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Service Utilization and Client Satisfaction with Quality of Healthcare among Enrollees of Health Insurance Attending a Tertiary Hospital in South-Western Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. Authors AZA and COO did conceptualization and designed the study. Authors AZA, OAA and AIA collected the data. Authors AZA and COO interpreted and analyzed the data. Authors AZA, OAA, AIA and COO drafted the article. Authors COO and AZA revised the article. All authors read and approved the final manuscript.

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ABSTRACT

Background: The establishment of National Health Insurance Scheme (NHIS) in Nigeria was the national strategy of combating the appalling health indices and rising cost of healthcare in the country. However, this vision remains a shadow of itself after over a decade of implementation of the scheme. This study sought to assess the level of service utilization and client satisfaction with

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quality of healthcare among enrollees attending NHIS Clinic of Lagos University Teaching Hospital (LUTH).

Methods: This is a cross-sectional study among enrollees of NHIS Clinic of LUTH. An interviewer-administered questionnaire was used to collect data from respondents over a period of eight weeks. A close-ended questionnaire was used to assess service utilization while SERVQUAL questionnaire was used to assess client satisfaction with quality of healthcare services. The data was collected from 377 participants using systematic sampling technique and analyzed with Statistical Package for Social Sciences (SPSS). In determining an association, a *P-value* of ≤0.05 was considered statistically significant in the study.

Results: Among the respondents, 88.1% asserted that NHIS enhanced their utilization of health facility and 93.9% were able to access clinic anytime they wanted. The assessment of client satisfaction showed that 73.7% of the respondents were satisfied with the perceived quality of care while 13.3% of the respondents were dissatisfied. Age, marital status, employment status and average monthly income of respondents were statistically significant factors affecting service utilization.

Conclusion: The study shows that NHIS enrolment enhanced service utilization by 88.1% without compromising the quality of healthcare services.

Keywords: Service utilization; client satisfaction; NHIS.

1. INTRODUCTION

The appalling national health indices that led Nigeria's health sector to be ranked as 187th out of 191 member states by World Health Organization (WHO) in 2000 amidst rising cost of healthcare services necessitated the drive for the implementation of NHIS National Health Insurance Scheme (NHIS) [1,2]. NHIS is a corporate body established under Act 35 of 1999 constitution of the Federal Republic of Nigeria which became operational in 2005. It is saddled with the responsibility of regulating and providing health insurance in Nigeria [3].

Healthcare financing in Nigeria has witnessed several systems of funding ranging from direct payment such as out-of-pocket payment to third party payment such as free health purchase, social health insurance, retainership, in-built health facilities within corporate organizations and private health indemnity insurance. Health insurance plays a pivotal role in alleviating the financial burden of healthcare services, especially for the poor and it protects against catastrophic health expenditures that out-of-pocket payment may cause [4]. Contrary to the trend in most developed countries, out-of-pocket payment accounts for most of the health expenditures in Nigeria and it was estimated at 64.59% of total health expenditure in 2002 [3,5,6]. The attendant financial burden of out-of-pocket payment has culminated in alternative health seeking behavior, self-medication, patronage of traditional healers and delayed presentation among healthcare users in Nigeria [7].

The drive for universal health coverage in Nigeria received a boost when NHIS expanded the scope of its coverage in the formal sector comprising employees of federal government, employees of organized private sector and tertiary students; and also mobilized resources towards the take-off of the informal sector comprising voluntary contributors and community-based scheme. The NHIS was conceived to be a viable option to increase sources of healthcare financing and reduce the over-dependence on budgetary allocation that is grossly insufficient. A study in Ilorin north-central Nigeria found an increase in staff enrolment into the insurance scheme with an appreciable increase of 144% in the utilization of service after the commencement of NHIS [1]. A few studies in West Africa also found that the introduction of health insurance in Ghana led to an enhanced utilization of health services [8,9].

However, more than a decade after the implementation, this vision is still a mirage of itself as health insurance coverage is still below 10% despite strategies at increasing the scope from formal sector to the informal sector such as Community Based Social Health Insurance Program (CBSHIP), Voluntary Contributor Social Health Insurance Program (VCSHIP). A survey assessing the different financing mechanisms used in Nigeria found that health expenditure is characterized by low donor funding, low funding from the government, overwhelming out-of-pocket payments and underwhelming health insurance coverage [10].

It is increasingly becoming evident that client satisfaction is a key parameter in the assessment of quality of care which may ultimately influence the uptake of healthcare services. However, there are insufficient studies on service utilization and satisfaction with quality of care among enrollees of health insurance in Nigeria and few studies that dealt with enrollees' experiences and worries in West African countries have pointed out the need for research in the area of client satisfaction [11]. Hence, this study aimed at determining the level of service utilization and client satisfaction among enrollees of health insurance, as well as finding factors that will boost uptake of healthcare services.

2. MATERIALS AND METHODOLOGY

2.1 Study Site

This study was conducted at the NHIS Clinic of LUTH in Lagos State, south-western Nigeria. LUTH is a 761-bedded tertiary hospital that was established in 1962 and has since then been involved in the training of both undergraduate and postgraduate medical, dental and pharmacy students. The NHIS Clinic is in the Department of Family Medicine of LUTH and it provides clinical services to all enrollees of NHIS that chose LUTH as their care provider.

2.2 Study Population

The participants of this study were patients of NHIS Clinic of LUTH.

2.3 Study Design

This is a hospital-based cross-sectional study investigating the service utilization and client satisfaction with quality of healthcare among enrollees of NHIS Clinic of LUTH.

2.4 Determination of Sample Size

The minimum sample size was determined to be 377 using the formula for estimating the proportion of binary outcome of a descriptive study with confidence level of 95%.

2.5 Sampling Technique

A systematic random sampling technique was carried out with a sampling interval of eight (based on the study population and sample size).

2.6 Data Collection

The study was conducted over 8 weeks using a pre-tested, semi-structured questionnaire and included NHIS enrollees who were at least 18 years of age and known out-patients of NHIS Clinic for at least one year. A modified SERVQUAL questionnaire was adapted for assessing client satisfaction with quality of healthcare services received by them [12,13]. The 31-item questionnaire was used to assess 5 important domains. The first 7 items assessed the tangible element domain (items 21-27 on the questionnaire). The reliability domain is made up of 6 items (items 28-33 on the questionnaire) while the responsiveness domain contained 7 items (items 34-40 on the questionnaire). The assurance or security domain has 6 items (items 41-46 on the questionnaire) while empathy domain composed of 5 items (items 47-51 on the questionnaire). All items have 5 Likert scale responses namely 'very dissatisfied', 'dissatisfied', 'uncertain', 'satisfied' and 'very satisfied'. For ease of analysis, the responses were further categorized into 3 groups namely 'dissatisfied' for very dissatisfied and dissatisfied, 'uncertain' and 'satisfied' for very satisfied and satisfied.

2.7 Data Analysis

SPSS were used for data entry and analysis, and the proportions of service utilization and client satisfaction were presented in frequency tables. The means and standard deviations of few socio-demographic data were estimated while other socio-demographic variables were presented in frequency tables. The association between client satisfaction and service utilization was measured using chi square, and logistic regression was used where appropriate. An association with *P-value* of 0.05 and below was considered statistically significant in this study.

3. RESULTS

The majority of respondents (28.1%) were within 18 - 27 years age group and the mean age of respondents was 38.59 years. The elderly population constituted the least age distribution. The majority of the respondents were female and married. Only one of the respondents was living with partner. Also, the majority of the respondents were from a nuclear family while respondents from single parent and extended families were 7.7% each. Christianity constituted the religion of 82.2% of respondents and Yoruba was the major ethnic group (Table 1A).

The majority of the respondents were employed (63.7%) and students accounted for 28.4% of the respondents while only 2.7% of the respondents were unemployed. Among the employed respondents, government employees accounted for 88.3% while non-governmental employees accounted for least distribution (2.5%). The occupations of the employed respondents revealed that professionals accounted for almost half of the respondents (45.4%) and the unskilled workers accounted for 11.3% of the study participants (Table 1B).

The majority of the respondents were principal enrollees (88.1%). It can also be depicted that not less than 51.2% of the respondents had either no dependent or one dependent while only about a quarter had 2 - 3 dependents. About one-third of the respondents had been on the Scheme for duration of 7 - 9 years. It was also found that utilization of healthcare service was enhanced in 88.1% of the respondents and 40.1% were able to visit Clinic regularly as a result NHIS enrolment. However, about 7.2% respondents visited the Clinic too frequently because of their enrolment. The majority of respondents (93.9%) were able to access Clinic anytime there was need for it and about 81.7% respondents attended Clinic at least once in the last six months (Table 2).

In Table 3, majority of the respondents were satisfied with the assurance domain of quality healthcare services while the reliability domain of quality services was dissatisfied by majority of the respondents (20.6%). The overall level of satisfaction with quality of healthcare was 73.7% while 13.3% of the respondents were dissatisfied with the quality of healthcare.

There was a strong association between age of the respondents and service utilization at a significant level of 0.008. It also showed that a strong association between marital status of the respondents and service utilization with a *P-value* of 0.001.Therefore, age and marital status were likely to have affected the utilization of service among the respondents. However, the associations between service utilization and gender, family type, religion and ethnic group were not statistically significant (Table 4A).

Table 1A. Socio-demographic characteristics of the respondents

Socio-demographic data		Frequency	Percentage (%)	
Age (Years)	18-27	106	28.1	Mean = 38.59
	28-37	77	20.4	SD = 13.692
	38-47	77	20.4	
	48-57	79	21.0	
	58-67	36	9.5	
	68 and above	2	0.5	
	Total	377	100	
Gender	Male	153	40.5	
	Female	224	59.4	
	Total	377	100	
Marital status	Single	127	33.7	
	Married	229	60.7	
	Divorced	11	2.9	
	Living with partner	1	0.3	
	Separated	9	2.4	
	Total	377	100.0	
Family type	Nuclear	312	82.8	
	Nuclear Dyad	5	1.3	
	Single Parent	29	7.7	
	Extended	29	7.7	
	Blended	2	0.5	
	Total	377	100.0	
Religion	Christianity	310	82.2	
	Islam	64	17.0	
	Others	3	0.8	
	Total	377	100.0	
Ethnic group	Hausa	4	1.1	
	Igbo	85	22.5	
	Yoruba	236	62.6	
	Others	52	13.8	
	Total	377	100.0	

Table 1B. Socioeconomic characteristics of the respondents

Socioeconomic characteristics		Frequency	Percentage (%)
Educational status	Primary Education	11	2.9
	Secondary Education up to JSS3	3	0.8
	Secondary Education Completed	52	13.8
	Tertiary Education	236	62.6
	Postgraduate degree	75	19.9
	Total	377	100.0
Employment status	Unemployed	10	2.7
	Employed	240	63.7
	Retired	20	5.3
	Student	107	28.4
	Total	377	100.0
Type of employment	Self-employed	22	9.2
	Government Employee	212	88.3
	Non-government Employee	6	2.5
	Total	240	100.0
Occupational category	Professional	109	45.4
	Managerial	26	10.8
	Skilled Non-manual	25	10.4
	Skilled Manual	22	9.2
	Partly Skilled	31	12.9
	Unskilled	27	11.3
	Total	240	100.0

Table 2. The service utilization of NHIS Clinic of LUTH by the respondents

Service utilization		Frequency	Percentage (%)	
Enrolment status	Principal enrollees	332	88.1	
	Dependent	45	11.9	
	Total	377	100.0	
Number of dependents of principal enrollees	0-1	170	51.2	Median = 1.00
	2-3	84	25.3	
	4-5	78	23.5	
	Total	332	100.0	
How long have you been on NHIS (in years)	1-3	159	42.2	Mean = 3.83
	4-6	96	25.4	
	7-9	122	32.4	
	Total	377	100.0	
Are you able to access care now because of NHIS enrolment	Yes	332	88.1%	
	No	45	11.9	
	Total	377	100.0	
Do you visit Clinic regularly now because of NHIS enrolment (Participants with chronic diseases)	Yes	151	40.1	
	No	226	59.9	
	Total	377	100.0	
Do you visit Clinic too frequently because of NHIS enrolment	Yes	27	7.2	
	No	350	92.8	
	Total	377	100.0	
Are you able to access Clinic anytime you want	Yes	354	93.9	
	No	23	6.1	
	Total	377	100.0	
Number of Clinic visits in the past 6 months	Nil	69	18.3	Mean = 1.98
	1-4	270	71.6	
	5-8	36	9.6	
	9-12	2	0.5	
	Total	377	100.0	

The employment status was significantly associated with service utilization at a level of 0.016. Conversely, educational status, type of employment and occupation are not significantly associated with service utilization. Also, it could be depicted that average monthly income is significantly associated with service utilization at a significance level of 0.015 (Table 4B).

There was a significant association between respondents who were single and service utilization (*P-value* 0.045). This showed that being single reduces the risk of using healthcare services by 0.125 in this study. Also, there was a significant association between employment status and service utilization (*P-value* 0.000). However, there was no significant association between age, average monthly income and service utilization. Hence, they are less likely to be factors affecting service utilization among enrollees attending NHIS Clinic of LUTH (Table 5).

Table 3. Overall level of client satisfaction with quality of healthcare services among the respondents

Client Satisfaction	Dissatisfied	Uncertain	Satisfied	Total
Tangible domain	14.8%	11.3%	73.9%	100.0%
Reliability domain	20.6%	12.9%	66.5%	100.0%
Responsiveness domain	18.0%	13.2%	68.8%	100.0%
Assurance domain	6.5%	10.0%	83.5%	100.0%
Empathy domain	6.6%	17.5%	75.9%	100.0%
Average total	13.3%	13.0%	73.7%	100.0%

Table 4A. Association between demographic characteristics and service utilization of the respondents

Factors affecting utilization		Service utilization			X^2	Df	P-value
		No	Yes	Total			
Age (Years)	18 – 27	6 (5.7%)	100 (94.3%)	106 (100.0%)	15.503	5	0.008
	28 – 37	4 (5.2%)	73 ((94.8%)	77 (100.0%)			
	38 – 47	13 (16.9%)	64 (83.1%)	77 (100.0%)			
	48 – 57	14 (17.7%)	65 (82.3%)	79 (100.0%)			
	58 – 67	8 (22.2%)	28 (77.6%)	36 (100.0%)			
	68 and above	0 (0.0%)	2 (100.0%)	2 (100.0%)			
	Total	45 (11.9%)	332 (88.1%)	377 (100.0%)			
Gender	Male	15 (9.8%)	138 (90.2%)	153 (100.0%)	1.114	1	0.291
	Female	30 (13.4%)	194 (86.6%)	224 (100.0%)			
	Total	45 (11.9%)	332 (88.1%)	377 (100.0%)			
M/status	Single	6 (4.7%)	121 (95.3%)	127 (100.0%)	19. 516	4	0.001
	Married	33 (14.4%)	196 (85.6%)	229 (100.0%)			
	Divorced	5 (45.5%)	6 (54.5%)	11 (100.0%)			
	Living with	0 (0.0%)	1 (100.0%)	1 (100.0%)			
Partner	Separated	1 (11.1%)	8 (88.9%)	9 (100.0%)			
	Total	45 (11.9%)	332 (88.1%)	377 (100.0%)			
Family type	Nuclear	35 (11.2%)	277 (88.8%)	312 (100.0%)	2.917	4	0.572
	Nuclear Dyad	1 (20.0%)	4 (80.0%)	5 (100.0%)			
	Single Parent	6 (20.7%)	23 (79.3%)	29 (100.0%)			
	Extended	3 (10.3%)	26 (89.7%)	29 (100.0%)			
	Blended	0 (0.0%)	2 (100.0%)	2 (100.0%)			
	Total	45 (11.9%)	332 (88.1%)	377 (100.0%)			
Religion	Christianity	34 (11.0%)	276 (89.0%)	310 (100.0%)	2.362	2	0.307
	Islam	11 (17.2%)	53 (82.8%)	64 (100.0%)			
	Others	0 (0.0%)	3 (100.0%)	3 (100.0%)			
	Total	45 (11.9%)	332 (88.1%)	377 (100.0%)			
Ethnic group	Hausa	0 (0.0%)	4 (100.0%)	4 (100.0%)	0.633	4	0.889
	Igbo	11 (12.9%)	74 (87.1%)	85 (100.0%)			
	Yoruba	28 (11.9%)	208 (88.1%)	336 (100.0%)			
	Others	6 (11.5%)	46 (88.5%)	52 (100.0%)			
	Total	45 (11.9%)	332 (88.1%)	377 (100.0%)			

***M/status = Marital Status*

Table 4B. Association of socioeconomic characteristics and service utilization of respondents

Factors affecting utilization	Service utilization			X^2	df	P-value
	No	Yes	Total			
Educational status				5.057	4	0.281
Primary education	3 (27.3%)	8 (72.7%)	11 (100.0%)			
Secondary education up to JSS3	1 (33.3%)	2 (66.7%)	3 (100.0%)			
Secondary education completed	8 (15.4%)	44 (84.6%)	52 (100.0%)			
Tertiary education	24 (10.2%)	212 (89.8%)	236 (100.0%)			
Postgraduate education	9 (12.0%)	66 (88.0%)	75 (100.0%)			
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)			
Employment status				10.264	3	0.016
Unemployed	0 (0.0%)	10 (100.0%)	10 (100.0%)			
Employed	38 (15.6%)	202 (84.2%)	240 (100.0%)			
Retired	2 (10.0%)	18 (90.0%)	20 (100.0%)			
Student	5 (4.7%)	102 (85.3%)	107 (100.0%)			
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)			
Employment type				1.925	2	0.382
Self-employed	5 (22.7%)	17 (77.3%)	22 (100.0%)			
Government employee	33 (15.6%)	179 (84.4%)	212 (100.0%)			
Non-governmental employee	0 (0.0%	6 (100.0%)	6 (100.0%)			
Total	38 (15.8%)	202 (84.2%)	240 (100.0%)			
Occupational category				3.440	5	0.633
Professional	13 (11.9%)	96 (88.1%)	109 (100.0%)			
Managerial	5 (19.2%)	21 (80.8%)	26 (100.0%)			
Skilled non-manual	4 (16.0%)	21 (84.0%)	25 (100.0%)			
Skilled manual	3 (13.6%)	19 (86.4%)	22 (100.0%)			
Semi-skilled	7 (22.6%)	24 (77.4%)	31 (100.0%)			
Unskilled	6 (22.2%)	21 (77.6%)	27 (100.0%)			
Total	38 (15.8%)	202 (84.2%)	240 (100.0)			
Average monthly income (₦)				12.367	4	0.015
<50000	13 (7.7%)	156 (92.3%)	169 (100.0%)			
50000 - <100000	15 (15.5%)	82 (84.5%)	97 (100.0%)			
100000 - <200000	8 (10.3%)	70 (89.7%)	78 (100.0%)			
200000 – 500000	9 (28.1%)	23 (71.9%)	32 (100.0%)			
≥500000	0 (0.0%)	1 (100.0%)	1 (100.0%)			
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)			

Table 5. Logistic regression of the factors affecting service utilization

Factors affecting utilization	Service utilization					
	Coefficient	Standard error	P-value	Odds ratio	95% CI	
					Lower	Upper
Age (Years)						
18 – 27	1.491	1.049	0.155	4.441	0.569	34.675
28 – 37	0.133	1. 028	0.897	1.142	0.152	8.571
38 – 47	-0.041	1.052	0.969	0.960	0.122	7.548
48 – 57	-0.520	1.119	0.642	0.595	0.066	5.329
58 – 67	18.717	28420.722	0.999	134435029.6	0.000	-
Marital status						
Married	-0.251	0.935	0.788	0.778	0.125	4.863
Single	-2.081	1.040	0.045	0.125	0.016	0.0958
Divorced	19.398	40192.970	1.000	265600118.5	0.000	-
Living with partner	0.289	1.440	0.841	1.336	0.079	22.443
Employment status						
Unemployed	-18.991	12261.265	0.000	0.000	0.000	-
Employed	-17.791	12261.265	0.000	0.000	0.000	-
Retired	-17.469	12261.265	0.000	0.000	0.000	-

Factors affecting utilization	Service utilization					
	Coefficient	Standard error	P-value	Odds ratio	95% CI	
					Lower	Upper
Average monthly income (₦)						
<50000	0.028	0.498	0.955	1.029	0.388	2.729
50000 - <100000	0.788	0.575	0.171	2.198	0.713	6.783
100000 - <200000	-0.184	0.594	0.757	0.832	0.260	2.669
200000 - <500000	20.436	40192.970	1.000	750363741.7	0.000	-

Table 6. Association between responsiveness domain of client satisfaction and service utilization of the respondents

Client Satisfaction	Service Utilization			X^2	Fisher's exact	df	P-value
	No	Yes	Total				
Promptness of service given to patients.				3.245			0.197
Dissatisfied	15 (17.4%)	71 (82.6%)	86 (100.0%)				
Uncertain	5 (11.1%)	40 (88.9%)	45 (100.0%)				
Satisfied	25 (10.2%)	221 (88.9%)	246 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Responsiveness of doctors to patients' needs.					5.455		0.047
Dissatisfied	2 (12.5%)	14 (87.5%)	16 (100.0%)				
Uncertain	7 (26.9%)	19 (73.1%)	26 (100.0%)				
Satisfied	36 (10.7%)	299 (89.3%)	335 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Responsiveness of nurses to patients' needs.				1.484		2	0.476
Dissatisfied	3 (7.1%)	39 (92.9%)	42 (100.0%)				
Uncertain	7 (15.6%)	38 (84.4%)	45(100.0%)				
Satisfied	35 (12.1%)	255 (87.9%)	290 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Responsiveness of pharmacists to patients' needs.				0.162		2	0.922
Dissatisfied	8 (13.1%)	53 (86.9%)	61 (100.0%)				
Uncertain	7 (12.7%)	48 (87.3%)	55 (100.0%)				
Satisfied	30 (11.5%)	231 (88.5%)	261 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Attitude of staff in instilling confidence in patients.					0.219		0.932
Dissatisfied	5 (12.2%)	36 (87.8%)	41 (100.0%)				
Uncertain	6 (10.0%)	54 (90.0%)	60 (100.0%)				
Satisfied	34 (12.3%)	242 (87.7%)	276 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Availability of staff while needed and demanded.				1.557		2	0.459
Dissatisfied	3 (6.8%)	41 (93.2%)	44 (100.0%)				
Uncertain	7 (10.6%)	59 (89.4%)	66 (100.0%)				
Satisfied	35 (13.1%)	232 (86.9%)	267 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Length of waiting time.				2.079		2	0.354
Dissatisfied	25 (13.4%)	161 (86.6%)	186 (100.0%)				
Uncertain	3 (6.0%)	47 (94.0%)	50 (100.0%)				
Satisfied	17 (12.1%)	124 (87.9%)	141 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				

In Tables 6 and 7, there was a strong association between level of client satisfaction with the responsiveness of doctors to patients' needs and service utilization with a *P-value* of 0.047. Similarly, there was a significant association between dignity and respect accorded patients

and service utilization (p = 0.023) and client satisfaction feedback obtained from patients was significantly associated with service utilization among respondents (p = 0.029) in assurance and empathy domain of client satisfaction respectively. However, there were no statistically significant associations in other domains of client satisfaction.

In the Fig. 1, the majority of the respondents (44.8%) earned less than ₦50,000 monthly while only one respondent (0.3%) earned more than ₦500,000 monthly.

4. DISCUSSION

The gender distribution in this study showed a female preponderance of 59.4% of the respondents which is consistent with most similar studies [1,14] this may probably be due to the better health seeking behavior among female folks. However, a study in Ibadan, South-western Nigeria found a male preponderance which may be attributable to the fact that the study was conducted in a health care provider where majority of their NHIS enrollees was factory workforce which is expected to be dominated by men [15].

The majority of the respondents were married (60.7%) which is in consonance with the previous NHIS studies in Nigeria [1,15]. Again, this could be because the bulk of principal enrollees of NHIS are the workforce who are mostly adults and married. A study in Ghana reported that single enrollees constituted the bulk of their enrollees which is in contrast to this study that excluded children (age younger than 18 years) during the design of the study [16]. Presently in Nigeria, majority of the NHIS enrollees are from formal sector, they are more likely to be educated and of nuclear family type. This was reinforced in the current study as 82.8% of the respondents were from a nuclear family and every respondent was found to have formal education with tertiary and postgraduate degrees accounting for 62.6% and 19.9% respectively. This study was conducted in Lagos, Nigeria which is predominantly populated by Yoruba and Christian. The result of this study further buttressed this as Yoruba accounted for 62.6% and Christian accounted for 82.2%. The result of this study was also similar to the findings reported in Ibadan, South-western Nigeria among beneficiaries of health insurance [15].

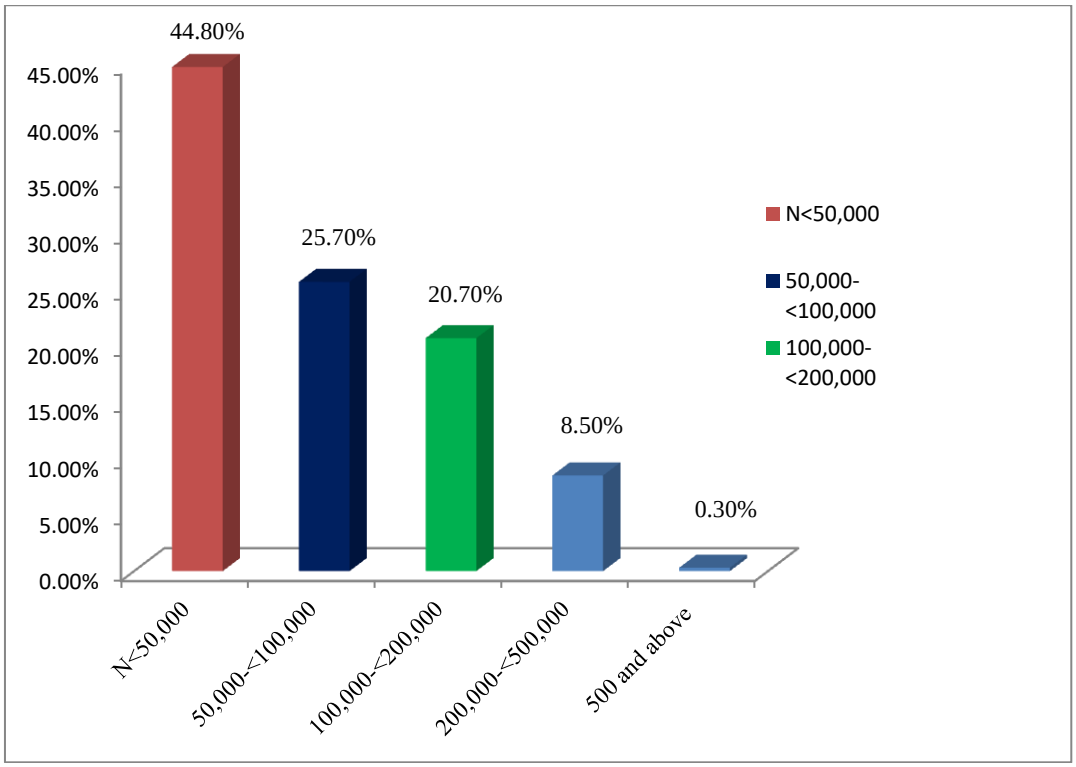

Fig. 1. Average monthly income of the respondents

**The unit of the data on the x-axis (income axis) is ₦ (Naira)*

***The prevailing exchange rate at the time of data collection was 360 Naira to 1 Dollar*

Table 7. Association between assurance domain of client satisfaction with quality of healthcare and service utilization of the respondents

Client Satisfaction	Service Utilization			X^2	Fisher's Exact	df	P-value
	No	Yes	Total				
Courteousness and friendliness of your doctors.					0.687		0.733
	1 (16.7%)	5 (83.3%)	6 (100.0%)				
Dissatisfied	2 (12.5%)	14 (87.5%)	16 (100.0%)				
Uncertain	42 (11.8%)	313 (88.2%)	355 (100.0%)				
Satisfied	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Total							
Courteousness and friendliness of your nurses.					2.023		0.357
Dissatisfied	2 (5.0%)	38 (95.0%)	40 (100.0%)				
Uncertain	7 (13.7%)	44 (86.3%)	51 (100.0%)				
Satisfied	36 (12.5%)	250 (87.4%)	355 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Courteousness and friendliness of your pharmacists.					0.045		1.000
Dissatisfied	4 (10.8%)	33 (89.2%)	37 (100.0%)				
Uncertain	8 (11.4%)	62 (88.6%)	70 (100.0%)				
Satisfied	33 (12.2%)	237 (87.8%)	270 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Spectrum of knowledge of your doctors.					0.453		0.902
Dissatisfied	0 (0.0%)	8 (100.0%)	8 (100.0%)				
Uncertain	3 (11.5%)	23 (88.5%)	26 (100.0%)				
Satisfied	42 (12.2%)	301 (87.8%)	343 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Dignity and respect accorded to patients.					7.160		0.023
Dissatisfied	1 (3.3%)	29 (96.7%)	30 (100.0%)				
Uncertain	9 (25.0%)	27 (75.0%)	36 (100.0%)				
Satisfied	35 (11.3%)	276 (88.7%)	311 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Content of information given to patients.					0.650		0.737
Dissatisfied	4 (16.0%)	21 (84.0%)	25 (100.0%)				
Uncertain	3 (10.7%)	25 (89.3%)	28 (100.0%)				
Satisfied	38 (11.7%)	286 (88.3%)	324 (100.0%				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				

Table 8. Association between empathy domain of client satisfaction with quality of healthcare and service utilization of the respondents

Client Satisfaction	Service Utilization			X^2	Fisher's Exact	df	P-value
	No	Yes	Total				
Feedback obtained from patients.					6.766		0.029
Dissatisfied	8 (26.7%)	22 (73.3%)	30 (100.0%)				
Uncertain	6 (7.5%)	74 (92.5%)	80 (100.0%)				
Satisfied	31 (11.6%)	236 (88.4%)	267 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				

Client Satisfaction	Service Utilization			X^2	Fisher's Exact	df	P-value
	No	Yes	Total				
Doctors paying particular attention to values & emotions of patients.					3.316		0.194
Dissatisfied	7 (19.4%)	29 (80.6%)	36 (100.0%)				
Uncertain	8 (15.1%)	45 (84.9%)	53 (100.0%)				
Satisfied	30 (10.4%)	258 (89.6%)	288 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Doctors having patients' best interest at heart.					3.845		0.128
Dissatisfied	4 (28.6%)	10 (71.4%)	14 (100.0%)				
Uncertain	7 (12.7%)	47 (87.0%)	54 (100.0%)				
Satisfied	34 (11.0%)	275 (89.0%)	309 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Nurses having patients best interest at heart.					0.889		0.628
Dissatisfied	4 (13.8%)	25 (86.2%)	29 (100.0%)				
Uncertain	8 (9.2%)	79 (90.8%)	87 (100.0%)				
Satisfied	33 (12.6%)	228 (87.4%)	261 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				
Doctors understanding specific needs of patients.					5.501		0.053
Dissatisfied	3 (20.0%)	12 (80.0%)	15 (100.0%)				
Uncertain	11 (20.0%)	44 (80.0%)	55 (100.0%)				
Satisfied	31 (10.1%)	276 (89.9%)	307 (100.0%)				
Total	45 (11.9%)	332 (88.1%)	377 (100.0%)				

Financial constraint has been observed to constitute a major barrier to accessing healthcare globally and especially in low- and middle-income countries like Nigeria. This downplays the effort of health stakeholders towards achieving universal access to healthcare [2]. A study in Abakaliki, south-eastern Nigeria reported that out-of-pocket payment was the major source of healthcare financing and most respondents opted for alternative remedy such as herbal preparation, self-medication and not seeking healthcare at all due inability to afford out-of-pocket payment as most of the respondents were poor [7]. This finding was also replicated in this study where nearly half of the respondents (44.8%) earned below fifty thousand naira monthly. This poor earning could have probably hindered their access to health facility if they were not enrolled on NHIS. This underscores the paramount role of NHIS in cushioning the catastrophic effect of out-of-pocket payment as most of the respondents could have been denied access to LUTH on account of financial constraint.

A number of studies across the world have shown that health insurance enhances service utilization of healthcare [17–21]. In this study, 88.1% of the respondents also stated that NHIS has enhanced their usage of healthcare services. Moreover, it has been reported that health insurance enhances utilization of emergency and elective utilization of outpatient and inpatient facilities [22,23]. In this study, it was found that 93.9% the respondents were able to access both outpatient and inpatient care anytime the need arose. Also, 81.7% of the respondents visited the Clinic at least once in the past six months which further reinforces the improved service utilization following enrolment on NHIS.

Client satisfaction is a measure of the outcome of healthcare services among users of health facilities. In this study, SERVQUAL questionnaire was used to assess the level of satisfaction with quality of care received by the respondents and it has 5 domains namely tangible, reliability, responsiveness, assurance and empathy domains. It was found that respondents were mostly satisfied with the tangible domain of quality of care. Although, in this tangible domain, about a quarter of respondents each were dissatisfied with adequacy of time for receiving care and maintenance of medical facilities in the Clinic. Also, in the reliability domain, respondents were mostly satisfied except with the availability of prescribed drugs where 53.3% of the respondents were dissatisfied. The finding in the responsiveness domain of quality of care in this study showed that respondents were satisfied in all areas except in the area of length of waiting time where 49.3% of respondents were

dissatisfied. In the same vein, respondents were satisfied with all items in the assurance and empathy domains of quality of care. The overall level of satisfaction with quality of healthcare among respondents was 73.7% while 13.3% of respondents were dissatisfied. Also, 13.0% of the respondents were not certain about their level of satisfaction with healthcare. A study conducted in Randle General Hospital using SERVQUAL among patients who were not NHIS enrollees found that majority of the respondents were satisfied with the quality of care as found in this study [24]. A community-based study in Jos, north-central Nigeria also found that 61.5% of the participants were satisfied while 26% expressed dissatisfaction with the services received under health insurance scheme [25], these findings are slightly at variance with the findings of our study. Evidence from the study in Jos revealed that client dissatisfaction with NHIS was a result of non-availability of prescribed drugs like in this study [25] The result of this study also agreed with the finding from Jos where 53.3% were dissatisfied with availability of prescribed drugs. Also, a study among University workers in northern Nigeria who were NHIS enrollees found that only about 42.1% of respondents were satisfied with the Scheme while the remaining majority was dissatisfied [26]. This is in contrast to this study where 73.7% of the respondents were satisfied with the quality of healthcare service.

This study found average monthly income which is one of the indicators of socioeconomic status as a factor affecting service utilization among the study participants and this was statistically significant (*P-value* = 0.015). A community-based study in Lagos south-western Nigeria found that low income level influenced NHIS usage as the subscription of low income earners were very low probably due to the fact that most low salary earners are casual workers who could not subscribe to NHIS through formal sector [27] Other factors that were significantly associated with health insurance usage identified in this study were occupation, education, age group, marital status, family size and place of residence of the respondents and this is consistent with the findings of previous studies [27,28].

In this study, some of the items of SERVQUAL for assessing client satisfaction with quality of healthcare were found to have a significant association with service utilization, thereby suggesting that client satisfaction with perceived quality of care could affect service utilization. Among the items that are suggestive to affect utilization are responsiveness of doctors to patients' needs, provision of service with dignity and respect and feedback obtained from patients. These findings are also in agreement with a similar study in Ibadan, south-western Nigeria [29]

5. CONCLUSION

This study shows that uptake of healthcare services can be boosted by health insurance without compromising the standard of service delivery. Some factors like age, marital status, employment status, level of income and client satisfaction are enhancers of healthcare utilization.

6. RECOMMENDATIONS

It is highly imperative to promote the scope and coverage of health insurance in Nigeria and the world at large in order to increase access to quality healthcare services and achieve universal health coverage.

7. LIMITATIONS

The scope of NHIS is still restricted to federal employees as many state governments in Nigeria are yet to buy into the scheme. As such this study was conducted on federal government employees who might not be representative of the entire population of Lagos State, Nigeria.

CONSENT

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

Ethical approval was obtained from the Health Research Ethics Committee of LUTH.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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