Community Based Health Insurance Scheme: Knowledge and Perception of Rural Communities in Abuja Nigeria

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Abstract

Background

In 2010, community based health insurance scheme (CBHIS) was launched in the Federal Capital Territory (FCT) of Nigeria. Little is known about the knowledge and perception of the rural dwellers of the FCT about the scheme. This study aimed to evaluate the knowledge and perception of healthcare consumers towards CBHIS in FCT.

Methods

A descriptive cross sectional study of 287 household heads was done. Systematic random sampling was used. Information was collected using a semi-structured, interviewer administered questionnaire. Data was analysed with SPSS version 21.

Results

Male respondents were 175(61%),242(84.3%) were aware of the existence of CBHIS, 126(82%) of enrollee also enrolled their dependents. Annual payment of health insurance premium was preferred by 91(59.9%) of enrolled respondents, 92(60.1%) enrolled in the scheme because they perceived it to be a cheap way to access healthcare. No proper understanding was the reason why 33(28.4%) of those aware of the scheme did not enroll themselves or their dependents. Only 124 (55.1%) were satisfied with the overall services provided to them by their health care provider (HCP).More males 102(81.6%) were satisfied with HCP services. Among respondents with secondary/tertiary education 18(81.8%) were satisfied with their HCP compared to 47(38.2%) of those who had no formal education, p<0.001. 47(85.5%) respondents in the richest wealth quintile were satisfied compared with only 13(52%) in the lowest category, p<0.001.

Conclusion

There is a need to educate the community members on principle of health insurance and improve access to health services under the scheme.

Key words: CBHIS, Health insurance, rural communities, knowledge, perception

Introduction

Healthcare systems in many developing countries have failed to provide its population with quality and affordable health services due to the poor state of public health services [1]. The health sector is also under funded as an average of only 3.52% of the entire budget of the Nigerian government was spent on health between 2000 and 2004 which was below the 5% recommended by the World Health Organization [2, 3]. As a result of the state of health systems, there has been an increase in the cost of healthcare which has further impoverished the poor population who fund their healthcare needs through out of pocket payment [4]. In recent years there has been a trend for many developing countries to move towards a new or expanded role for various forms of health insurance schemes as a form of health care financing in order to reduce

the burden of high cost of out of pocket payment for health care and to attain universal coverage, Nigeria as a country not excluded [5].

The community based health insurance scheme (CBHIS) which is a non-profit health insurance programme for a cohesive group of households/individuals or occupation based groups, formed on the basis of ethics of mutual aid and the collective pooling of health risks in which members take part in its management [6, 7]. The CBHIS is one of the Informal sector health insurance programmes of the National Health Insurance Scheme which was established by Act 35 of the 1999 of the Nigerian constitution. The scheme operates on the principal aim to reduce the high dependency on out-of-pocket (OOP) payments which accounts for more than 65% of all health expenditures in the form of user charges and co-payments, which disproportionately affect the poorest in society and has been recognized as an important tool for making health care affordable among the poorest [8, 9, 10].

Government and communities in Sub-Saharan Africa have been seen to show interest in implementing the CBHIS [11, 12, 13]. This is because CBHIS promises a glimpse of hope to the unending health inequality affecting most especially the rural part of the region, providing a means of achieving universal health coverage and this eagerness has resulted in the spread of CBHI schemes [1, 14,]. Despite increasing support and spread of CBHIS as reported in several studies across Africa [15 -2] enrolment has remained low [22 – 24%] indicating that CBHIS has continued to fail to reach satisfactory levels of participation amongst targeted population, this could be as a result of poor awareness and sensitization to the targeted population and a lack of understanding of their expectation of the scheme [14, 18, 21- 23].

According to WHO, little attention is being paid to understanding consumers' preferences in the implementation of CBHIS across the world and the case is not different as only few studies were found to have recently accessed consumers knowledge and perception on CBHIS in Africa [14, 24-25]. A study in Plateau State, Nigeria showed that 71% had good knowledge of CBHIS through mass media, however, there was no CBHIS scheme in the community and the entire state where this study was carried out [18]. The other study found in Nigeria which evaluated the benefit healthcare consumers are willing to pay for, if CBHIS was eventually introduced excluded the communities in which CBHIS has been piloted [25]. This study aimed to evaluate the knowledge of healthcare consumers, access their perception and determine their level of satisfaction towards CBHIS in a community where the scheme has been implemented.

Methods

Study setting

This study was conducted from July to September 2014 in Gwagwalada area council which is one of the six Local Government Area Councils of the Federal Capital Territory of Nigeria. Gwagwalada area council has an area of 1,043 km² and 104 communities which has an estimated 50,867 households and population of 201,496. Majority of its working population are in the informal sector dwelling in rural communities and involve in Fadama farming which is the main economic activity in the area [26].

Study design

A descriptive cross sectional study design was used in this study. This study design was chosen as the most suitable considering the research questions and budget involved.

Sample size

Sample size calculation used based on Williams Cochran's method for cross sectional survey [27]. In order to achieve a confidence interval of 95% and a power of 80% and to be able to detect a margin of error of 5%, the study sample size was calculated based on the estimated

prevalence rate of knowledge of CBHI of 25% [28]. Assuming a non-response rate of 5%, the required minimum sample was 301 households.

Sampling methodology

To identify the individual households to participate in this survey, the FCT demographic and household survey listing of households was used as a sampling frame. The first household was identified using simple random sampling, after which a systematic random sampling was applied to identify the subsequent household until the required sample was obtained. Questionnaires were administered to household heads or their spouses, and in their absence, another senior household member. Eligibility of the individual household included in this survey was individuals aged 18 years or more, consenting and willing to respond to an interview.

Data collection

Data collection was through face-to-face interviews using a structured pretested questionnaire that contained both structured and open-ended questions administered to household heads selected using simple random sampling.

The first part of the questionnaire was designed to capture data on socio-demographic characteristics. The second part of the questionnaire evaluated respondent's knowledge on CBHIS depending on whether or not the respondent had heard of a CBHIS and classified as "aware" or "unaware", "enrolled" or "not enrolled" and whether or not they have benefitted from the scheme in terms of service delivery. Only the knowledge of those who were aware of CBHIS will be evaluated. The third part of the questionnaire evaluated community perception of CBHIS in terms of willingness to be involved in the scheme, satisfaction with service delivery, and payment of premium. An interpreter was also used to translate response from their local gbagyi language to English language

Data Analysis

Data collected were entered into a computer and analyzed using SPSS version 21.0 [29]. Descriptive statistics was employed to describe the socio-demographic characteristics of respondents. Principal Component Analysis (PCA) was used to categorize households into wealth quintiles and inputs into the PCA were gotten from information on household items like ownership of house and other assets like stove, fan, refrigerator, radio, television, air conditioner, piped water in the household, generator, bicycle, motorcycle, upholstered chair, washing machine and sewing machine. Quintiles were used to calculate distribution cut points and each household head was assigned the wealth index score of his/her household. The quintiles were Q1= Poorest, Q2= Second, Q3 = Middle, Q4 = Fourth, Q5 = Richest [30]. Level of awareness was summarized using mean and standard deviation while satisfaction level was summarized using mean score of respondent's satisfaction score of different healthcare services on likert scale of 1 to 5. Satisfaction score below the mean was classified as "not satisfied" and score above the mean classified as "satisfied". Association between socio-demographic characteristics and satisfaction level was explored with the Chi-square test and p-value less than 0.05 was considered statistically significant.

Ethical considerations

Ethical approval was obtained from the FCT CBHIS Secretariat and Head of Department for health in Gwagwalada area council.

Result

A total of 301 questionnaires were distributed out of which 287 were properly filled and returned, this amounts to a response rate of 95.4 % and equals the originally calculated required sample size and so the data presented is based on the response of 287 respondents.

The socio-demographic characteristics of the 287 respondents is found in Table 1 with 115(40.1%) in age group 30-39 years and the least 35(12.2%) in age group 20-29 years. There were 175(61%) male respondents. Islam was practiced by 143(49.8%). Gbagyi ethnic group were 151(52.6%). The married respondents were 236(82.2%) of the population. The mean household size was 6.5 and ranged from 4 to 21 with 190(66%) having household size of 6 and above. Only 22(7.7%) had secondary/tertiary education while 173(60.35) never had formal education. Farming is the predominant occupation of the study population, posing as source of income to 140(48.8%), 60(20.9%) of the respondents didn't have any source of income and only 13(4.5%) have their income from livestock rearing. About 175(63.4%) earn below the country's minimum wage of 18,000 naira. Respondents were categorized into 5 using wealth quintile.

Table 1: Socio-demographic characteristics of the study population (N = 287)

Socio-demographic characteristics	Frequency	Percentage
Age group in years		
20-29	35	12.2
30-39	115	40.1
40-49	87	30.3
50+	50	17.4
Sex		
Male	175	61.0
Female	112	39.0
Religion		
Christianity	121	42.2
Islam	143	49.8
Traditional	23	8.0
Ethnic group		
Igbo	6	2.1
Hausa	94	32.8
Fulani	36	12.5
Gbagi	151	52.6
Marital Status		
Single	10	3.5
Married	236	82.2
Divorced	14	4.9
Widowed	27	9.4
Level of Education Completed		
No formal Education	173	60.3
Primary	92	32.1
Secondary/Tertiary	22	7.7
Household size		
≤5	97	33.8
≥6	190	66.2
Main source of income		
Farming	140	48.8
Livestock	13	4.5

Paid employment	32	11.1
Small business	42	14.6
No source of income	60	20.9
Monthly Income in naira(n=276)		
<18000	175	63.4
≥18,000 and above	101	36.6
Wealth index		
Poorest	58	20.2
Second quintile	58	20.2
Middle quintile	56	19.5
Forth quintile	58	20.2
Richest	57	19.9

Table 2 shows the respondent's knowledge and awareness of CBHIS. In all, 242(84.3%) were aware of the existence of CBHIS. Among the respondents who were aware of CBHIS, 115(47.5%) was through community sensitization, 13(5.4%) and 68(28.1%) were through radio and close relatives respectively. Table 2 also shows that 186 (76.9%) of the respondent have the knowledge that only the enrolled individual pay for the CBHIS and the premium paid is enough to provide healthcare for a one year period. In all, 54(22.3%) have the knowledge that the enrolled individual pays their premium which is only a part of the total cost needed to provide care while the government pay the rest in form of subsidy.

**Table 2:** Knowledge and awareness of CBHIS

Variable	Frequency	Percentage
Awareness of CBHIS (n= 287)		
Yes	242	84.3
No	45	15.7
Awareness medium (n=242)		
Radio	13	5.4
Health center	46	19.0
Close relative	68	28.1
Community sensitization programs	115	47.5
Knowledge of who pays for CBHIS (n= 242)		
Enrolled family	186	76.9
Government	2	0.8
Government and enrolled individual	54	22.3

Enrollment status of sample population is presented in **Table 3**. The total number of respondent that were aware of the scheme was 242 out of which 152(62.8%) enrolled into the scheme. 126(82%) of those enrolled also enrolled their dependents while 26(17.1%) did not enroll their dependents. Only 54(35.5%) have enrolled to the scheme for more than one year. Annual payment of health insurance premium was preferred by 91(59.9%) of enrolled respondents while only 138.6% preferred to pay quarterly. A greater number of the respondents were new to the scheme as 74(48.4%) were not due for renewal of their healthcare premium. However, 51(33.3%) had renewed their premium and only 28(18.3%) who were due for renewal had not yet renewed their premium. Willingness to renew healthcare premium was shown by 129(84.3%) of the enrolled population while 20(13.1%) were not sure if they will renew or not and 4(2.6%) were not willing to renew.

Table 3: Enrolment into CBHIS

Enrolment status	Frequency	Percentage
Enrollment in CBHIS (n=242)		
Yes	152	62.8
No	90	37.2
Dependants enrollment CBHIS (n=152)		
Yes	126	82.9
No	26	17.1
Period of membership		
< 6 months	8	5.3
6 - 12 months	90	59.2
13 - 24 months	54	35.5
Preferred mode of payment		
Monthly	27	17.8
Quarterly	13	8.6
Bi-annually	21	13.8
Annually	91	59.9
Renewal of premium		
Yes	51	33.3
No	28	18.3
Not due for renewal	74	48.4
Willingness to renew premium		
Yes	129	84.3
No	4	2.6
Undecided	20	13.1

Figure 4.1 is a bar chart showing respondent's reason for enrolling into CBHIS. More than half of the respondents 92(60.1%) enrolled in the scheme because they perceived it to be a cheap way to access healthcare, 49(32%) enrolled because they felt the scheme will help them prevent out of pocket spending for healthcare while 7(4.6%) and 5(3.3%) enrolled to stay healthy and get timely treatment respectively.
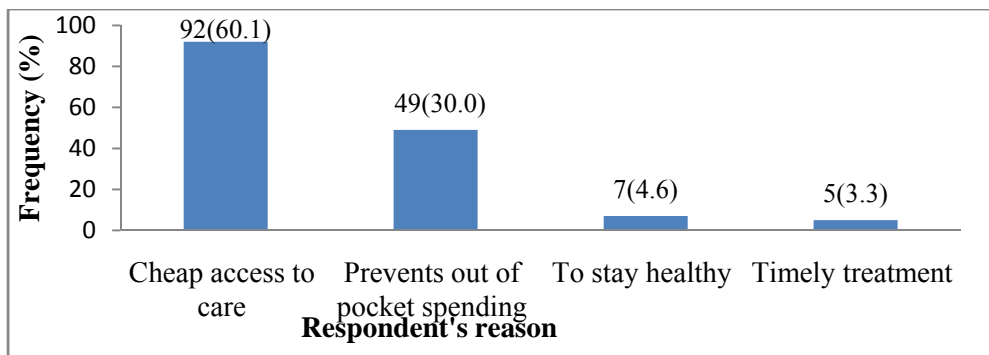
Figure 4.1: Reason for enrolling in CBHIS
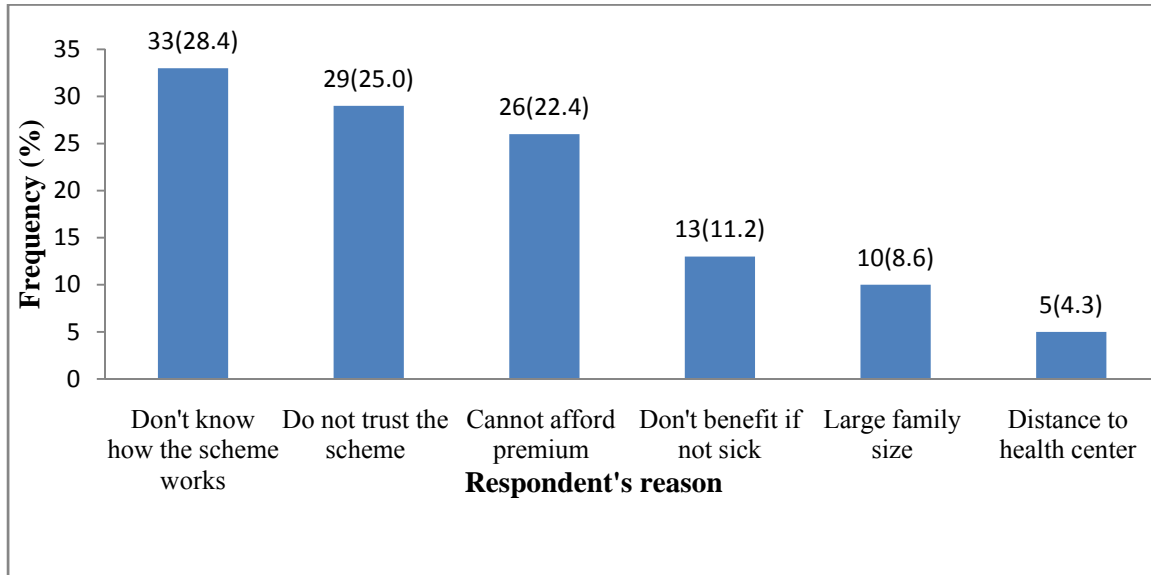
Figure 2: Reason for not enrolling in CBHIS

Figure 2 is showing the reasons why 116 of the respondents who were aware of CBHI did not enroll. As seen in figure 2, 33(28.4%) of those aware of the scheme did not enroll themselves or their dependents because they had no proper understanding on how the scheme works, 29(25%) did not trust the scheme. Those who couldn't afford the premium needed to be paid for them to enroll into the scheme were 26(22.4%). The reason why 13 (11.2%) refused to enroll was because they don't see how they benefit when do not fall sick at the end of their cover period. Only 10(8.6%) could not register because they had large family size and 5(4.3%) because of distance to the healthcare center.

Table 4: Experience with healthcare provider (HCP)

HCP experience	Frequency	Percentage
Healthcare provider (n=242)		
Community PHC	201	83.1
Private Clinic	18	7.4
Traditional healer	8	3.3
Home	15	6.2
Use of PHC services		
Yes	193	79.8
No	49	20.2
Frequency of PHC services per year (n=193)		
< 5	31	16.1
5 - 10	93	48.2
10 – 20	69	35.8
Last visit to PHC		
< 2 months ago	40	20.7
2 - 5 months ago	68	35.2
5 - 10 months ago	65	33.7
10 - 20 months ago	20	10.3
Referral to another healthcare provider (n=211)		
Yes	77	36.5

No	134	63.5
Referral facility (n=77)		
State Hospital	31	40.3
General Hospital	46	59.7

   Data on respondent's experience with HCP is presented in **table 4** and shows that 201(83.1%) receive healthcare from the community primary healthcare center (PHC) and only 8(3.3%) use the services of the traditional healer. Out of 201 respondents that receive healthcare from the PHC, 193(79.8%) had used the services of the PHC since the inception of the scheme. Likewise, 93(48.2%) of the respondents used the services of the PHC 5-10 times and 31(16.1%) used it less than 5 year a times a year. In all, 68(35.2%) last visited the PHC about 2-5 months ago with most recent visit of less than 2 months ago by 40(20.7%) respondents. Only 77(36.5%) of respondents have been referred to another healthcare provider out of which 46(59.7%) were referred to the General hospital.
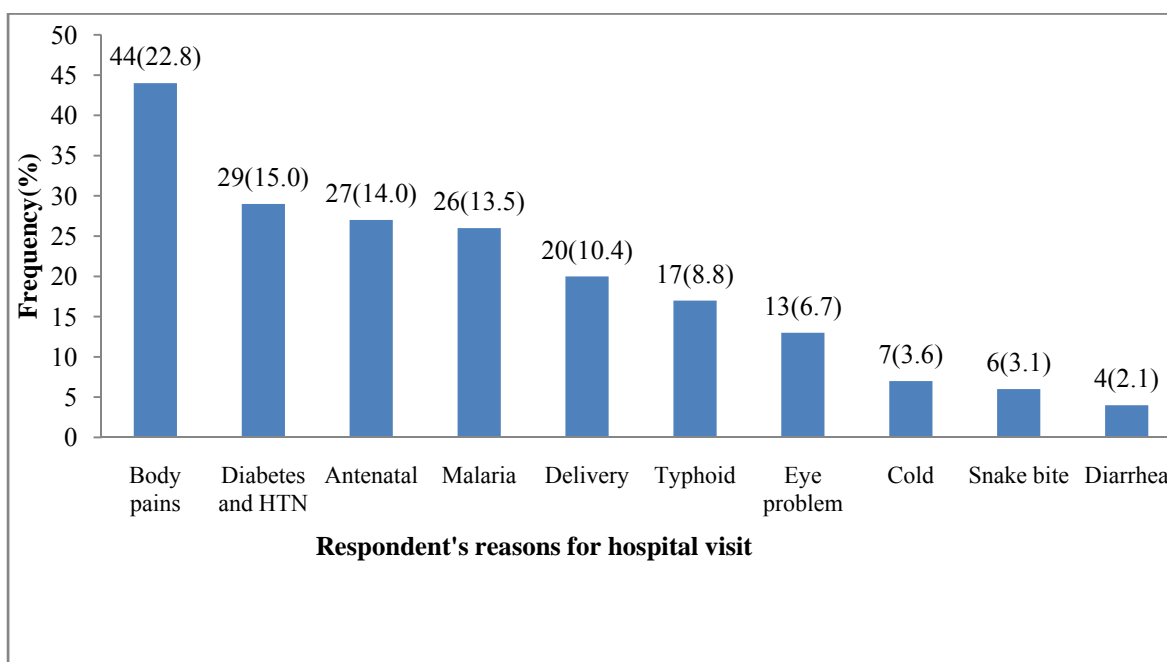
Figure 3: Respondent's reason for last visit to PHC

   Figure 3 is a bar chart displaying respondent's reason for their last visit to PHC. Body pain was the reason why 44(22.8%) respondents visited the PHC. Diabetes & HTN was recorded as they reason why 29(15.0%) visited the PHC. Other reasons were antenatal care 27(14.0%) and malaria 26(13.5). Only 4(2.1%) visited the PHC because of diarrhea

Table 5: Respondent's satisfaction with healthcare provider (HCP) services (n=225)

Satisfaction with HCP services	Frequency	Percentage
Drugs Provision		
Not satisfied	99	44.0
Satisfied	126	56.0
Hospital Services		
Not satisfied	104	46.2
Satisfied	121	53.8
Waiting time		

Not satisfied	94	41.8
Satisfied	131	58.2
Overall Satisfaction		
Not satisfied	101	44.9
Satisfied	124	55.1

Table 5 shows respondent's level of satisfaction with healthcare provider (HCP) services, 126(56%) were satisfied with the services that involved drug provision and dispensing. More than half of the respondents 121(53.8%) were satisfied with hospital services and 94(41.8%) respondents were not satisfied with the hospital waiting time. In all, 124(55.1%) were satisfied with the overall services provided to them by their HCP.

Table 6: Bivariate analysis of respondent's socio-demographic characteristics and satisfaction level.

Socio-demographic characteristics	Satisfaction level		Chi square	p-value
	Not satisfied (%)	Satisfied (%)		
Age Group in Years				
20-29	29 (85.3)	5 (14.7)		
30-39	45 (46.9)	51 (53.1)	33.77	<0.001
40-49	18 (32.1)	38 (67.9)		
>50	9 (23.1)	30 (76.9)		
Sex				
Male	23 (18.4)	102 (81.6)	79.77	<0.001
Female	78 (78.0)	22 (22.0)		
Religion				
Christianity	80 (77.7)	23 (22.3)	82.51	<0.001
Islam	21 (17.2)	101 (82.8)		
Ethnic group				
Igbo	4 (66.7)	2 (33.3)		
Hausa	20 (35.1)	37 (64.9)	3.95	0.267
Fulani	12 (44.4)	15 (55.6)		
Gbagyi	65 (48.1)	70 (51.9)		
Marital Status				
Single	6 (60.0)	4 (40.0)		
Married	78 (41.7)	109 (58.3)	6.96	0.073
Divorced	3 (37.5)	5 (62.5)		
Widowed	14 (70.0)	6 (30.0)		
Level of Education Completed				
No formal Education	76 (61.8)	47 (38.2)		
Primary	21 926.30	59 (73.8)	31.78	<0.001
Secondary/Tertiary	4 (18.2)	18 (81.8)		
Household size				
≤5	49 (62.8)	29 (37.2)	15.52	<0.001
≥6	52 (35.4)	95 (64.6)		
Monthly Income in Naira				

≤18000	73 (49.7)	74 (50.3)	6.27	0.012
>18,000	21 (31.3)	46 (68.7)		
Wealth index.				
Poorest	12 (48.0)	13 (52.0)		
Second quintile	44 (89.8)	5 (10.2)		
Middle quintile	17 (41.5)	24 (58.5)	37.77	<0.001
Fourth quintile	20 (36.4)	35 (63.6)		
Richest	8 (14.5)	47 (85.5)		

Among the respondents in age group 30-39 years, 51(53.1%) were satisfied with HCP services while 45(46.9%) were not. Majority of respondents 29(85.3%) in age group 20-29 years were not satisfied with HCP services while only 5(14.7%) were satisfied, p<0.001. There was statistically significant difference between sex and level of satisfaction as more males 102(81.6%) were satisfied with HCP services and 23(18.4%) were not. Respondents that practiced Islam religion and were satisfied with the services of their HCP were 101(82.8%) as compared to only 23(22.3%) of respondents that practiced Christianity, p <0.001. with regards to level of education 18(81.8%) of the respondents with secondary/tertiary education were satisfied compared to 47(38.2%) of those who had no formal education, P<0.001. Households with ≥6 members were more satisfied with 95(64.6%) compared to only 29(37.2%) of households with ≤5 members, p< 0.001. Considering monthly income 46(68.7%) earners of > 18,000.00 were more satisfied with HCP than 74(50.3%) earners of ≤   18,000.00 monthly, this is statistically significant. Similarly, 47(85.5%) respondents in the richest wealth quintile were satisfied compared with only 13(52%) in the lowest category, p<0.001.

Discussion

The objective of this study was to evaluate the knowledge and perception of healthcare consumers in rural communities in Abuja and also to determine their level of satisfaction with health care providers in the community health insurance scheme (CBHIS). The socio-demographic characteristics of the study population revealed that there were more respondents in the age group of 30-39 years. This could be because this age group holds the youth of the community who are more enlightened and actively involved in community development programs. Unlike the study carried out in rural East and West Africa [12, 18] which recorded more female household heads in the study population. There were more male household heads in this study because in the Northern Nigerian context, the household heads are mostly males and it has been recorded that only 1 in 5 households are headed by female in Nigeria [33]. About half of the study population practiced Islam religion and were of Gbagyi ethnic group as expected in rural setting of Abuja, Nigeria. As reported in some studies on CBHIS in Africa [7, 12, 17 - 18] most of the respondents in this study were married and had little or no formal education. Household size of more than 6 was seen in about 66% of respondent because the study was carried out in a rural area which records more household size than the urban area [33].

Awareness level of CBHIS in the communities under this study was high and can be attributed to the constant sensitization and awareness campaigns organized in the communities by the FCT Health and Human Services Secretariat combined with the brilliant collaboration with the FCT-MDGs office who has initiated various health and agricultural programs in the communities before the introduction of CBHIS. This proves that the role of awareness and sensitization in CBHIS cannot be over emphasized. It gives an advantage to approach the rural community with a face they trust and are familiar with.

More than half of the household heads had enrolled themselves and their dependants. These figures are higher than the national health insurance scheme coverage level in Nigeria which is

estimated as 5% of the population [34]. The study population saw the need to enroll in CBHIS as it provided cheap access to healthcare and prevents out of pocket spending but there was lack of knowledge of how CBHIS is financed in the FCT as 80% of respondents felt that the money they pay fully provides the health services they receive from the CBHIS and were not aware that the government pays a huge part of the cost of care in form of subsidy, without which the scheme will not be sustainable. Similarly, some of the respondents were not enrolled in the scheme because of lack of proper understanding of how the CBHIS works and were of the opinion that the enrolled individual or family be refunded the unutilized premium paid for healthcare at the end of the cover period. This finding is synonymous to results from a study where the study population had inadequate knowledge of financing CBHIS [17].

The price for health insurance was perceived to be high by some of the respondent this is because the study population were poor and 63.4% earn below the country's minimum wage of 18,000 naira from mostly farming coupled with the design of CBHIS that uses the family as a unit of enrollment which makes it difficult for the poor population to register themselves and their dependants. High price for health insurance being a barrier for rural communities to enroll into CBHIS was also reported in qualitative studies from Senegal, Ugandaand Kenya [12, 15, 22]. Another study went ahead to suggest possible premium exemption or waivers for the poorest of the community members as an assurance for equitable enrollment into health insurance schemes [7].

The primary healthcare center (PHC) the only public health facility in most rural communities and serves as the first point of healthcare contact to about 83% of respondents of this study when they fall ill but access to this PHC is actually limited as only 48.2% use the services of the PHC 5-10 times a year and just a few had been referred to the only general hospital in the area council. Presence of a healthcare facility in the community where the CBHIS is a critical factor for community members to be involved in the scheme but Gwagwalada area council where this study was conducted has PHC in only 29 out of 104 communities (FCT Baseline data on health services) and as expected, some respondents gave distance to PHC as their reason for not getting involved in CBHIS because they had to travel to a neighboring community to receive healthcare. This shows poor access and inequitable distribution of healthcare facilities and the people in the rural communities are disproportionately affected like in studies from some other African countries [12, 22, 24]. Despite poor access to PHC, more than half of the respondents were satisfied with PHC services. This could be because people in this part of the country are ignorant of what their health rights are coupled with the failing health system and the community members perceived that some form of cheap health care is better than none at all.

Regarding satisfaction level and socio-demographic characteristics, older household heads were more satisfied with PHC services. Reason being that this age group of household heads holds the vulnerable group and they use more of the services of the health center. Household size plays a significant role in respondent's satisfaction as respondents with larger households were more satisfied with PHC services. This is because the health insurance is cheap and has helped reduce the burden of out of pocket payment for their large household when they visit the health center uninsured. Higher income earners and respondents in the richest wealth quintile showed a significant positive level of satisfaction with healthcare services provided to them under the CBHIS. This high satisfaction level could be attributed to their ability to comfortably pay the premium for health insurance and can afford to pay for subsidized drugs outside the benefit package outlined in the CBHIS.

Conclusion

Findings from this study suggest that although there is a high level of awareness of CBHIS among the study population but there is misconception on how the scheme is financed as community members are under the impression that the premium paid provides the healthcare they receive under the scheme and are not aware of the subsidy paid by the government. There exists a lack of understanding of the principle of risk pooling on which health insurance operates by the community who expects a refund for unutilized health premium. The community members perceive the CBHIS as affordable and protect them from out of pocket payment; the reason behind high enrolment. On the other hand, lack of understanding on how the scheme works, lack of trust and inability to pay premium were hindrances to becoming members of CBHIS by some community members.

Recommendation

Increased access to healthcare facility and improved quality of health services particularly in drug availability, infrastructure and hospital personnel will go a long way to sustain the existence of CBHIS. The Nigerian government needs to dedicate more resources to bridge the gap created by lack of health care centers in the community and improve the bad state of the existing ones in order to keep the CBHIS running and achieve universal health coverage. Comprehensive awareness campaign should be carried put using various medium of awareness to reach out to the community members because people are likely to accept a program if only they understand key concepts and how the program actually runs. Other CBHIS programs should emulate the strategy used by the FCT-CBHIS to create awareness and acceptability of the scheme by going into the community through already established programs and people they trust.

The FCT-CBHIS should carry out a proper feasibility study to determine what community members are willing to pay for their healthcare premium and possibly design healthcare premium for different wealth quintiles of the community.

References

[1]. World Health Organization (WHO). The world health report: health systems financing: the path to universal coverage. Geneva, Switzerland. WHO, 2010.

[2]. Ngowu, R., Larson, J. S. and Kim, M. S (2008). Reducing child mortality in Nigeria: A case study of immunization and systemic factors. *Social Sciences and Medicine* 67 **(1):** 161-164

[3]. Falegan, I. J. (2008). Healthcare financing in the developing world: is Nigeria's National Health Insurance Scheme a Viable Option? *Jos Journal of Medicine* 3 **(1).**

[4]. Meessen, B., Van Damme, W., Tahobya, C. K., Tibouti, A. Poverty and user fees for public health care in low-income countries: lesion from Uganda and Cambodia. *Lancet* 2006, **368**(9954):2253-2257.

[5]. Wagstaff A: Social Health Insurance Re-examined. *Health Economics* 2010, 19:503–517

[6]. Carrin G, Waelkens M. P, Criel B. Community-based health insurance in developing countries: a study of its contribution to the performance of health financing systems. *Trop Med Int Health*. 2005; 10(8):799-811.

[7]. Kamau Njoroge and Njiru Haron. Community based health insurance schemes: Lesson from rural Kenya. *Journal of Health Care for the Poor and Underserved.* 2014; 25(1): 192-203. DOI: 10.1353/hpu.2014.0023.

[8]. Sepehri AS, Sarma W, Simpson. Does non-profit health insurance reduce financial burden? Evidence from the Vietnam Living Standards Survey Panel. *Health Economics* 2006; 15(6):603-16.

[9]. Jutting J. P. The Impact of Health Insurance on the Access to Health Care and Financial Protection in Rural Developing Countries: The Example of Senegal. Health, Nutrition and Population Discussion Paper. 2001. Washington. The World Bank.

[10]. Jutting, J. P. Do Community-based health insurance schemes improve poor people's access to health care? Evidence from rural Senegal. *World Development.* 2004; (32) 2: 273-288.

[11]. Gamble-Kelley A, Diop F, Makinen M. Approaches for scaling up community-based health financing schemes. Bethesda, MD: Partners for Health Reform Plus Project. 2006. Cambridge. Abt Associates Inc. *PubMed*

[12]. Jehu-Appiah, C Aryeetey, G., Agyepong, I., Spaan E. and Baltussen, R. Household perceptions and their implications for enrolment in the National Health Insurance Scheme in Ghana. *Health Policy and Planning* 2012; (27): 222–233. Doi:10.1093/heapol/czr032

[13]. Onwujekwe, O., Onoka, C., Uzochukwu, B., Nkoli, U. Nnnena, T., Eze, S., Kirigia, J. and Petu, A. Preferences for benefit packages for community-based health insurance: an exploratory study in Nigeria. *BMC Health Services Research* 2010, **10**:162

[14]. Mulupi, S., Kirigia, D., Chuma, J. Community perceptions of health insurance and their preferred design features: implications for the design of universal health coverage reforms in Kenya. *BMC Health Services Research* 2013; **13**: 474. Doi:10.1186/1472-6963-13-474

[15]. Jean Jacques N Noubiap et al. Community-based health insurance knowledge, concern, preferences and financial planning for health care among informal sector workers in a health district of Douala, Cameroon. *Pan African Medical Journals*. 2013; 16:17. Doi:10.11604/pamj.2013.16.17.2279.

[16]. De Allegri, M., Sanon, M., Bridges, J. and Sauerborn, R. Understanding consumers' preferences and decision to enrol in community-based health insurance in rural West Africa. *Health Policy* 76 (2006) 58–71.

[17]. Banwat, M. E., Agbo, H. A., Hassan, Z., Lassa, S., Osagie, I. A., Ozoilo, J. U., Ogbonna, C. Community based health insurance knowledge and willingness to pay; A survey of a rural community in North Central zone of Nigeria. *Jos Journal of Medicine*, 2012; (6): 1.

[18]. Uzochukwu, B.S.C., Onwujekwe, O.E., Eze, S., Ezuma, N., Obikeze, E.N and Onoka, C.A. Community Based Health Insurance Scheme in Anambra State, Nigeria: an analysis of policy development, implementation and equity effects. The Consortium for Research on Equitable Health Systems (CREHS) 2009.

[19]. Odeyemi Isaac, A. O. Community-based health insurance programmes and the national health insurance scheme of Nigeria: challenges to uptake and integration. *BMC Health Services Research* 2013; (2) 12: 237.

[20]. Basaza, R., Criel, B., Van der Stuyft, P. Community health insurance in Uganda: why does enrolment remain low? A view from beneath. *Health Policy.* 2008(87) 172– 184. Doi:10.1016/j.healthpol.2007.12.008.

[21]. Dixon, J., Tenkorang, E. Y. and Luginaah, I. Ghana's National Health Insurance Scheme: a national level investigation of members' perceptions of service provision. *BMC International Health and Human Rights* 2013, 13:35.

[22]. Bjorn Ekman, 2004. Community-based health insurance in low-income countries a systematic review of evidence. *Health Policy and Planning*; **19**(5): 249-270.

[23]. Afolabi, M. O., Daropale, V. O., Irinoye, A. I. and Adegoke, A. A. Health-seeking behaviour and student perception of health care services in a university community in Nigeria. *Health* 2013; (5):817-824.

[24]. McIntyre D, Garshong B, Mtei G, et al. Beyond fragmentation and towards universal coverage: insights from Ghana, South Africa and the United Republic of Tanzania. *Bull World Health Organ.* 2008; 86(11): 871–876.

[25]. Onwujekwe, O., Onoka, C., Uzochukwu, B., Okoli, C., Obikeze, E. and Eze, S. Is community- based health insurance an equitable strategy for paying for healthcare? Experiences from southeast Nigeria. *Health Policy* 92 (2009) 96–102.

[26]. Federal Capital Territory (FCT) Demographic and Household Survey tool. 2011. Retrieve from http://fctsurvey.org.ng/on 28/09/2014.

[27]. Cochran, W. G. Sampling techniques (3rd ed.). New York, NY: John Wiley and Sons, 1977.

[28]. IBM SPSS Statistics for Windows, Version 21.0. IBM Corp. Released 2012. Armonk, NY: IBM Corp
[29]. National Population Commission (NPC) [Nigeria] and ICF International. 2014. *Nigeria Demographic and Health Survey 2013*. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International
[30]. National Population Commission (NPC) AND ICF Macro. Nigeria Demographic and Health Survey 2009.