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Awareness and Willingness to Pay for Community Based Health Insurance Scheme in North-Western Nigeria

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Abstract

There is a need for the communities to develop their health financing system, especially those that were not covered by the National Health Insurance Scheme (NHIS). This will give the people an opportunity to finance their medical care which in turn would alleviate financial burden at the point of treatment. Therefore, this study is aimed to determine the level of awareness of Community-Based Health Insurance Scheme (CBHIS) among communities and to measure the degree of willingness to pay for the scheme in Katsina, North-Western Nigeria. Semi-structured interviewer-assisted questionnaires were used to collect information from the respondents. Statistical analyses were performed using SPSS version 20.0. The results indicate that majority of the respondents attained the tertiary level of education (68.3%) and 81.1% were employed. About 74.2% were earning more than the Nigerian minimum wage N18, 000 (≈$59). About 52.2% of the respondents were aware of the CBHIS. And 81% were willing to pay a premium while 62.2% will pay between N 1, 000 – 5, 000 (≈$3.3-$16.4). There was a strong significant relationship between monthly income and knowledge of CBHIS ($p = < 0.0001$). However, gender and educational level were not significantly associated with the knowledge of CBHIS. Awareness about CBHIS was not sufficiently adequate but a significant number of the respondents were willing to pay for CBHIS after learning about the scheme. Factors such as level of education and income levels were found to have a positive effect on willingness to pay.

Keywords: Willingness to pay; Awareness; Community Based Health insurance; Healthcare financing; Household head

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Introduction

Out of pocket payment for healthcare which dominates Nigerian healthcare systems bring about a serious barrier to health service seeking behavior in Nigeria (Aboyomi & Samuel 2012). Healthcare is quite costly, and only the wealthier among the people can afford to pay the costs of treating a serious illness when it arises. Community-based health insurance scheme pools the risk of high care costs across a large number of people, permitting them to pay a premium based on the average cost of medical care for the group of people. This risk-spreading function helps make the cost of health care reasonably affordable for most people (Gary, 2008).

A recent review of health-system financing for Universal Health Coverage in Nigeria shows high out-of-pocket expenses for health care, a very low budget for health at all levels of government, and poor health insurance penetration (Lancet global health - Nigeria's new government and public financing for universal health coverage, 2015 and Uzochukwu B et al 2015). According to WHO, general government expenditure on health as a percentage of total government expenditure was very low at 3•3% in 2002, increasing consistently per year to 9•4% in 2007, and dropped to 6•7% in 2012 (WHO. Global Health Observatory Data Repository. Nigeria: statistics summary, 2002). Private expenditure on health as a percentage of total health expenditure remains high, dropping slightly from 74•4% in 2002 to 68•9% in 2012. Out-of-pocket expenditure as a percentage of private expenditure on health has consistently remained higher than 90% since 2002 and was 95•7% in 2012 (Towards achieving universal health coverage in Nigeria – Business day, 2015).

Health-related risks pose the greatest threat to households as it directly affects lives and livelihood. The uncertainties associated with the untimely illness, its huge treatment costs make financial provision difficult for households (Arhin-Tenkorang 2001). There is a rapid change and increase in medical expenditure most especially on some infectious diseases like malaria and chronic diseases like hypertension and Diabetes mellitus plus family's consumption. This brings about the need for the communities most especially those that were not covered by the National health insurance scheme (NHIS) to develop their health financing system (OE Onwujekwe, Uzochukwu, Ezeoke, & Uguru, 2012). This will give the people an opportunity to finance their medical care so that they can alleviate financial burden at the point of treatment. Health insurance actually gives partial reimbursement to the people for expenditure on selected diseases (Maumita, 2013).

Unfortunately, there is little knowledge to complete ignorance about the community-based health insurance scheme in the whole North-Western Nigeria and there is none instituted in the region. Therefore, this study aimed to determine the level of awareness for community-based health insurance and to measure the degree of willingness to pay for the scheme in Katsina State, North-Western Nigeria in 2016.

Method

Ethical consideration

Participation in this study was voluntary and consent was sought from the respondents before filling the questionnaire. No findings which could identify individual respondents were published.

Study Site/ Population and sample size

Dutsin safe low-cost housing estate is one of the earliest estates in the ancient city of Katsina, North-Western Nigeria. The housing estate was built by the then Kaduna State government and completed in 1988. It comprises two, three and four bedroom semi-detached houses in units of twos. The study population was

mainly household heads resident in Dutsin safe low-cost area of Katsina metropolis.
Since CBHIS is targeted towards communities, the whole Dutsen safe community (180 households) was sampled and recruited for the study.

Inclusion criteria

1. All household heads (male and female) above 18 years old resident in Dutsin safe low-cost housing estate.
2. Any adult above the age of 18 years old available when the household head is not around and is a permanent resident of the area.

Exclusion criteria

1. All households that are not a permanent resident of Dutsin safe low-cost housing estate.
2. Households below the age of 18 years old.

Study Design

This was a cross-sectional study in which data were collected using a combined close-ended/ open-ended interviewer/self-administered questionnaire (semi-structured). Single-Bounded Dichotomous Choice (SBDC) approach is used in the study where respondents in the survey are usually presented with one bid amount to which they can respond with either a yes or no to show their willingness to pay or not to pay. The questionnaire basically contains three basic sections adequate to capture relevant data required. These sections capture information on the demographic and socioeconomic characteristics of the households, CBHIS awareness and willingness to pay.
A pilot study was carried out with 10 subjects randomly selected from the study area. From the pilot study, respondents were found to be able to understand and answer the questionnaire provided. Consequently, no further modification of the questionnaire was done prior to the actual survey.

Statistical Analysis

Data were analyzed using Statistical Package for Social Sciences. All demographic data were analyzed descriptively and presented as frequencies and percentages. Chi-square analysis was carried out between CBHIS awareness and willingness to pay with the socio-economic characteristics (gender, education levels, and income) to test for significance.

Results

Socio-demographic characteristics of the respondents

Summary of the socio-demographic characteristics of the respondents was shown in Table 1. A total of 180 respondents participated in the study. The majority were males (82.8%). Most were married (86.7%) and between the ages of 26-35 (27.8%). Majority attained the tertiary level of education (68.3) and about 81.1% were employed (work for pay and self-employed). Slightly more than a quarter (25.8%) were earning less than $65 (N 20, 000) and most of them have 4-6 children (26.7%)

Knowledge and Willingness to pay for Community Based Health Insurance Scheme

Slightly more than half (52.2%) have knowledge about CBHIS while 68.9% indicated interest to participate. About 81% were willing to pay for a premium while 65.2% will pay between the ranges of approx. $3.3-$16.4 (N 1, 000 – 5, 000).

The relationship between knowledge of CBHIS and socio-demographic characteristics of the respondents

There was a significant relationship between monthly income and knowledge of CBHIS ($p = < 0.0001$). However, gender and educational level were not significantly associated with the knowledge of CBHIS.

Table 1: Socio-Demographic Characteristics of the Respondents

	Frequency	Percentage (%)
Gender		
Male	149	82.8
Female	31	17.2
Age		
18-25	46	25.6
26-35	50	27.8
36-45	44	24.4
46- 55	23	12.8
Above 55	17	9.4
Marital Status		
Married	156	86.7
Single	21	11.7
Divorced/ Widowed	3	1.7
Level of Education		
Tertiary Education	123	68.3
Secondary Education	36	20.0
Primary Education	1	0.6
Informal Education	12	6.7
Others	8	4.4
Employment Level		
Employed	146	81.1
Unemployed	34	18.9
Monthly household income ($)		
< $65	46	25.8
$66 - $654	85	47.8
$655 and above	47	26.4

	Frequency	Percentage (%)
Number of children		
None	21	11.7
1-3 children	48	26.8
4-6 children	46	25.7
7-9 children	34	19.0
10 and above	30	16.8

Table 2: Knowledge and willingness to pay for community-based health insurance scheme (CBHIS)

ITEM	Frequency	Percentage
Knowledge of CBHIS		
Yes	94	52.2
No	86	47.8
Interest to participate		
Yes	124	68.9
No	56	31.2
Willingness to pay a premium		
Yes	146	81.1
No	34	18.9
Willingness to pay between ≈ $3.3 - $16.4 (N1000 -N5000)		
Yes	117	65.2
No	59	32.8

The relationship between WTP and socio-demographic characteristics of the respondents

Gender was found to be significantly associated with WTP ($p = 0.001$) with more males (87.7%) willing to pay than females (12.3%). WTP was found not to be associated with the Educational level and monthly income but a trend was observed that respondent that attained the tertiary level of education were more willing to pay. Additionally, those with a monthly income of above NGN 20, 000 were also more willing to pay.

DISCUSSION

The results obtained from the study shows that there were149 (82.8%) More male respondents

Table 3: The relationship between CBHIS Awareness and Demographic Characteristics of the Respondents

Variable	AWARENESS			
	No	Yes	X2(df)	p-value
Gender				
Male	110 (80.9)	39 (88.6)	1.402 (1)	0.236
Female	26 (19.1)	5 (11.4)		
Educational level				
Tertiary	91 (66.9)	32 (72.7)	0.520 (1)	0.471
Below Tertiary	45 (33.1)	12 (27.3)		
Monthly Income				
≤$65 (N 20, 000)	44 (32.8)	2 (4.5)	13.833 (1)	0.000
>$65 (N 20, 000)	90 (67.2)	42 (95.5)		

Table 4. correlation between WTP and the demographic characteristics of the respondents

Variable	Willingness to pay (WTP)			
	No	Yes	X2(df)	p-value
Gender				
Male	21 (63.6)	128 (87.7)	11.145 (1)	0.001
Female	12 (36.4)	18 (12.3)		
Educational level				
Tertiary	20 (60.6)	103 (70.5)	1.238 (1)	0.266
Below Tertiary	13 (39.4)	43 (29.5)		
Monthly Income				
≤$65 (N 20, 000)	14 (43.8)	31 (21.4)	6.919 (1)	0.009
>$65 (N 20, 000)	18 (56.2)	114 (78.6)		

(82.8%) than females (17.2%) indicating more male household heads/respondents which is a characteristic of typical Hausa community. Most of the respondents were married (86.7%) and 68.3% of the respondents attained a tertiary level of education. This is also an anticipated result since Dutsin-safe is at the urban center of Katsina and the Nigerian urban communities

are characterized by high literacy levels. It was discovered that 81.1% of the respondents were employed with 74.2% earning more than N20, 000 ($ 65) monthly.

CBHIS was a relatively new concept of healthcare financing, which was developed to provide financial risk protection for the low-income households, the poor and the vulnerable groups (Carrrin, Waelkens & Criel, 2005). Awareness and knowledge about CBHIS are of prime importance before the commencement of the scheme. Community-Based Health Insurance Scheme is not popular in Nigeria, and it is still not fully implemented even in the developing countries that have massively started the scheme (Carrrin, Waelkens & Criel, 2005). In this study, there was a generally poor level of awareness among the households. The households that attained a tertiary level literacy have higher level of awareness about CBHIS when compared with the households with a lower level literacy, but there was a very considerable proportion of tertiary level literates (103 of 123) i.e. 83.7% that were willing to pay for community-based health insurance scheme while secondary level literates have 77.1% willingness to pay. Therefore, there was a positive correlation between literacy levels and willingness to pay in the present study. Dror, Redermacher, and Koren (2007) have reported a positive relationship between educational attainment and willingness to pay which is similar to findings in the current study. Awareness about community-based health insurance scheme was not sufficiently adequate and from the interaction with some of the respondents that were aware, they only understood the concept of the scheme but do not really have the experience nor have in-depth knowledge about how the scheme operates. This is justified since there was none of such establishment in the study area and other neighboring states in North-Western Nigeria. This underscores the need for Government to key into the findings of the present study and create more community awareness, stakeholders' sensitization and eventually stimulate commencement of CBHIS with demand creation in this part of the country.

Gender was identified as a factor for WTP as 128 out of 149 males were willing to pay (85.9%) while only 18 out of 30 females were willing to pay (40%). Male household heads more willing to pay and more willing to pay higher amounts when compared with female household heads. This is consistent with the findings by David Mark, Radermacher, & Koren, 2007; and Tundui & Macha (2014) who found that male household heads were more willing to purchase and pay for health insurance than the female household heads.

Slightly more than half of the respondents (52.2%) were aware of CBHIS with 124 (69.3%) interested in participating in the scheme and 146 (81.6%) willing to pay for the scheme. This finding is similar to result obtained from a comparative study among rural and urban households on willingness to pay for CBHI carried out in Osun state by Usman and Bukola (2013) where the results indicated that 82.8% of the rural households were willing to pay for CBHIS. However, a lower score (51.6%) was obtained from the urban households which contradicts the findings obtained from the current study conducted in an urban area. This study revealed that about 78.6% household heads were earning slightly above the current National Minimum Wage of N18, 000 (≈ $59) as average monthly income, which suggests that socioeconomic status may influence the willingness to pay. The affluent among the people were anticipated to be more willing to pay than the poor. This is because the affluent are more conscious about their health and well-being which may also affect their productivity. CBHIS is, therefore, more suitable for rural settlers and poor persons as opined by Usman and Bukola (2013) in Southwestern Nigeria; and David Mark, Radermacher, and Koren (2007) in rural areas of India. Poor people are vulnerable to diseases and catastrophic spending at the point of healthcare intervention. Moreover, Garba, Harun, and Salihu (2015) found a correlation

between socioeconomic status and willingness to pay for CBHIS among the rural dwellers in Sokoto, Northwestern Nigeria.

Moreover, Onwujekwe, Uzochukwu, and Kirigia, (2011) investigated the basis for effective CBHIS in Southeastern Nigeria and found that in addition to Income levels of the people, the premium for the scheme should be affordable to the people [17]. In the present study, 65.2% of household head was willing to pay a premium of about ≈ $3.3 - $16.4(N1, 000 to N 5,000). This indicates that majority of the households can afford to purchase the insurance premium. However, the most-poor among the people could not afford to pay the premium no matter how cheap, this will negatively affect the CBHIS coverage. CBHIS is targeted towards the poor, vulnerable and people that were not covered by any form of Insurance (Informal sector). Thus, there should be solidarity and altruism among the people in the community. The wealthy among the people should pay a higher premium to cover for the less privileged among the community. As philanthropy is generally related to wealth, Onwujekwe, Uzochukwu, and Kirigia (2011) also found a positive correlation between socioeconomic status, altruism and willingness to pay for CBHIS and opined that the poor have to depend on the altruistic contributions from the affluent in the community to be able to enroll in CBHIS, as they may not afford the full premium.

In spite of the important factors that influence WTP for CBHIS explored in this study, there are other equally important factors which need to be explored; such as social capital, trust, community participation in setting-up, management, maintenance and sustenance of the scheme. Social capital is an important factor to consider in setting-up a CBHIS. Herman, Pythogore, Donfouet, Pirre, and Alexandret (2012) on community-based health insurance and social capital in rural areas of developing countries reported a positive and significant association between the social capital of the communities and willingness to participate in and pay for community-based health insurance scheme [18]. Since CBHIS targets communities, there should be an existing communal network, relationship, association or corporation, and solidarities among the people in the community to own it.

In the present study, a significant number of the respondents were willing to pay for community-based health insurance scheme. The respondents were able to understand the relevance and importance of CBHIS. A number of factors were identified to influence willingness to pay. These factors include but not limited to the level of education and income levels which positively have an effect on willingness to pay. This study was the first of its kind to be carried out in the study area, therefore, there are a lot of untapped prospective research gaps that need to be filled in this field of study. Aspects such as socioeconomic status, Affordability, and Social capital issues with CBHIS are potential areas for further research.

CONCLUSION

There was a significant relationship between monthly income and knowledge of CBHIS ($p = < 0.0001$). However, gender and educational level were not significantly associated with the knowledge of CBHIS. Awareness of community-based health insurance scheme is not sufficiently adequate and a significant number of the respondents are willing to pay for community-based health insurance scheme. Factors such as level of education and income levels were found to have a positive effect on willingness to pay.

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