.0844	0.598
	Q4. In my opinion, the Relationship between service provider and patients can affect to seek care	0.2	.0044	0.001*
Individual/household factors	Q5. I have seen some members of the scheme with bad utilization and abuse the scheme resource	4.5	.1011	0.697
	Q6. In my view, members of the scheme are visiting contracted health centers even for minor illness	4.7	.1044	0.701**
	Q7. I my view, the community participation in the scheme is low and will affect the HSB members in the scheme	4.6	.1022	0.699
Socio-cultural Factors	Q8. In my opinion resource mobilization in the scheme can affect the success of the scheme	4.7	.1011	0.701**
	Q9. I have seen bad resource utilization in the scheme	4.4	.0977	0.632
	Q10. Selection criteria of the POP in the scheme is unfair	0.3	.0066	0.004*

Note. ** Distinguish strong correlation, * distinguish low correlation