Utilization of Community Based Health Insurance Scheme among the Vulnerable: An Urban City Experience in Nigeria

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ABSTRACT

Background: Universal health coverage is based on the declaration that health is a fundamental human right with equity being paramount. The National Health Insurance Scheme (NHIS) was set up by the Nigerian government to enable every citizen access basic health care as part of universal health coverage. The community based health insurance scheme (CBHIS) as part of the NHIS was at the same time also set up to take care of the informal sector. This is meant to ensure that not just a particular group has access to health care but also available to all individuals within different groups by whatever classification that is used. **Objective:** We sought to assess the utilization of CBHIS among a group of low-income earners (petty traders) in urban city of Nnewi in South Eastern Nigeria. **Methodology:** This is a cross-sectional descriptive study of 400 petty traders using multi-stage sampling technique. Data was collected using pretested, semi-structured interviewer administered questionnaire. Statistical Analysis was done using SPSS V25. Ethical approval was obtained from the health research and ethics committee of Nnamdi Azikiwe University Teaching Hospital, Nnewi. **Result:** Majority (62.5%) of the petty traders were females with 26% of them aged between 36 and 45 years. While 56.5% of the people were aware of the existence of CBHIS in their community, only 27.5% utilized it. Major factors preventing utilization were feeling of loss of money if no sickness was recorded, lack of trust in the insurance scheme, poor understanding of the scheme structure and difficulty in locating service providers. **Conclusion:** Access to basic healthcare services is essential for every individual. Families need to be protected from the financial hardship of huge medical bills. Although there is a high level of acceptance of CBHIS, utilization still remains very low. The poor knowledge of the availability of the scheme, operational system of the scheme and lack of funds has contributed to poor enrollment among the vulnerable.

Keywords: Health Insurance, Community, Vulnerable, Universal Health Coverage, Access,

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INTRODUCTION

Basic medical healthcare is the right of every citizen. Over the years, every government has made most individuals have access to basic medical health care[1]. The United Nations as a result has made effort to improve health care system in the world by making reforms which will enable consumers pay for healthcare services[2]. Healthcare financing plays a critical role in strengthening any nation's health system and as such necessitates implementation of sustainable health financing structures if universal health coverage is to be achieved[3].

However, it became obvious that availability of healthcare to all by government alone cannot be possible without the participation of the informal sector. This led to the emergence of NHIS in Nigeria in 2005. It was a corporate body established under the NHIA Act 2022 (which replaced the NHIS Act of 1999) by the federal government of Nigeria to improve access to quality and affordable healthcare for all Nigerians[5]. This NHIS however was centered on the formal sector which included the government and organized private formal sector workers[4,6,7]. The informal sector which included the petty traders were left out behind thereby still making access to healthcare services difficult for these group of people.

A health insurance scheme is a system in which periodic contributions are made by individuals (or on their behalf) to purchasing institutions responsible for paying for covered services from providers on behalf of the members of the scheme. This is to reduce out of pocket payment for all services as payment decreases equitable access to healthcare particularly among the low-income groups[4,5]. It was designed to operate at three levels to have maximal impact at the national, state and community levels[8]. The community based health insurance (CBHI) model was officially included within the NHIS in Nigeria[8]. The CBHIS was designed to ensure that members have sufficient funds to access healthcare when needed. Contributions are usually accumulated and managed such that the risk of payment for health services is spread across all members[9]. While WHO had viewed medical fees as major obstacle to healthcare utilization, and opined that the only way to reduce reliance on direct payment is for government to encourage the prepayment pooling approach, it seems the CBHIS in Nigeria has not been effective at the grassroots.

Many forms of CBHIS exist but the structure rests on the model by the federal government for the informal sector. The federal government of Nigeria had created the NHIS with a formal enabling of private sector participation by developing 3 main programs under it: 2 informal and one formal. The formal sector was easier as it covered public employees as well as the organized private sector. The two core informal programs were the urban Self-Employed Social Health Insurance Programme (USSHIP) and the Rural Community Social Health Insurance Programme (RCSHIP) [6-10] which are essentially non-profit schemes according to the CBHIS model. The USSHIP was to be made up by members who contributed a monthly flat-rate amount of money with amount being dependent on the type of health package chosen. Anambra State Government had established Anambra State Health Insurance Scheme (ASHIS) in 2016 to address existing health inequities and high out of pocket expenditures for individuals living in the state. However, it became operational in September 2018. The scheme had an equity fund established for the vulnerable persons and consisted mainly of contribution of an annual premium of N12,000 (USD12) per person for individuals who are not in a formal employment. It also involves co-payment of only 10% of the cost of medications prescribed for an enrollee whether as an out-patient or as in-patient services at the point of care. The scheme is being managed by the Anambra State Health Insurance Agency (ASHIA).

However, studies have shown a lot of families are unable to settle their medical bills or even seek medical care promptly due to unavailability of

sufficient funds earmarked for healthcare services.[11-17] Out of pocket payment (OOP) has been estimated to account for about 69% of all healthcare expenditure in Nigeria[18, 19]. This results in inability of low-income earners to access healthcare. The resultant effect is inequity as quality healthcare becomes available only to those who can afford it. The inability to access proper medical care due to non-payment of medical bills increases morbidity and mortality. This is even worse for chronic diseases which constitute a significant number of the public health diseases. The poor financial capacity of this category of individuals to pay for essential health services results in inequitable access to health care. The resultant difficulty in accessing the required healthcare services results in loss of man hours, decreased income, poverty, poor health outcomes as well as increased mortality.

Thus, there is a growing need to correct the persistent poor coverage at the grassroot by reviewing the design of the CBHIS as well as the implementation strategies if universal health coverage will be achieved in the community especially among the vulnerable groups.

METHODOLOGY

Study Site:

This study was conducted among petty traders in the various markets/roadsides in Nnewi North local government area (LGA.) of Anambra State in South Eastern Nigeria. Nnewi town makes up the Nnewi North L.G.A which is one of the 21 L.G.As in Anambra State. The town is largely an industrial and a commercial city with significant agricultural activities. Nnewi town is a large city with four big communities. The town has a central market while the different communities have many major markets within them.

Study Design:

A cross-sectional study design was used.

Study population:

This consists of all petty traders in Nnewi North LGA. Petty trader in this study was used to refer to anyone who was engaged in small quantities of buying and selling in any open space without a shop.

Inclusion Criteria:

All petty traders in Nnewi North LGA who voluntarily gave their consent to participate in the study.

Exclusion Criteria:

All petty traders who had been in business for less than a year.

Sample size determination:

The sample size for this study was obtained using Cochrane's formula and was estimated to be 381[20,21]. Calculating for attrition rate of 10% finally yielded an estimated sample size of 420.

Sampling Technique

A multistage sampling technique was used. In the first stage, a market was randomly selected from the markets in the different communities making up the town. The second stage involved simple random sampling to select the required number of lines from each of the four markets. The third stage involved the use of cluster sampling technique to select clusters from each of the selected market lines. The last stage involved the sampling of consecutive petty traders from the selected clusters.

Data Collection Method

Data was collected using well-adapted, pretested, semi-structured interviewer-administered questionnaire developed by the researchers. Ten research assistants who were undergraduates were recruited and trained to assist with administration of questionnaires. Pretesting of questionnaire was done in the central market of a neighbouring town and necessary adjustments were done thereafter to ensure uniformity and reliability. Utilization in this study was referred to as the ability of individuals to receive healthcare services from the CBHIS whenever

required….'the met health demands'

Statistical Analysis

The data was collated and cleaned up. SPSS V25 was used to analyze the data.

Summary statistics such as percentages, mean and standard deviation were used to describe the key data. Association between the explanatory and outcome variables was done using Chi-Square (or Fischer's Exact test as the case may be). Statistical significance was set at a $P<0.05$.

Ethical Considerations

Approval for the study was obtained from the Ethics and Research Review Committee of Nnamdi Azikiwe University Teaching Hospital, Nnewi. Permission was then obtained from the Local Government Caretaker Committee Chairman to carry out the study in the various markets.

Informed oral consent was obtained from each respondent after debriefing the participants on the nature, aim and benefit of the research.

RESULTS

The mean age of the participants was 44.4 ± 16.2. The modal age group is ≥55years followed closely by the 36-45 years group. Two hundred and fifty (62.8%) are females. More than half of the respondents had secondary school education (70.5%). About two hundred and ten (52.5%) of the respondents earned less than fifty thousand naira (≈ USD 70) while only 4.5% earned more than N100,000 ($140). The petty traders that had a family size less than five were one hundred and eighty six (46.5%). Of the two hundred and ninety three (73.2%) that had heard about health insurance, one hundred and fifteen (25.1%) did not know of any type of health insurance scheme. About one hundred and sixty eight (36.6%) of the respondents had heard about NHIS whereas only one hundred and thirty five (29.4%) had heard about CBHIS. One hundred and forty three (35%) of these respondents wanted the NHIS while 34.2% wanted CHIS. One hundred and twelve (27.4%) did not want any form of health insurance.

Table 1: Socioeconomic variables of the petty traders

Variables	Frequency	Percentage (%)
Age		
=15yrs	2	0.5
16-25yrs	35	8.75
26-35yrs	58	14.5
36-45yrs	104	26.0
46-55yrs	96	24.0
=55yrs	105	26.3
Mean ± STD	44.4±36.2	
Sex		
Female	250	62.5
Male	150	37.5
Religion		
None	4	1.0
Christianity	382	95.5
Islam	10	2.5
Traditional	1	0.3
Others	3	0.8
Marital Status		
Single	79	19.7
Married	260	65.0
Divorced	13	3.3
Separated	48	12
Educational Status		
None	28	7.0
Informal	4	1.0
Primary	86	21.5
Secondary	205	51.3
Tertiary	77	19.2
Family Size		
Less than 5	186	46.5
5	88	22.0
Greater than 5	126	31.5
Estimate of monthly income		
<50,000 ($100)	210	52.5
50,000-100,000 ($100-$200)	172	43.0
>100,000 ($200)	18	4.5

1 USD….N500

Table 2: Knowledge of CBHIS among petty traders

Variables	Yes (%)	No (%)
Have you heard about health insurance?	293 (73.2)	107 (26.8)
Have you heard of community health insurance scheme? *(n=400)*	226 (56.5)	174 (43.5)
Community health insurance is pooling of funds to access health service*(n=400)*	320 (80.0)	80 (20.0)
What is the role of community health insurance for non-profit*(n=400)*	258 (64.5)	142 (35.5)
What is the role of community health insurance for profit*(n=400)*	225 (56.2)	175 (43.8)
What types of health insurance do you know*		
None	115	25.1
CHIS	135	29.4
NHIS	168	36.6
Private HMO	41	8.9
What types of health insurance do you want*		
None	112	27.4
CHIS	140	34.2
NHIS	143	35.0
Private HMO	14	3.4
Source of Information*		
Community Sensitization	105	26.3
Family member	55	13.8
Friend	51	12.8
Radio	54	13.5
School	13	3.3
T. V	62	15.5
No answer	60	15

*** denote multiple answers**

Table 3: Availability of CBHIS to petty traders

Variables	Yes (%)	No (%)
Do you know of any community health insurance scheme present for petty traders	177 (44.3)	223 (55.8)
Would you want a health insurance scheme to be set up for your category of traders?	370 (92.5)	30 (7.5)
How many health care centers offering community health insurance scheme do you have around you ?		
None	170	42.5
1	140	35
2	72	18
3	17	4.3
4	1	2.5
5	-	-
>5	-	-
What basic services would you want to get from a health insurance scheme if you decide to join*		
Consultation	51	9.0
Drugs	256	45.2
Laboratory investigations	177	31.2
Surgery	78	13.8
Others	5	0.8

Table 4: Acceptance and Utilization of CBHIS among petty traders

Variables	Yes (%)	No (%)
Do you like the community health insurance scheme *(n=400)*	342 (85.5)	58(14.5)
Would you like to be involved in any form of health insurance scheme(*n=400)*	321 (80.2)	79 (19.8)
Do you think you can use the community health insurance scheme(*n=400)*	317 (79.2)	83 (20.8)
Are you registered under any community health insurance scheme (*n=400)*	110 (27.5)	290(72.5)
If yes, how much do you contribute monthly in naira (n=110)		
<500	25	22.7
500-1000	53	48.2
1000-1500	24	21.8
1500-2000	6	5.4
>2000	2	2.0
How much would you like to contribute if one were to be set up?(n=400)		
<500	184	46.0
500-1000	165	41.3
1000-1500	42	10.5
1500-2000	4	1
>2000	5	1.2
How many times have you used the insurance scheme (n=400)		
None	252	63.0
1	53	13.2
2	39	9.7
3	16	4.0
4	13	3.3
5	15	3.8
>5	12	3.0
Where do you go to use it*		
In the market	38	23.7
Outside the market	80	50.0
Others	42	26.3
What services do the community health insurance scheme cover *		
Outpatient	205	80.4
Antenatal clinic	63	21.6
Paediatrics clinic	15	5.1
Surgeries	7	2.4
Others	2	0.7

**** denote multiple answers***

Table 5: Reasons for non-utilization of CBHIS among petty traders

Variables	Yes (%)	No (%)
The contribution is much and you can't afford it*(n=400)*	152 (38.0)	248 (62)
The location of the health center is far away from you *(n=400)*	140 (35)	260 (65)
Just not interested*(n=400)*	143 (35.8)	257 (64.2)
No trust in the insurance*(n=400)*	190 (47.5)	210 (52.5)
Money is lost if one does not fall sick*(n=400)*	230 (57.5)	170 (42.5)
I do not understand how it works*(n=400)*	153 (38.2)	247 (61.8)
My money will be mismanaged by the organisers*(n=400)*	172 (43.0)	228 (57.0)

Table 6: Association between socioeconomic variables and knowledge and acceptance / utilization of CBHIS among petty traders

Variable	Knowledge of CHIS		Acceptance and	Utilization
	Chi-square Value	p-value	Chi-square Value	p-value
Sex	8.65	0.129	12.34	0.286
Age	12.704	0.241	11.367	0.330
Religion	5.62	0.846	34.17	<0.001*
Marital Status	4.58	0.599	7.84	0.250
Educational Status	29.19	<0.001*	15.46	0.051
Family Size	8.73	0.068	4.52	0.341
Monthly income	4.35	0.361	11.54	0.021*

P< 0.005

DISCUSSION

CHBIS is a type of micro health insurance targeted at low-income earners. Major feature is the community involvement in its set up and management whereby members pool funds to enable them offset healthcare expenditures[22].

In this study, majority of the petty traders (73.2%) had heard about health insurance while 56.5% had heard about CBHIS. This is relatively lower than the 90.7% observed by Kapologwe et al in Tanzania and the 84.3% noted by Ogben et al in Abuja but much higher than the 37.8% obtained by Babatunde et al[15,23,24]. Awareness in this study was mainly through community sensitization and friendly discussions followed by news from TV and radio as well from family members. This is similar to a study in the North Central Zone of Nigeria, where the mass media was the major source (53.3%) of information but contrary to a similar study in Tanzania which revealed that the main source of awareness was from healthcare workers followed by radio announcements and community sensitization[23,25]. In a study in Osun state of South West Nigeria, the mass media was the main source of information (with radio and television being 31.2% and 28.1% respectively[26]. The mass media being a major source of information was also noted in Cameroon[27].

Since there is a positive association between knowledge and uptake of the scheme[25,26], it becomes important that both the community and the media get actively involved in information dissemination on CBHIS. Greater awareness as well as better public enlightenment program will lead to higher level of uptake.

On acceptance of CBHIS, the study discovered that while 85.5% of the respondents accepted CBHIS, only 80.2% of them wanted to be involved in community-based health insurance. This is similar to the study by Aderigbe Adedeji et al in which there was a comparable high acceptance rate of the CBHIS[28]. An acceptance rate of 62.5% was recorded in Lagos by Yusuf et al despite the fact that only 9% of the respondents in the study had a good knowledge about CBHIS[14]. This is however contrary to the study by Babatunde et al in which the acceptance rate was only 13.1%[15].

In this study, utilization of the CBHIS was found to be 27.5% despite the fact that 80.2% of the respondents had indicated interest to be involved in the CBHIS. This is quite lower than that obtained in Tanzania by Kapologwe et al where 80.3% were enrolled in a CBHISc and 62.8% enrollment in Abuja by Ogbeni et al[23,24]. On the contrary, there were lower utilization rates in some other parts of the country. Yusuf et al in the study in Ifelodun Lagos had recorded 4.5% enrollment whereas Ibukun et al in Olowora Lagos had recorded an enrollment of 53%[14,29].

This brings to the fore one of the critical issues of CBHIS. Why does acceptance of the CBHIS not translate to enrollment/utilization? This is observed in

this study where though 80.2% of the respondents had admitted to being willing to be enrolled on the CBHIS, however only 27.5% were actually enrolled. There is need to make the processes pertaining to registration/enrollment and utilizing required services in these CBHIS as seamless as possible.

In addition, 63% of the respondents had never utilized the CBHIS whereas 37% had used it at one point or the other in their life. Of those that had registered, 13.2% of the respondents had used it only once.
Major service offered in this study by available CBHIS was mainly outpatient services followed by antenatal clinic.

Amongst those who had enrolled with one CBHIS or the other, 48.2% contributed between 500 and 1000 naira monthly while 22.7% contributed less than N500 monthly. While 92.5% of the respondents want CBHIS to be set up for them, only 44.3% of them were aware of any available CBHIS.

The reasons inhibiting the utilization of CBHIS were mainly the feeling of losing money if one doesn't fall sick (57.5%), not having trust in the insurance scheme (47.5%) and fear of money being mismanaged by the organisers (43%) with the least challenge being the distance of the health centre from the respondents (35%). This is similar to the findings by Odeyemi et al in which regressive contribution and lack of trust among others were noted to be the major challenges hindering utilization of CBHIS[6].

Studies have revealed that enrollment to CBHIS are influenced by various factors including awareness level and educational level and wealth index[29,30]. This is similar to the finding in this study where income was significantly associated with acceptance and utilization of CBHIS.
Educational status was significantly associated with knowledge of CBHIS in this study. On the contrary, the factors that were found to be significantly associated with CBHIS among the urban poor in Delhi India were residential area, migration period, possession of ration card, household size and occupation of the head of the household[31,32].

This study has revealed high rate of willingness to participate in CBHIS but low level of enrollment which points to the fact that if made available, affordable and accessible, the CBHIS will go a long way in helping universal health coverage to be achieved among all categories of people. In a study by Amu et al involving four countries: Ghana, Kenya, Nigeria and Tanzania, it was observed that Nigeria had the lowest health insurance coverage while Ghana had the highest[33-35].

This has been partly attributed to the fragmentation of the health insurance scheme in other countries compared to the one harmonized public health insurance scheme in Ghana. This harmonized scheme ensures risk pooling as well as the confidence of potential subscribers to enroll in the scheme. In addition, the scheme is highly pro-poor as all indigents are allowed to enroll without paying the required annual premiums[36-42]. Together with Tanzania and Kenya which recorded low coverage rates too, it has been observed that the fragmented scheme being run in these countries leads to poor resource pooling with subsequent inefficient health insurance schemes.

Our findings also point to religion and income as being significant factors for acceptance and utilization of CBHIS. This could point to need for increased sensitization in the various religious bodies within the communities. There is need to scale up dissemination of information on awareness, availability and utilization of CBHIS especially among the vulnerable groups if universal healthcare coverage will be achieved among all categories of people.

CONCLUSION

The health insurance coverage in communities among the vulnerable is still low. There is need for available, acceptable and affordable CBHIS.

Increasing community awareness about the CBHIS is important. Families must be protected from huge out of pocket payments if they are to have equitable access to basic healthcare services. There is need to review policies regulating the formation and operations of the CBHIS to enable it become fully operational and hence more accessible to the vulnerable.

Limitations

It is important to state there are potential limitations despite the relevance of the findings. Being a cross-sectional study, one cannot account for unobserved heterogeneity. There could also be recall bias and deliberate misreporting.

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Author Contributions

FMS conceptualized the study. FMS, ALO and CCI designed the study. ALO prepared the original draft. All authors were involved in the writing and revision of the manuscript. The authors read and approved the final manuscript and agreed to be accountable for all aspects of the work.

Data Availability

Anonymised data and details used in this study will be available from the corresponding author upon necessary request.

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None

Conflict of Interest

The authors declare that this research was conducted in the absence of any financial relationship that could be misconstrued as a potential conflict of interest

Ethical Approval

The study was approved by the institution's Ethics and Research Committee.

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