

# Willingness of in-patients to Uptake the Vital Contributor Social Health Insurance Program in a Teaching Hospital, Southwest Nigeria

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## Abstract

**Background:** The introduction of the Vital Contributor Social Health Insurance (SHI) Program in Nigeria was to scale up access to health insurance and achieve universal health coverage. However, many Nigerian in-patients still pay out-of-pocket for health services. This study aimed to determine Nigerian in-patients' willingness to pay for the Vital Contributor SHI Program. **Methodology:** A cross-sectional analytical study conducted among 133 adult in-patients and care-givers of pediatric in-patients of a tertiary health facility in southwestern Nigeria, not under a health insurance cover, and recruited through a simple random sampling technique. Data were collected using an interviewer-administered questionnaire. Willingness to Pay was assessed using the double contingent valuation by the Bidding method. Descriptive and inferential statistical analysis was performed using the IBM SPSS version 20 with inference made at  $P > 0.05$ . **Results:** Findings showed a low awareness (42.1%) of the National Health Insurance Scheme (NHIS), and much lower awareness of the Vital Contributor Insurance Scheme, (27.1%). A high proportion of the respondents (67.7%) were willing to participate in the scheme, whereas 67.3% of those not willing to participate gave insufficient funds as the reason. The median maximum amount of premium respondents were willing to pay annually was ₦15,000 (\$38) and ₦5000 (\$12.8) interquartile range. Respondents in the working population ( $P = 0.032$ ), with some form of education ( $P = 0.002$ ), having difficulty with paying their medical bills ( $P = 0.044$ ), who were aware of the Vital Contributor Scheme ( $P = 0.001$ ) and were knowledgeable about the NHIS benefits ( $P = 0.026$ ) were significantly more willing to uptake the Vital Contributor SHI Scheme. **Conclusion:** Although awareness of the Vital Contributor SHI Scheme is low, the proportion of respondents willing to partake in it is satisfying. Increased targeted awareness campaigns should improve uptake. Health management organizations should take the lead in the awareness creation process.

**Keywords:** Health insurance, vital contributor social health insurance scheme, voluntary contribution, willingness to pay

## INTRODUCTION

The United Nations, in her 67/81 Resolution on Global health and foreign policy declared on December 12, 2012, urged governments of nations to accelerate efforts at ensuring universal healthcare for their citizens.<sup>[1]</sup> Globally, an estimated 808 million people incurred catastrophic health spending in 2010,<sup>[2]</sup> and some countries, up to 11% suffer severe financial hardship, with 5% of the population forced into poverty as a result of paying for healthcare each year.<sup>[3]</sup>

In most countries in Africa, coverage through social health insurance (SHI) and other forms of insurance is low.<sup>[4]</sup> Out-of-pocket (OOP) payments have, therefore, increased in

nearly all African countries from US\$15 per capita in 1995 to US\$38 in 2014.<sup>[4]</sup> As a result, about 11 million people are falling into poverty every year.<sup>[4]</sup> Despite the consensus to move toward universal health coverage (UHC), Nigeria continues to rely on direct OOP payments as a means of financing the

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**How to cite this article:** Esan OT, Falayi KO, Adekunle BA, Akinwunmi T, Ajao OO, Abubakar Y. Willingness of in-patients to uptake the vital contributor social health insurance program in a teaching hospital, Southwest Nigeria. *Niger J Med* 2020;29:476-85.

**Submitted:** 03-Jun-2020 **Revised:** 12-Jun-2020

**Accepted:** 08-Aug-2020 **Published:** 18-Sep-2020

### Access this article online

#### Quick Response Code:



**Website:**  
www.njmonline.org

**DOI:**  
10.4103/NJM.NJM\_95\_20

healthcare system.<sup>[5]</sup> Indeed, OOP payments contribute 90% to overall health expenditure in Nigeria.<sup>[5]</sup>

The National Health Insurance Scheme (NHIS) was introduced to provide SHI to Nigerians and ensuring UHC.<sup>[6]</sup> The NHIS programs are categorized under the Formal Sector, Informal Sector, and Vulnerable Sector groups. However, NHIS membership is only mandatory for federal government workers, while state government workers are not legally bound.<sup>[7]</sup>

To scale up access to the scheme, a state-owned health insurance scheme was instituted.<sup>[8]</sup> As of 2019, only nine out of thirty-six states indicated an interest in the NHIS. As of 2018, the percentage coverage of the NHIS scheme lies <5% of the populace,<sup>[7]</sup> with coverage still limited to the federal government employees within the formal sector. According to the Nigerian Demographic Health Survey 2018, only 3% of men and women aged 15–49 years of age have any form of health insurance.<sup>[9]</sup> All these show that out-of-pocket payment is still very high in Nigeria.

The Vital contributor formerly called voluntary contributors social health insurance program (VCHIP) was developed to expand the coverage of healthcare insurance among the formal and nonformal sector population in the country. This is a health insurance program taken up and paid for by willing individuals or at the discretion of employers on behalf of employees in an organization with <10 staff.<sup>[6]</sup> It was designed for those who are not actively covered by any of the NHIS programs in the country and for those who may not have been satisfied with the existing healthcare services.<sup>[6]</sup> Membership is entirely voluntary, and the program is financed by contributions made by interested individuals.<sup>[6]</sup>

The VCSHIP contribution rate was actuarially determined to be ₦15,000 (\$41.7) only per person, payable once annually, or in installments.<sup>[6]</sup> The NHIS covers over 95% of disease conditions that affect the Nigerian population.<sup>[7]</sup> The benefits package for the NHIS enrollees is similar to those of the VCSHIP. They include out-patient services, in-patient services, maternity care for up to four live births, emergencies, preventive care including immunization, consultation with specialists, eye examination and care, preventive dental care and pain relief as well as a range of prostheses.<sup>[6]</sup> However, awareness of the VCSHIP has been reported low among informal sector employees. In Osun state of South Western Nigeria, of 387 participants in a study, only 28.9% of participants knew about the scheme.<sup>[10]</sup>

In-patients were studied because it is believed they are in more dire need of financial risk protection in the form of a health insurance scheme when compared with out-patients.<sup>[11]</sup> In-patients pay for admission, feeding, drugs, investigations, and nursing care. These lead to incurring huge costs that could be catastrophic and some sell-off properties to cater for these costs.

This research is aimed to determine the willingness of in-patients at the Obafemi Awolowo University Teaching

Hospital Complex (OAUTHC) Ile-Ife to uptake the Vital Contributor Program of the NHIS and the factors associated with it.

## METHODOLOGY

The study was a descriptive cross-sectional in design conducted among adult in-patients and care-givers of pediatric in-patients in the male and female medical and surgically related wards of the OAUTHC, Ile-Ife, southwest, Nigeria. As at the time of conducting the study, it was a 535-bedded tertiary hospital with an annual bed occupancy rate of over 90%.<sup>[12]</sup> The facility offers all the services required for a tertiary health facility under the NHIS in the country ranging from minor and major surgical procedures, Internal Medicine, HIV/AIDs, Pediatrics, Obstetrics and Gynecology, Ophthalmology, Ear, Nose, and Throat (Health) to Radiology/Ultrasonography.

Only in-patients not registered under any health insurance program were recruited for the study. Furthermore, the availability of close relative care-givers for debilitated or moribund patients served as inclusion criteria for the study. However, in-patients in intensive care units and psychiatric wards were excluded from the study.

A minimum sample size of 139 was determined using the Cochran's formula for calculating single proportions with a prevalence of 90% given as the proportion of people not on the NHIS in Nigeria,<sup>[13]</sup> at 95% confidence limit, permitting a 5% error margin and adjusting for a 10% nonresponse rate. The number of patients to be interviewed across the wards visited over the 2-week duration for data collection was determined proportionately to the number of beds per ward. On the wards, simple random sampling by balloting of the bed numbers was done to select the eligible respondents. For the wards that did not initially meet the proportion of respondents to be interviewed therein, repeated visits were done to look out for new admissions.

Data collection was quantitative using an interviewer-administered pretested semi-structured questionnaire, developed by the researchers. The questionnaire was translated to Yoruba and back-translated to English by a professional translator. A brief introductory explanation on health insurance with a focus on the VCSHIP was presented to the respondents before asking about their willingness to register in the program.

The Double Contingent Valuation method using the Bidding game was used to elicit information about their willingness to pay.<sup>[14]</sup> The start-up amount was the current ₦15,000 (\$38.5) nationally determined as premium for the VCSHIP. Those who were willing to pay the amount were asked if they would pay double the amount and those who could not if they would pay half the amount. The maximum amount they would be willing to pay were then asked as an open-ended question. The currency exchange rate was at ₦390 to \$1 (USD) at the time. Their knowledge of the benefit packages in the NHIS

was determined guided by the NHIS Operational Guidelines, which are almost the same as those of the VCSHIP.<sup>[6]</sup>

Data collected were analyzed using the descriptive and inferential statistics of the IBM SPSS Statistics version 20.0 software (IBM Corp., Armonk, NY, USA). Frequency distribution and summarization of data were done for categorical and continuous variables, respectively. The outcome variable was the willingness to uptake the VCSHIP. Factors associated with respondents' willingness to pay into the scheme or not was determined using the Chi-square test with statistical significance inference set at  $P < 0.05$ .

### Ethical approval

The principles of Helsinki were observed. The respondents were assured that nonparticipation would in no way affect the management of their condition, and the academic purpose of the research was well explained to the patient. Respondents were interviewed after recruitment at their chosen convenient time when not under undue pain or stress. Ethical approval to conduct the study was obtained from the Ethics and Research Committee of the OAUTHC, Ile-Ife.

### RESULTS

One hundred and thirty-three respondents completed the research tools for the study giving a response rate of 95.7%. Their mean (standard deviation [SD]) age was  $44.79 \pm 16.9$  years with a minimum and maximum age of 18 years and 92 years, respectively. Females were slightly more than the males with a male-to-female ratio of 1:1.08. The minimum and maximum total monthly income earned by them was nothing earned to ₦400,000 (\$1,025), respectively, with a median monthly income of ₦30,000 (\$76) and ₦30,100 (\$77.2) interquartile range (IQR). The average number of people in the respondent's households was  $5 \pm 2$  SD.

A higher proportion of the respondents; 112 (84.2%) were in the working population. Most had secondary education, with only 12 (9.0%) with no formal education. In the distribution of the respondents recruited across all the medical and surgical wards, there were more respondents recruited in the adult surgical wards 59 (44.4%) compared to the adult medical wards, 39 (29.3%). While for the respondents who were care-givers of the pediatric patients, there were more in the pediatric medical wards 24 (18.0%). Thus, more respondents were diagnosed with surgically related illnesses 69 (51.9%). However, quite a number of the respondents either did not know the diagnosis they were being managed for 35 (26.3%), or the one they proffered was not correct 60 (45.1%). Those who knew were more of the respondents 14 (36.8) being managed in the adult surgical wards [Table 1].

About three-quarters of the respondents had a job with only 60% of them being satisfied with their jobs and thus the income from it. More than half of the respondents, 75 (58.1%) earned about ₦30,000 (\$80) or less per month. Only 48 (36.1%) of the respondents lived in owned apartments. A higher proportion

**Table 1: Sociodemographic characteristics of respondents (n = 133)**

Variables	Frequency (%)
Age (years)	
18-64	115 (84.2)
$\geq 65$	21 (15.8)
Sex	
Male	64 (48.1)
Female	69 (51.9)
Educational status	
Primary	28 (21.1)
Secondary	63 (47.4)
Tertiary	30 (22.6)
No formal education	12 (9.0)
Ethnicity	
Yoruba	121 (91.0)
Igbo	9 (6.8)
Hausa	1 (0.8)
Others	2 (1.5)
Religion	
Christianity	111 (83.5)
Islam	21 (15.8)
Traditional	1 (0.8)
Distribution of patients across the wards	
Adult medical wards	39 (29.3)
Adult surgical wards	59 (44.4)
Pediatric medical wards	24 (18.0)
Pediatric surgical wards	11 (8.3)
Patient's knowledge of diagnosis	
The patient could not proffer a diagnosis	35 (26.3)
Patient proffered a diagnosis that did not tally	60 (45.1)
Patient proffered a diagnosis that tallied	38 (28.6)
Distribution of patients knowledgeable about their diagnosis	
Adult medical wards	11 (28.9)
Adult surgical wards	14 (36.8)
Pediatric medical wards	9 (23.7)
Pediatric surgical wards	4 (10.5)

of them had the well as their source of water supply and used the kerosene stove to cook, with about 11 (8.3%) of them still using (charcoal and wood). A higher proportion of them 53 (39.8%) did not own a means of transportation [Table 2]. Almost all the respondents alluded to having electricity, television, radio, and electric fan in their homes. However, <20% of them had a personal computer and an air conditioning system [Figure 1].

As at the time of interviewing respondents, the median duration in days of their being on hospital admission for that episode was 7 days and 12.5 days' IQR with a minimum and maximum duration of 1–90 days. The median amount they had spent while on admission was ₦50,000 (\$128)  $\pm$  ₦70,000 (\$179.5) IQR with the minimum and maximum amount spent being ₦5000 (\$12.8) and ₦2,000,000 (\$5,128). Getting to the hospital to obtain care was the first choice for the majority, 110 (82.7%) of them, if ever faced with illnesses such as they were being managed for, even if they would have to borrow.

A higher proportion of them 70 (56.6%) were finding it difficult to procure their drugs and 33 (24.8%) of them were having challenges with paying their hospital bills at the time of conducting the study. Three (2.3%) of them had once lost a close relative for the inability to pay hospital bills. About half of the respondents, 66 (49.6) had sometimes resolved into taking herbal concoctions. When asked, only 7 (5.3%) of them said they could afford to spend about half or more of their income on their drugs and hospital bills while the majority of them; 69 (51.9%) said they could afford little or nothing on these, as many activities in their lives will be affected. Feeding off

their family, 50 (37.6%), as well as the inability to pay children school fees, 13 (9.8%), were a few of the activities that were opportunity cost to respondents' paying their hospital bills and procuring their drugs [Table 3].

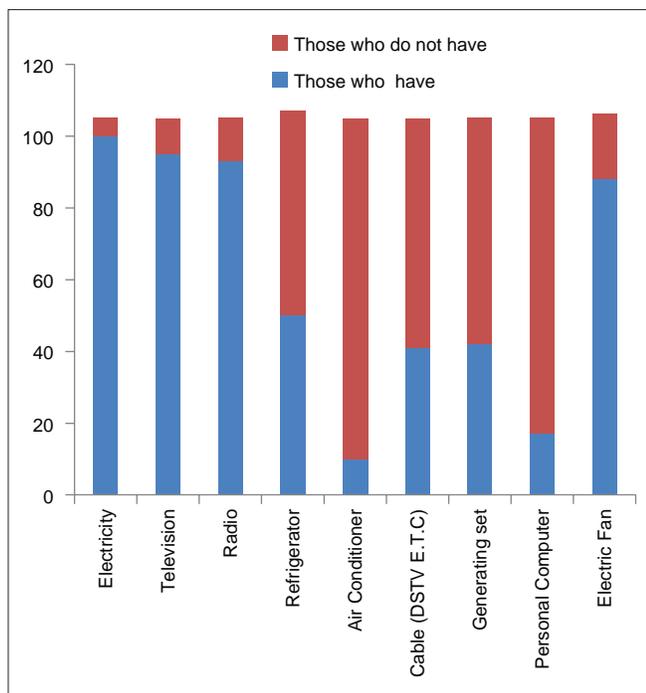
A higher proportion of the respondents, 97 (57.9%) were not aware of the National Health Insurance program. For those who knew, their main source of information were healthcare providers; 25 (44.6%) as well as their families and friends

**Table 2: Socioeconomic characteristics of respondents**

Variables	Frequency (%) (n=133)
Number in respondents' households	
≤5	71 (55.5)
>5	57 (44.5)
Current employment status	
Currently working	100 (75.2)
Not currently working	33 (24.8)
Satisfaction with job	
Very satisfied	12 (12.0)
Just satisfied	60 (60.0)
Not satisfied	28 (28.0)
Estimated monthly income	
≤₦30,000 (80 USD)	75 (58.1)
>₦30,000 (80 USD)	54 (41.9)
Type of accommodation	
Own apartment	48 (36.1)
Rented apartment	65 (48.9)
Family house	20 (15.0)
Type of toilet	
Water system	98 (73.7)
Pit latrine	32 (24.1)
Bush	3 (2.2)
Source of water supply	
Pipe borne/borehole	64 (48.1)
Well	69 (51.9)
Source of water within residential compound	
Yes	112 (84.2)
No	21 (15.8)
Cooking source	
Electric cooker	3 (2.3)
Gas cooker	42 (31.6)
Kerosene stove	77 (57.9)
Charcoal	1 (0.8)
Wood	10 (7.5)
Automobile affordability	
Personal car	38 (28.6)
Motorcycle	34 (25.6)
Bicycle	8 (6.0)
None	53 (39.8)
Socioeconomic status	
High socioeconomic status	38 (49.4)
Low socioeconomic status	39 (50.6)

**Table 3: Health-seeking behavior and hospital cost affordability experiences (n=133)**

Variables	Frequency (%)
Options to consider first for illnesses as this	
Borrow money to go to the hospital (if I don't have)	110 (82.7)
Go to a chemist (medicine store)	13 (9.8)
Visit a traditional doctor	1 (0.8)
Visit the religious center to pray	6 (4.5)
Stay back at home	3 (2.3)
Frequency of visiting the hospital to obtain care	
Every time	31 (23.3)
Sometimes	58 (43.6)
Depends on the severity of illness	43 (32.3)
Ease of affordability of drugs	
Difficult	70 (52.6)
Quite easy	63 (47.4)
Use of herbal concoction and frequency of use	
Every time	5 (3.8)
Sometimes	66 (49.6)
Only when ill	24 (18.0)
Never use	38 (28.6)
Ever lost anyone for inability to pay hospital bills	
Yes	3 (2.3)
No	130 (97.7)
Ever been unable to pay self-hospital bills	
Yes	8 (6.0)
No	125 (94.0)
Ever been detained in hospital for inability to pay bills	
Yes	2 (1.5)
No	131 (98.5)
Any current challenge with paying for hospital bills	
Yes	33 (24.8)
No	100 (75.2)
The proportion of income respondent can afford to spend on drugs and hospital bills	
≥50%	7 (5.3)
<50% but >25%	11 (8.3)
≤25%	46 (34.5)
Little or nothing	69 (51.9)
Activities majorly affected when trying to pay hospital bills	
Feeding of family	50 (37.6)
Paying house rent	4 (3.0)
Paying a child's school fees	13 (9.8)
Others	19 (14.3)
None	47 (35.3)



**Figure 1:** Distribution of respondent's socio-economic assets

23 (41.1%) and not the staff of the Health Maintenance Organizations (HMOs). The reason given by the majority of the respondents for their not being under a health insurance cover, was lack of access to adequate information about the health insurance programs; 79 (61.2%). Furthermore, almost three-quarters of the respondents; 97 (72.9%) had never heard about the VCSHIP. However, for those who knew, most of them, 30; (83.3%) knew correctly how much to pay for it. Only a few 6 (16.7%) knew the number of persons the amount paid covers for while only 22 (61.1%) knew how to pay for it, and very few of them were correct on this; 6 (27.3%) [Table 4].

A high proportion of the respondents, 109 (82%), had a good knowledge of the NHIS benefit packages. The breakdown of their responses to their knowledge assessment of the benefit packages is shown in Table 5. A higher proportion of the respondents were not aware that some eye care services, dental care, provision of Nigerian based prosthesis, and the symptomatic treatment of HIV patients are offered in the NHIS benefit packages. A higher proportion of them also wrongly assumed that almost all the services not being offered currently in the package were inclusive of the NHIS benefit packages [Table 5].

The respondents were then provided with information about the VCSHIP, and thereafter, a high proportion of them 90 (67.7%) were willing to register for it. For those who remained persistent and unwilling to register, the reasons given by 30 (69.8%) were not having sufficient money to register for it, while others said they rarely fall ill; 27 (62.8%). Almost all those who were willing to register for it; 81 (90%) were willing to pay the current ₦15,000 (\$40) payable annually.

**Table 4: Awareness and knowledge of respondents about the National Health Insurance Scheme and Vital Contributor Program with their benefits (n=133)**

Variables	Frequency (%)
Ever heard about NHIS	
Yes	56 (42.1)
No	97 (57.9)
Source of information	
Family, friends and colleagues	23 (41.1)
Mass media	6 (10.7)
Health care provider	25 (44.6)
HMO officer	2 (3.6)
Ever been on any health insurance program	
Yes	7 (5.3)
No	126 (94.7)
Reason for disengagement	
Retired	3 (42.9)
Left former workplace	2 (28.6)
Got older than 18 years of age	2 (28.6)
Reason for not being on a health insurance cover	
Not being a government worker	3 (2.3)
Inadequate funds	26 (20.2)
No access to adequate information about it	79 (61.2)
Do not fall ill often	14 (10.9)
Don't feel it is worth it	7 (5.4)
Ever heard of VCSHIP	
Yes	36 (27.1)
No	97 (72.9)
Know how much to pay for it	
Yes	30 (83.3)
No	6 (16.7)
Number of person amount covers for	
One person	6 (16.7)
Four persons	24 (66.7)
Any number of persons	6 (16.7)
Know how to pay for it	
Yes	22 (61.1)
No	14 (38.9)
Responses on how to pay for it	
Pay into NHIS remittal account in any bank	6 (27.3)
Pay to HMO officer at NHIS registration office	16 (72.7)
Knowledge of NHIS benefit packages	
Good knowledge	109 (82.0)
Poor knowledge	24 (18.0)

HMO: Health maintenance organisations, NHIS: National Health Insurance Scheme, VCSHIP: Vital Contributor Social Health Insurance Program

Of those, who were willing to pay this amount, 17 (21.0%) of them were willing to pay double the amount if need be or if the government requires it as such.

For those who were willing to register for the VCSHIP but not willing to pay the required ₦15,000 (\$40) naira, more than half of them; 5 (55.5%) were willing to pay just half of the current amount being paid for the program which is ₦7,500 (\$20). For those who declined to pay even ₦7,500 (\$20), the modal

**Table 5: Knowledge of the benefit packages covered under the National Health Insurance scheme**

	Correct responses, n (%)	Incorrect responses, n (%)
Benefit packages offered		
Outpatient care, including necessary consumables like gloves, etc.	47 (88.7)	6 (11.3)
Essential drugs for treating common illness	52 (98.1)	1 (1.9)
Majority of lab and radiological investigations	47 (88.7)	6 (11.3)
Maternal care for up to 4 live births	38 (71.7)	15 (28.3)
Preventive care, including immunization	35 (66.0)	18 (34.0)
Antenatal care, normal delivery, and postnatal care	32 (60.4)	21 (39.6)
Surgical care such as caesarean section and appendectomy	31 (58.5)	22 (41.5)
Hospital consultation fee with doctors and consultants	41 (77.4)	12 (22.6)
Hospital admission for a maximum period of 15 days/year	28 (52.8)	25 (47.2)
A range of Nigerian based prostheses	20 (37.7)	33 (62.3)
Eye examination, care and pain relief including consultation	22 (41.5)	31 (58.5)
Preventive dental care and pain relief including consultation	17 (32.1)	36 (67.9)
Treatment of HIV and AIDS patients with complaints	15 (28.3)	38 (71.7)
Periodic (annual) medical check-ups	27 (50.9)	26 (49.1)
Benefit packages not offered		
Family planning commodities	32 (60.4)	21 (39.6)
Treatment of all types of cancer	16 (30.2)	37 (69.8)
Organ transplant	9 (17.0)	44 (83.0)
Treatment of sport injuries	12 (22.6)	41 (77.4)
Treatment of occupational industrial injuries	15 (28.3)	38 (71.7)
Plastic or reconstructive surgeries	13 (24.5)	40 (75.5)
Management of stroke beyond initial treatment	9 (17.0)	44 (83.0)
Chronic congenital defects	9 (17.0)	44 (83.0)
Chronic renal failure and renal dialysis	8 (15.1)	45 (84.9)

amount they were willing to pay was ₦5,000 (\$13) [Table 6]. Thirty-four (41.0%) respondents would like to still pay annually as it is being done currently on the program, 42 (50.6%) opted for 2-installments (6 monthly) payments while the rest chose to pay quarterly.

Among those in the independent age group (working population), 80 (71.4%) were willing to uptake the VCSHIP, and there was a significant difference when this was compared with those willing to do the same in the dependent population ( $P = 0.032$ ). Having some form of formal education ( $P = 0.002$ ) and also awareness of the VCSHIP ( $P = 0.001$ ), were other factors statistically significantly associated with willingness to uptake the VCSHIP. Patients who had ever experienced an inability

to pay hospital bills were more willing to uptake the VCSHIP compared to those who had not, and this was also statistically significant ( $P = 0.044$ ) [Table 7].

## DISCUSSION

The importance of health insurance in financing healthcare to achieve UHC cannot be overemphasized. However, the NHIS in Nigeria seems not to have achieved its set objectives since its inception.<sup>[13]</sup> The awareness and uptake of the Vital Contributors SHI program (VCSHIP), which focuses both on the formal and informal sectors of the population are salient for the NHIS coverage to improve. This study assessed the level of awareness of the NHIS programs and benefits; specifically the VCSHIP, the willingness to participate and pay into it by in-patients at a tertiary hospital in southwest Nigeria, who was at the time not covered under any health insurance program.

### Description of the study population

Respondents in the surgically-related wards knew the diagnosis they were being managed for more than those in the medically-related wards. This may be because of the needed informed consent before surgical interventions are carried out. Nonetheless, this finding highlights the importance of effective communication between the provider and the patients. This poor provider-patient communication was also found among discharged patients from a municipal teaching hospital in New York.<sup>[15]</sup> This should be improved in medical-related specialties.

Respondents' median monthly income was far lesser than the median health expenditure amount they had spent while on admission. This means that the health expenditure for the respondents in this study was already >40% of the monthly income that defines catastrophic health spending. This suggests that a high proportion of the respondents were already experiencing catastrophic health spending with a number of them already having challenges with paying their hospital bills. Hence, their need to be under health insurance coverage cannot be overemphasized.

### Awareness of the National Health Insurance Scheme and VCSHIP programs

There was a low level of awareness of the NHIS and much lower awareness of the VCSHIP amongst the in-patients studied. This was similar to the low level of awareness about health insurance found among artisans in Lagos,<sup>[16]</sup> while it was the contrast in Kwa-Zulu Natal in South Africa where >80% of the respondents were aware of their health insurance schemes.<sup>[17]</sup> The main source of the information was the health care providers in this study, followed by the media while the media took first place amongst the artisans in Lagos. The HMOs should take responsibility for increasing the awareness of the NHIS programs and the VCSHIP amongst the populace, even though there have been calls for more clarity of the HMO roles and responsibilities in the scheme.<sup>[18]</sup> As shown in this study, the healthcare providers have done better than all other stakeholders in creating awareness for the NHIS. Nonetheless,

**Table 6: Willingness to uptake the Vital Contributor Program of the National Health Insurance Scheme (n=133)**

Variables	Frequency (%)		
	Yes	No	Total
Willingness to register for VCSHIP	90 (67.7)	43 (32.3)	133 (100.0)
Not willing to register (reasons)			
Have insufficient money to register	30 (69.8)	13 (30.2)	43 (100.0)
Rarely fall ill	27 (62.8)	16 (37.2)	43 (100.0)
Preference for out of pocket payment	12 (27.9)	31 (72.1)	43 (100.0)
Lack of trust in government programs	18 (41.9)	25 (58.2)	43 (100.0)
Lack of trust in the insurance organizations	3 (7.0)	40 (93.0)	43 (100.0)
Not worth it due to health worker strikes	9 (20.9)	34 (79.1)	43 (100.0)
Payment in advance for an illness is a taboo	17 (39.5)	26 (60.5)	43 (100.0)
The limited scope of services covered	6 (14.0)	37 (86.0)	43 (100.0)
The registration process is cumbersome	2 (4.7)	41 (95.3)	43 (100.0)
Amount respondents were willing to pay			
₦15,000 (40 USD)	81 (90.0)	9 (10.0)	90 (100.0)
If yes to ₦15,000 (40 USD)			
₦30,000 (80 USD)	17 (21.0)	64 (79.0)	81 (100.0)
If no to ₦15,000 (40 USD)			
₦7500 (20 USD)	5 (55.6)	4 (44.4)	9 (100.0)

VCSHIP: Vital Contributor Social Health Insurance Program

individual determination, as evident in the willingness to pay by interested individuals is crucial to the uptake of the VCSHIP since it is yet to be made mandatory.

### Willingness to pay for the VCSHIP

A high proportion of the respondents (67.7%) were willing to pay for the VCSHIP program, and this was similar to the 65% who were willing to do the same in Berhan town of Ethiopia.<sup>[19]</sup> A much higher proportion of individuals in Nigerian households (97.3%) were willing to pay into the VCSHIP scheme according to the findings of the national survey conducted by the NHIS on it.<sup>[20]</sup> The difference in these findings may be secondary to the difference in their study population-healthy population in their study versus the ill in-patients in ours. This high willingness to uptake the VCSHIP is encouraging and suggests that if more awareness creation activities about the VCSHIP is implemented across the health facilities, and the country, the number of enrollees will greatly increase.

It is, however, disturbing that almost a third of the respondents were not willing to participate in the VCSHIP. Inadequate information about the benefits of the scheme and inadequate income were the major reasons that deterred them from participating in the VCSHIP. This finding is similar to those of the market men and women studied in Ibadan, a city in the neighboring state to our study location where economic reasons topped the list of the concerns of those unwilling to participate in the scheme.<sup>[21]</sup> Unlike the respondents in southern Ethiopia whose reasons for not joining the scheme were its poor implementation and the presumption to always be in good health and not for economic reasons.<sup>[22]</sup> The economic reason given by our respondents is an indication that their failure to register into the scheme may have led them

to further financial impoverishment and poverty. There is also the need for continuous provision of adequate information on the VCSHIP as an increase in the proportion of people willing to participate in it, implies more people with access to health services.

Lack of trust in the government was also a key factor that discouraged respondents from up-taking the VCSHIP. This finding was also similar to that of the study conducted among market men and women in Ibadan.<sup>[21]</sup> This is critical, and the government at various levels must address this challenge through increased transparency and accountability as regards the funds from the scheme. If being on the scheme does not guarantee the availability of drugs or treatment, then the people will never believe in it.

Knowledge about the benefits of NHIS was generally good. It was encouraging that 82% of the respondents knew what the benefit packages of NHIS entail. This probably influenced more than two-thirds who were willing to participate in the VCSHIP as its benefit packages are similar to those of the NHIS. This is a much better result compared to the high proportion of out-patients in a tertiary hospital with poor knowledge of the NHIS in Lagos state.<sup>[23]</sup>

One of the conditions for which our respondents would participate in the VCSHIP is if the premium is left at ₦15,000 (\$38.5) per annum as an effort to increase this amount may jeopardize the uptake of the VCSHIP and the targeted increased coverage of the NHIS schemes. This is not surprising as the findings from the survey conducted by the NHIS regulating body itself in Nigeria in 2013 showed that respondents were only willing to pay ₦1,200 (\$3) monthly totaling about ₦14,400 (\$36.9) per annum with the majority willing to pay <₦400 (\$1) per month which totals about ₦4,800 (\$) per annum.<sup>[20]</sup> These findings are

**Table 7: Factors associated with willingness to uptake the Vital Contributor Social Health Insurance Program**

Variables	Frequency (%)			Statistical test (df), P
	Willing	Unwilling	Total	
Age (years)				
18-64	80 (71.4)	32 (28.6)	112 (100.0)	$\chi^2=4.58$ (1); $P=0.032$
$\geq 65$	10 (47.6)	11 (52.4)	21 (100.0)	
Sex				
Male	44 (68.8)	20 (31.2)	64 (100.0)	$\chi^2=0.066$ (1); $P=0.797$
Female	46 (66.7)	23 (33.3)	69 (100.0)	
Educational status				
Some form of formal education	87 (71.9)	34 (28.1)	121 (100.0)	$P=0.002^*$
No formal education	3 (25.0)	9 (75.0)	12 (100.0)	
Patients' diagnosis				
Medically related	47 (83.9)	17 (26.6)	64 (100.0)	$\chi^2=1.876$ (1); $P=0.171$
Surgically related	43 (56.6)	26 (37.7)	69 (100.0)	
Number in respondents' household				
$\leq 5$	47 (66.2)	24 (33.8)	71 (100.0)	$\chi^2=0.071$ (1); $P=0.790$
$> 5$	39 (68.4)	18 (31.6)	57 (100.0)	
Median monthly income				
$\leq \text{N}30,000$ (80 USD)	47 (62.7)	28 (37.3)	75 (100.0)	$\chi^2=1.290$ (10); $P=0.258$
$> \text{N}30,000$ (80 USD)	39 (72.2)	15 (27.8)	54 (100.0)	
Employment status				
Currently have a job	69 (69.0)	31 (31.0)	100 (100.0)	$\chi^2=0.326$ (1); $P=0.568$
Have no job	21 (63.6)	12 (36.4)	33 (100.0)	
Socioeconomic status				
High	30 (76.9)	9 (23.1)	39 (100.0)	$\chi^2=0.253$ (1); $P=0.615$
Low	31 (81.6)	7 (18.4)	38 (100.0)	
Ease of affordability of drugs				
Difficult	48 (68.6)	22 (31.4)	70 (100.0)	$\chi^2=0.055$ (1); $P=0.815$
Easy	42 (66.7)	21 (33.3)	63 (100.0)	
Ever been unable to pay hospital bills				
Yes	8 (100.0)	0	8 (100.0)	$P=0.044^*$
No	82 (65.6)	43 (34.4)	125 (100.0)	
Current challenge with hospital bills				
Yes	25 (75.8)	8 (24.2)	33 (100.0)	$\chi^2=1.312$ (1); $P=0.252$
No	65 (65.0)	35 (35.0)	100 (100.0)	
A family member enrolled on NHIS				
Yes	7 (100.0)	0	7 (100.0)	$P=0.096^*$
No	83 (65.9)	43 (34.1)	126 (100.0)	
Awareness about the VCSHIP				
Yes	47 (83.9)	9 (16.1)	56 (100.0)	$\chi^2=11.117$ (1); $P=0.001$
No	43 (56.6)	33 (43.4)	76 (100.0)	
Knowledge of the NHIS benefits				
Good	21 (87.5)	3 (12.5)	24 (100.0)	$\chi^2=4.934$ (1); $P=0.026$
Poor	70 (64.2)	39 (35.8)	109 (100.0)	

\*Fishers exact test. NHIS: National Health Insurance Scheme, VCSHIP: Vital Contributor Social Health Insurance Program

very similar to those from our study and the findings of a study conducted among uninsured household heads in Tanzania.<sup>[24]</sup> The resistance to an upward review of the premium may eventually become a threat to the VCSHIP, as there should be a regular review of the actuarial costs of services being provided under the VCSHIP to ensure the sustainability of the scheme. If the current premium becomes unrealistic, it will surely affect the quality of the services provided and eventual loss of confidence in the scheme.

### Factors associated with the willingness to participate in and pay into the VCSHIP

Younger respondents in the working population, as well as those who are educated, were more willing to uptake the VCSHIP. This may not be far-fetched as those in the working population may be able to afford the premiums better, and being educated makes it easier for them to access information regarding the VCSHIP better. Age was found as a significant predictor of willingness to pay into a voluntary contributors

scheme among out-patients at a tertiary hospital in Lagos,<sup>[23]</sup> while education was found as the only predictor of willingness to pay among market men and women in Ibadan.<sup>[21]</sup> However, another study conducted in a northern state in Nigeria found household income being directly proportional to their respondents' willingness to pay for health insurance, while education was interestingly inversely proportional to it.<sup>[25]</sup>

The elderly in the dependent population in our study were not as willing to uptake the VCSHIP despite being at risk of frequent hospitalization from the diseases of senility. This could be as a result of their low financial power at this age. The government, as well as the family of these elderly, should take more responsibility in providing them financial protection against catastrophic health spending. This is, however, contrary to the findings conducted among adult patients too in a tertiary health facility in Lagos state, as they were more willing to register for health insurance.<sup>[23]</sup>

Respondents with an inability to pay for their health services were also more interested in paying into the VCSHIP scheme compared to those who were having fewer difficulties with their health expenditures. The health education provided should emphasize that health insurance helps to save for a rainy day. The ability to pay for health services today may not translate to the same at a later date. The ability to ever pay for healthcare may also not translate to the same ability for one's kith or kin. Hence, the importance of the pooled risk effect in the health insurance scheme. The health education activities should emphasize that participating in the VCSHIP safeguards us from health risks even when we presume we seldom fall ill, and others directly benefit from the pooled contributions more than we do individually.

Awareness of the VCSHIP program and knowledge of the NHIS benefit packages were significantly associated with respondents' willingness to pay into the VCSHIP. A community-based study conducted in Osun state also found that their respondents' willingness to pay into a health insurance scheme increased significantly with an increase in the level of awareness.<sup>[26]</sup> Knowledge of the benefits in the NHIS scheme is a build-up on the awareness of the scheme. Hence, if the awareness will positively influence willingness to pay, then knowledge of the benefits packages in it should do more. These findings further stress the need for all relevant stakeholders, the HMOs, the health providers, family and friends, and the regulating agencies to be consistent and frequent with educational messages to sensitize and inform the populace on the VCSHIP scheme. This, we believe, will help to increase the coverage of health insurance and the attainment of UHC, particularly in Nigeria.

## CONCLUSION

There was a low level of awareness of the VCSHIP and knowledge of the benefits of NHIS packages, and this low level of awareness was significantly associated with respondents' willingness to pay into the VCSHIP. There was a fairly high

proportion of respondents who were willing to pay into the VCSHIP. Young age, having some form of education and current inability to pay health bills were also factors significantly associated with willingness to pay for the VCSHIP by the in-patients studied. Inadequate income and information about the scheme as well as lack of trust in the scheme were a few of the reasons given by those unwilling to participate in the scheme. We recommend a qualitative exploratory study to explore in detail the reasons for both the willingness and unwillingness to pay into the scheme. We hope that these findings will inform programmatic decision making to improve VCSHIP uptake.

## Acknowledgment

Esan, OT is being supported by the Consortium for Advanced Research Training in Africa, which is funded by the Carnegie Corporation of New York (Grant No--B 8606.R02), Sida (Grant No: 54100029), the DELTAS Africa Initiative (Grant No: 107768/Z/15/Z)". This support is highly appreciated.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

## REFERENCES

1. UN The General Assembly. Global Health and Foreign Policy. New York, NY: USA; 2013. p. 1-6. Available from: <https://undocs.org/en/A/RES/67/81>. [Last accessed on 2020 May 25].
2. Wagstaff A, Flores G, Hsu J, Smits M, Chepynoga K, Buisman LR, *et al.* Progress on catastrophic health spending in 133 countries: A retrospective observational study. *Lancet Glob Heal* 2018;6:e169-79. Available from: <https://www.thelancet.com/action/consumeSharedSessionAction?MAID=doJUI3Jf9R8g61L21OLU1w%3D%3D&SERVER=WZ6myaEXBLEHX71BOVfvjg%3D%3D&JSESSIONID=aa1WTebE9Aeed8UVC3ix&ORIGIN=142813885&RD=RD> [Last accessed on 2020 May 25].
3. World Health Organisation. The World Health Report: Health Systems Financing- the Path to Universal Coverage. World Health Organisation; 2010. Available from: [https://apps.who.int/iris/bitstream/handle/10665/44371/9789241564021\\_eng.pdf;jsessionid=EEC100C880D85076BC458D1CDEB07B94?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/44371/9789241564021_eng.pdf;jsessionid=EEC100C880D85076BC458D1CDEB07B94?sequence=1). [Last accessed on 2020 May 25].
4. World Bank Group. UHC in Africa: A Framework for Action. World Bank Group; 2016. Available from: [https://www.who.int/health\\_financing/documents/uhc-in-africa-a-framework-for-action.pdf](https://www.who.int/health_financing/documents/uhc-in-africa-a-framework-for-action.pdf). [Last accessed on 2020 May 25].
5. Aregbeshola BS, Khan SM. Out-of-pocket payments, catastrophic health expenditure and poverty among households in Nigeria 2010. *Int J Health Policy Manag* 2018;7:798-806.
6. National Health Insurance Scheme. National Health Insurance Scheme: Operation Guidelines. Nigeria; 2012. Available from: [https://www.nhis.gov.ng/file/repository/NHIS\\_OPERATIONAL\\_GUIDELINES.pdf](https://www.nhis.gov.ng/file/repository/NHIS_OPERATIONAL_GUIDELINES.pdf) [Last accessed on 2019 May 25].
7. Aregbeshola BS, Khan SM. Predictors of enrolment in the national health insurance scheme among women of reproductive age in Nigeria. *Int J Health Policy Manag* 2018;7:1015-23.
8. Ogundeji YK, Ohiri K, Agidani A. A checklist for designing health insurance programmes A proposed guidelines for Nigerian states. *Health Res Policy Syst* 2019;17:81.
9. National Population Commission (NPC) Nigeria and ICF. Nigeria Demographic and Health Survey 2018. Abuja, Nigeria and Rockville, Maryland, USA: NPC and ICF; 2019.

10. Jo B, Wo A. Awareness, attitude and willingness of artisans in osun state southwestern Nigeria to participate in community based health insurance. *J Community Med Prim Heal Care* 2012;24:1-10.
11. Onwujekwe OE, Ibe O, Torpey K, Dada S, Uzochukwu B, Sanwo O. Examining geographic and socio-economic differences in outpatient and inpatient consumer expenditures for treating HIV/AIDS in Nigeria. *J Int AIDS Soc* 2016;19:20588:1-9.
12. OAUTHC. Welcome to OAUTHC: Ife Philosophy/Ife Concept. The Obafemi Awolowo Univeristy Teaching Hospitals Complex Nigeria; 2019. Available from: <http://oauthc.com/readmore.aspx>. [Last accessed on 2020 May 12].
13. Adebisi SA, Odiachi JM, Chikere NA. The National Health Insurance Scheme (NHIS) in Nigeria: Has the policy achieved its intended objectives? *Acad J Econ Stud* 2019;5:8.
14. O'Brien B, Viramontes JL. Willingness to pay: A valid and reliable measure of health state preference? *Med Decis Making* 1994;14:289-97.
15. Makaryus AN, Friedman EA. Patients' understanding of their treatment plans and diagnosis at discharge. *Mayo Clin Proc* 2005;80:991-4.
16. Campbell PC, Owoka OM, Odugbemi TO. National health insurance scheme: Are the artisans benefitting in Lagos state, Nigeria? *J Clin Sci* 2016;13:122-31.
17. Setswe G, Muyanga S, Witthuhn J, Nyasulu P. Public awareness and knowledge of the National Health Insurance in South Africa. *Pan Afr Med J* 2015;22:19.
18. Obikeze E, Onwujekwe O. The roles of health maintenance organizations in the implementation of a social health insurance scheme in Enugu, Southeast Nigeria: A mixed-method investigation. *Int J Equity Health* 2020;19:33.
19. Mekonnen WN, Tegene MW, Mekonnen AB. Willingness to join and pay for social health insurance scheme among employees in debere berhan town. *Res Sq*. p. 1-23. [Preprint].
20. Centre for Health Economics and Development. Willingness To Pay For Voluntary Contributor Social Health Insurance (VCSHI) In Nigeria. Centre for Health Economics and Development Nigeria; 2013. Available from: <https://www.checod.org/willingness-to-pay-for-voluntary-contributor-social-health-insurance-vcshi-in-nigeria/>. [Last accessed on 2020 May 20].
21. Adewole AD, Akanbi SA, Osungbade KO, Bello S. Expanding health insurance scheme in the informal sector in Nigeria: Awareness as a potential demand-side tool. *Pan Afr Med J* 2017;27:1-11.
22. Agago TA, Woldie M, Ololo S. Willingness to join and pay for the newly proposed social health insurance among teachers in Wolaita Sodo Town, South Ethiopia. *Ethiop J Health Sci* 2014;24:195-202.
23. Abiola AO, Ladi-Akinyemi TW, Oyeleye OA, Oyeleke GK, Olowoselu OI, Abdulkareem AT. Knowledge and utilisation of National Health Insurance Scheme among adult patients attending a tertiary health facility in Lagos State, South-Western Nigeria. *Afr J Prim Health Care Fam Med* 2019;11:e1-e7.
24. Kuwawenaruwa A, Macha J, Borghi J. Willingness to pay for voluntary health insurance in Tanzania. *East Afr Med J* 2011;88:54-64.
25. Ogundeji YK, Akomolafe B, Ohiri K, Butawa NN. Factors influencing willingness and ability to pay for social health insurance in Nigeria. *PLoS One* 2019;14:e0220558.
26. Oyekale AS. Factors influencing households' willingness to pay for national health insurance scheme (NHIS) in Osun State, Nigeria. *Stud Ethno-Med* 2012;6:167-72.