Research Square

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National Health Insurance Scheme Enrolees' Satisfaction with Quality of Care and Willingness to Retain Membership in a tertiary hospital in Nigeria: Implications for Community-Based Health Insurance uptake

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Abstract

Background; Low enrolment into National Health Insurance scheme is a barrier to universal health coverage in Nigeria and could be connected to consumer/enrolees' satisfaction which is an important index of willingness to retain any service provider. Therefore, enrolees' satisfaction with the quality of received healthcare services and willingness to retain membership of NHIS at a tertiary hospital in Ebonyi State, Nigeria was evaluated.

Method: The embedded nested design was implemented under an integrative mixed-method approach to study 376 NHIS enrolees selected using a convenience sampling technique at Alex Ekwueme University Teaching Hospital, Abakaliki, Ebonyi State, Nigeria. Researcher-developed questionnaire and interview guide were used for data collection. Quantitative data were analysed using Z test, at two-tailed $p < 0.05$ while qualitative data were analysed thematically.

Results: Proportion of satisfied enrolees (232, 61.70%) was higher than unsatisfied enrolees (Z= 6.42; p = <.0002 two-tailed; 95% CI= 0.16 – 0.30). Reasons for enrolees satisfaction were quick recovery, assurance of receiving unadulterated drugs, easy accessibility to specialized services, and significant healthcare expenditure reduction. Reasons for enrolees unsatisfaction were drug stock-out, poor drug quality, poor accessibility, arduous bureaucracy, poor Information quality and poor attitude of nurses. Proportion of enrolees willing to retain membership of NHIS (312, 61.70%) was higher than unwilling enrolees (18.233, p = <.0002 two-tailed; 95% CI= 0.60 – 0.71). Reasons for enrolees unwillingness to retain membership of NHIS include long waiting times, drug stock-out, arduous bureaucracy, and poor attitude of nursing personnel. There was a strong association between willingness to retain membership of NHIS and enrolees' satisfaction with the quality of care received (X^2 = 121.14, df=1; Crammer's V = 0.57; P<.0001).

Conclusion: Most NHIS enrolees are satisfied, but some are unsatisfied as they are impacted by low institutional capacities and organizational weaknesses like long waiting times, drug stock-out, bureaucratic bottlenecks, and poor nurse attitudes, which also hindered their willingness to retain membership of the NHIS. Therefore, data on enrolee satisfaction with care quality is crucial for policy adjustments and preventing poor institutional governance and practices that could hinder NHIS membership retention or uptake.

Introduction

Enrolees' satisfaction with the quality of health services received under the National Health Insurance Scheme (NHIS) needs to be monitored as Nigeria's healthcare sector has been neglecting the quality of healthcare and patients' satisfaction, leading to increased medical tourism and depletion of foreign reserves. This has resulted in 78 billion naira ($8,500 million) spent annually by Nigerians seeking healthcare abroad due to shortcomings in home healthcare delivery [1]. Therefore, patient satisfaction is a crucial metric for assessing the quality of care received [2], and is influenced by psychological and physical variables [3]**.** It reflects an individual's psychological evaluation of the care received and can influence their willingness to utilize available services [4]**,** including those provided under the NHIS.

Lessons learned from this study would have implications for the community-based health insurance (CBHI) model within the NHIS which has faced disappointing uptake to date.

Common endemic diseases are the primary causes of health expenditures in Nigeria, leading to morbidity and mortality [5, 6, 7]. High out-of-pocket (OOP) spending and lack of insurance mechanisms hinder healthcare financing [8, 9,10], resulting in inequitable access [11, 12], productivity loss, poverty, poor health outcomes, and preventable deaths [13, 14]. Therefore, the NHIS was created by the Nigerian Federal Government in 1999 and implemented in 2005 under the NHIS Act 2004 as a social health insurance scheme to offer all Nigerians access to reasonably priced healthcare [15, 16]. The NHIS also accredits healthcare institutions and Health Maintenance Organizations (HMOs) that offer benefit packages to enrolees. NHIS aims to reduce healthcare inequity, increase access to high-quality healthcare, and reduce costs [17] thereby reducing the uninsured rate in Nigeria [18], and contributing to the realisation of the Sustainable Development Goal Target 3.4 which focuses on wellness and good health for the global populations [19]. The NHIS, as a cost-effective alternative to user fees and achieving universal healthcare coverage, was established to enrol a minimum of 20 million Nigerians in health insurance per year from 2005 to 2015 [15]. However, only 5% of Nigerians have health insurance, while 70% still pay for their medical care out of pocket [20, 21]. Delay in meeting the enrolment target is linked to implementation challenges such as extreme poverty, limited awareness, little interest in the program, superstitious beliefs, ineffective payment methods, drug stock-out, and inadequate administrative and supervisory capabilities [22]. Other issues affecting the implementation of the NHIS in Nigeria include poor fund management, a negative debt profile for HMOs, unsatisfactory registration services, and enrolees' dissatisfaction among other challenges [23].

Several studies highlighted the factors influencing patient satisfaction in healthcare services including care provider expertise, primary and secondary care distance, appointment time, privacy, and cost [24, 25], quality of care received [2], and psychological and physical variables [3] among others. The trends at the sub-national level in Nigeria are similar. For instance, Ebonyi State is one of the states in Nigeria with poor physical variables though it is one of the two states in the Southeast that inaugurated a State Health Insurance Agency in Nigeria, in March 2019 to supplement the NHIS yet Ebonyi state's healthcare system faces low institutional capacity and structural weaknesses, including inadequate human resources, a weak health management information system, poor primary healthcare facilities, and inefficiencies in drug distribution, leading to wastage and a lack of essential drugs at facilities contributing to underutilization of health services and poor health indices [26] below lower middle-income countries (LMICs) [27, 28]. The above factors are likely to inform patients' dissatisfaction with services received in the public health facilities under the NHIS in Ebonyi state, indicating the need for regular monitoring of access and utilization of health facilities, particularly by NHIS enrolees. This is important because NHIS enrolees' satisfaction in some parts of Nigeria is generally poor, barely averaging 42.1 % in Zaria, 52.8 % in Southwest [29] and 56 % in North Central Nigeria [30]. So far, Stakeholders' opinions on the scheme's effectiveness in addressing the nation's poor health profile and health crisis are divided [31]. Consequently, there is an increasing need to evaluate the scheme's design and implementation issues as regards how it affects enrolees' satisfaction and willingness to retain membership of the NHIS. This information will

enable policy actors to address the ongoing inadequate coverage objectively. Therefore, the objectives of this cross-sectional study were to assess NHIS enrolees' level of satisfaction with the quality of care received, their willingness to retain membership of NHIS, and the relationship between enrolees' satisfaction and willingness to retain NHIS membership.

Method

Research Design:

Embedded nested design was implemented under an integrative mixed-method approach to study NHIS enrolees' satisfaction with the quality of services received and their willingness to retain membership in NHIS. In the six months of the study, 3,141 NHIS enrolees attended the Medical and Surgical Out-Patient Clinics at Alex Ekwueme University Teaching Hospital Abakaliki, Nigeria, from November 2019 to April 2020.

Area of study:

The area of study is Alex-Ekwueme Federal Teaching Hospital in Ebonyi State, Nigeria, a south-eastern region which lies approximately within longitude 70301 and 70E and latitude 50401 and 60451N, with a population of 149,683 [28] and a land mass of 5,935 square kilometres. The hospital, located in Abakaliki, is the largest in the state and has two sections, headed by a chief medical director.

Sample size:

Taro Yamane's [32] formula for determining the minimum sample size for a finite population is: n = N/1 + $N(e)^2$, Where n = Sample size, 1 = constant, N = population, e= sampling error (5%); N= 3,141/1 + $3{,}141(0.05)^2$ = 375.8. Therefore, a sample of 376 participants is sufficient to reduce Type 1 and 2 errors in this study, given a 0.05 margin of error, at a 95% confidence interval. Ten per cent (10 %) of the study sample (i.e. 38 participants) was determined as the subset sample for qualitative study but the saturation point was reached after the enrolment of 20 participants who were purposively selected.

Inclusion Criteria:

- Respondents must be insured with NHIS for at least one year before the study.
- Respondents must be attending Medical and Surgical Out-Patient Clinics at Alex Ekwueme University Teaching Hospital, Abakaliki, Ebonyi State, Nigeria.
- Respondents must be adults ≥ 18 years old.
- Respondents must be emotionally and mentally stable at the time of data collection.

Sampling techniques:

The researcher selected participants for the study who met inclusion criteria by convenience sampling technique and purposively selected a subset of this sample for qualitative study.

Instrument for data collection:

Data collection was done using a self-structured questionnaire divided into two sections, namely: Section A - covering participants' socio-demographics; and Section B- covering specific study objectives. The questionnaire was designed in a logical sequence, with simple English language, and in closed and open-ended format. Strongly satisfactory (VS), Satisfactory (S), Not satisfactory (NS), and strongly unsatisfactory (SU), were used to determine the level of satisfaction of the NHIS enrolees. Four experts from Nursing Science and Health Economics evaluated the validity of the researcher-developed questionnaire. They assessed content relevance, clarity, and logical accuracy. Their suggestions were used to develop the final version of the questionnaire for data collection. The reliability of the questionnaire was pretested with 20 patients at a general outpatient clinic of Nnamdi Azikiwe Teaching Hospital, Nnewi, Anambra State, Nigeria. This facility was not selected for this study, but located in Southeast, Nigeria. The Cronbach's alpha coefficient for internal consistency of the questionnaire was 0.867, indicating high reliability. Four experts also developed, reviewed, and validated a semi-structured interview guide for one-on-one interviews to supplement the quantitative study.

Data collection:

Participants provided written informed consent and were subsequently administered a questionnaire.

1. ***Quantitative data collection:*** A self-structured questionnaire was used to collect data on enrolee's satisfaction with the quality of care received at the NHIS service clinics and willingness to retain membership of the NHIS. **Two research assistants were trained to assist in explaining the study, interpreting the questionnaire, and assisting with data collection, which lasted six months.**
2. ***Qualitative data collection*:**

The purposive sampling method was used to recruit a subset of 20 out of the 376 participants in the study for an in-depth interview. They were approached to participate in the study, and recruitment was continuous till data saturation [33].

Data analysis:

Quantitative data analysis:

The study used IBM® SPSS version 26 to analyze data on enrolees’ satisfaction with quality of care and willingness to retain NHIS membership. Descriptive statistics were used to analyze demographic characteristics and the Chi-square test was conducted to determine the association between enrolees' satisfaction with the quality of care and willingness to retain NHIS membership. Crammer's V was used to estimate the strength of the association, which varies from 0 to 1 without any negative values and is interpreted as follows: > 0.25 = Very strong; > 0.15 = Strong; > 0.10 = Moderate; > 0.05 = Weak; and > 0 = No or very weak [34]. Therefore, in this study, a Cramer's V of 0.10 provides a good minimum threshold for suggesting a substantive association between two variables. This method is useful for comparing multiple X^2 test statistics and is generalizable across contingency tables. Lamda was used to predict the accord

between enrolees' satisfaction with the quality of care and willingness to retain NHIS membership and thus measured the degree to which enrolees' satisfaction (independent variable) reduces error in predicting willingness to retain NHIS membership (dependent variable's value). Multiplied by 100, Lambda represents the per cent reduction in error. The McNemar test was also used to determine the proportional significance of variables in the study population. Alpha was set at $p < 0.05$.

Qualitative data analysis:

The interview was conducted by an experienced researcher who was trained in techniques for minimizing bias, building rapport, asking insightful questions, handling transitions, and determining the saturation point to move on to the next question. The researchers worked with research assistants with prior experience in conducting qualitative interviews who were recruited for the study and trained on skills, attributes, practices, and specific project tools for coordinating and conducting qualitative interviews. The research assistants participated in role plays in a pretest interview or pilot study. The research team members were debriefed after the interview sessions to discuss the dynamics of the interview session, reflect on personal reactions, examine what went well, and identify opportunities for improving future interviews.

The interviews were conducted using a Philips DVT Digital Dictaphone, recorded in MP3 format, and transcribed into text by an independent translator. The transcript was independently reviewed by two researchers to ensure consistency. The transcriptions were formatted consistently, and the files were transferred and stored securely by the research assistants. The transcribed data were exported to and analyzed using MAXQDA version 22.3.0, a computer-assisted qualitative data analysis software, and themes were identified from the data. The audio recordings were securely stored in a password-protected file on a computer and later removed from the digital audio recording device. The researcher and assistants analyzed transcribed interviews, establishing consensus on the coding and analysis process. The outcomes were discussed and adopted by the entire research team. Two researchers independently implemented data coding for thematic content analysis using the transcript. Audio recordings and thematic content analysis were used to analyze the demographics of NHIS enrolees and their level of satisfaction with care quality at NHIS service clinics after data de-identification. Descriptive statistics and directed content analysis [35] were employed to analyze data on predetermined themes like healthcare costs, waiting times, and technical performance of NHIS employees which were highlighted and coded, with new codes added to emerging themes. The research focused on qualitative analysis of NHIS enrolees' satisfaction with care quality, and the coding process and content. It revealed patterns of differences and similarities in these themes, emphasizing the need for understanding and addressing them.

Trustworthiness:

The qualitative analyses adhered to Lincoln and Guba's [36] quality criteria for trustworthiness and rigour, particularly credibility for veracity, transferability for applicability, dependability for consistency and confirmability for transparency to outside examination and verification.

- *Transferability:* Purposive sampling was used to select participants, and provide details on sampling, sample size, interview procedure, findings, and inclusion/exclusion criteria, ensuring transferability. To investigate the transfer criterion, a mixed sample of participants' age, sex, and background was used to describe the population sample and participant characteristics. The interviews were found to be appropriate, and the veracity of the conclusions derived from them was validated.
- *Credibility:* The study location was visited to satisfy the credibility requirement before the interviews and data collecting. In addition, to prevent single-researcher bias, the transcript was analyzed, and coded, and significant themes and sub-themes were identified by two researchers independently before they discussed it. Sustained engagement was implemented to mitigate the risk of data divergence from the research objectives until the entire breadth of data was covered.
- *Dependability:* The research assistant received a detailed explanation of the study approach to satisfy the dependability criterion. Two seasoned researchers (authors 1 and 2) examined the interview guidelines. The insights of independent observers were employed in the transcription of the interviews as a third-party translator.
- *Confirmability:* During study team meetings, further issues were raised and taken into consideration for confirmability. The peer review approach increased the research's confirmability by having a third, independent reviewer, who was not involved in the project before, assess the raw data and compare the different categories and themes. The independent reviewer double-checked the codes to evaluate the inter-coder agreement and enhance the dependability of the findings.
- *Rigour:* By reviewing questions and answers with the participants, rigour was developed by respecting member checking and inter-coder agreement and enabling responses to be verified. To improve the validation process even more, participants were requested to draw attention to any inconsistencies they saw.
- *Reflexivity:* The researcher (author 1), a healthcare professional, used a reflexive diary to analyze data from public health and community nursing to draw conclusions from the data, enable reflection on her work, and share her ideas about improving NHIS enrolment in communities. She discovered that most health management strategies in NHIS service clinics were rigid and bureaucratic, neglecting operational efficiency and patient-centred care.

Result

Results Overview

Socio-demographic Characteristics of Respondents:

The study analyzed demographic data of NHIS enrollees (Table 1), revealing a mean age of 41.65 ± 6.2 years, an age range of 21 – 65 years, with most aged 34 - 44 and with 225 participants or 60.11 % earning between 51,000 - 100,000 naira. The majority were female (53.46 %), married (81.12 %), tertiary educated (58.78 %), civil servants (64.63 %), and had access to health (82.71 %).

Table 1: Demographic characteristics of the NHIS enrolees (N = 376)

Demographic characteristics	Participants (n = 376)	**%**
Age (years)		
15-24	35	09.31
25-34	83	22.07
35-44	97*	25.80*
45-54	89	23.67
≥55	72	19.15
Total	**376**	**100**
Gender		
Male	175	46.54
Female	201*	53.46*
Total	**376**	**100**
Marital Status		
Single	50	13.30
Married	305*	81.12*
Widowed/Separated/Divorced	21	5.59
Total	**376**	**100**
Highest Level of Education		
Primary	31	8.24
Secondary	124	32.98
Tertiary	221*	58.78*
Total	**376**	**100**
Employment status		
Civil servants	243 *	64.63*
Self-employed	124	32.98
Unemployed	09	02.40
Total	**376**	**100**
Average Monthly Income (N)		
<50,000	107	28.46

51,000-100,000	119	31.65*
101,000-150,000	66	17.55
151,000-200,000	57	15.16
201,000-250,000	21	5.59
>250,000	6	2.00
Total	**376**	**100**
Access to healthcare		
Yes	311	82.71*
No	65	17.29
Total	**376**	**100**

Socio-demographic Characteristics of Respondents in qualitative study:

Twenty (20) NHIS enrolees were selected for the in-depth interview, with a broad range of characteristics including gender (10 males and 10 females), socio-economic status (average monthly income of N50,000 – N100,000 only), mean age of 45.25 ± 21.50 years, age range of 21 – 65 years, and duration of NHIS enrolment of 5 – 11 years. Half of them were married, mostly tertiary educated and all of them had full access to healthcare. The interview lasted between 33 - 86 minutes.

Table 2: NHIS enrolees' level of satisfaction with the quality of healthcare services

Level of Satisfaction	Participants (n=376)	%	95% CI
Strongly satisfied	22	5.9%	
Satisfied	210*	55.9%	
Unsatisfied	134	35.6%	
Strongly Unsatisfied	10	2.7%	
Total	**376**	**100%**	

Enrolees level of satisfaction:

The majority of enrolees were satisfied with the quality of care received at the hospital, with 232 (61.7 %) being either satisfied or strongly satisfied, while only 144 (38.3 %) were unsatisfied (Table 2). The satisfaction rate (232/376, 61.70 %) was significantly higher (Z = 6.42; p = <.0002 two-tailed; 95 % CI= 0.16 – 0.30) than the dissatisfaction rate. This is validated by qualitative data which provided further information regarding the factors associated with enrolees' satisfaction as reported below:

The qualitative study showed that the majority of the NHIS enrolees were satisfied with the quality of care received for reasons that included: satisfactory recovery from their illness after treatment, assurance of receiving unadulterated drugs, easy accessibility to healthcare services, and a significant reduction in healthcare expenditure. The details are provided below:

Recovery rate:

Most enrolees were satisfied that they experienced a quick recovery after treatment. One of them stated:

"I am satisfied because….. I am making a quick recovery after receiving my treatment …much more than I expected." (Female, 34 years old)

Drug quality and effectiveness:

Enrolees were satisfied with the assurance that government-owned institutions would not dispense fake and adulterated medicinal products, and they perceived the drugs to be effective.

"The quality of care (received under the NHIS) is better than patent chemists because I am sure it came from the government hospital who will not give us fake drugs…..I don't think they will ever give you a fake drug here….The drugs I got here worked for me, so I am very happy about it." (Male, 19 years old).

Accessibility to specialists:

Enrolees were satisfied with the convenience of accessing diverse healthcare experts in one location, enabling easy coordination of all components of the needed healthcare services.

"*I am satisfied because experts in the treatment of different diseases are here in one location. I came to see my physician for high blood pressure but he observed some rashes on my skin and promptly referred me to the skin (dermatology) clinic which is also within the hospital. I didn't have to pay for transport to get to another location to see the skin Doctor (dermatologist)"* (Female, 47 years old).

Cost of Care:

Enrolees were satisfied with the much lower health expenditure under the NHIS compared to not having it.

"I am satisfied that the cost of healthcare is affordable for me as NHIS pays the greater part of our bills while I only pay 10 % of the cost of treatment." (Male, 37 years old).

".,. there has been a tremendous reduction in our expenses on drugs and hospital bills since we joined NHIS. I only pay 8 - 15 % of my monthly salary on hospital bills…. of which I earn about N 93,000 a month. It gives me breathing space as I spend less of my monthly income on healthcare issues…. With more money in my pocket, I can better cope with other financial challenges of daily living." (Male, 39 years old)

Unsatisfied enrolees:

Table 1 revealed that 144 (38.3 %) of NHIS enrolees were dissatisfied with the quality of healthcare they received. The reasons for their dissatisfaction were revealed in the qualitative study and included: drug stock-out, poor drug quality, poor accessibility, arduous bureaucracy, poor Information quality and technical performance (poor attitude of nurses). The details are provided below:

i. Drug stock-out and out-of-pocket expenditure:

Most enrolees expressed concerns about the drug stock-out at the hospital pharmacy or the non-inclusion of prescribed drugs on the NHIS-approved drug list. Some of the enrolees explained further:

"I am not satisfied because most of the drugs I needed for the management of my ailment are not available under the NHIS while others that are listed on the NHIS approved drug list were not stocked at the hospital pharmacy." (Male, 43 years old).

"The hospital pharmacy only stocks the cheap drugs but not the more expensive drugs on the NHIS approved drug list…what is the gain of enrolling into the NHIS if the hospital pharmacy hardly stocks prescribed drugs ……Under the NHIS, what you see is what you get." (Female, 44 years old)

ii. Poor drug quality and availability:

Poor drug quality was cited by enrolees as a primary cause of dissatisfaction with the standard of care provided at NHIS service clinics.

"I am not satisfied with the drug quality. Some of the drugs look like small "Akara balls" (bean cake) and a few of them smell off. I do not know where they get these drugs from. It is different from the drugs I get from private hospitals or private pharmacy stores which work better and faster for me." (Male, 58 years old).

"Though they (NHIS service clinics) will never give you the wrong medication, most of the costly and high-quality drugs are either unavailable at the pharmacy or are not included in the NHIS-approved drug list. I am not satisfied with the quality of drugs I receive for my treatment." (Male, 43, years old)

iii. Accessibility (difficulty in accessing hospital services) and out-of-pocket expenses:

Enrolees were dissatisfied with difficulty in accessing certain diagnostic services in the hospital.

"I have been referred severally to private facilities to do my diagnostic examinations at higher costs….including some laboratory investigations, x-ray (radiological investigations) …because it is either we are told that the hospital exhausted their test kits or the equipment for the examination were unavailable or in disrepair or there is no electricity power supply." (Female, 48 years old).

" Often, I have done laboratory and radiological investigations in private facilities at higher costs...because they (NHIS clinic) gave flimsy excuses for not providing the needed services….It was either they ran out of

consumables or there was no electricity to power the equipment..., Though, this does not happen all the time more often than not, it was either one long story or the other." (Male, 63 years old)

Bureaucracy (ardours registration procedures):

NHIS enrolees voiced displeasure with the arduous bureaucracy when obtaining codes for clinical treatments and diagnostic tests from the HMOs. One of them stated:

"*It seems as if we (NHIS enrolees) are being maltreated because the procedure required to register and generate a code for treatment on each hospital visit is so tasking and discouraging. I do not know how long I can put up with it"* (Male, 28 years old)

"I am unsatisfied that we (NHIS enrolees) are the first to come to the hospital in the morning, but the last to leave in the evening because of unnecessary delays in generating the treatment codes unlike those who are not enrolled on the NHIS. I do not know why they can't find an efficient way of generating the codes." (Female, 61 years old)

"I am not satisfied that half a day and more is spent generating codes to access treatment under NHIS. By the time I finally get to the clinic to see the doctors, the day is far spent. It is boring and frustrating to keep doing the same thing all over again on each visit" (Male, 42 years old)

Poor Information quality (inaccurate information about drug availability/medical services):

Enrolees reported a lack of accurate information to prospective NHIS enrolees about drug availability and medical services not included in the approved NHIS list, leading to some out-of-pocket payments for routine care after enrollment. Some of them further elaborated:

"Before registration, I was not informed that some of the drugs and medical services I needed were not included in the approved NHIS list. So, I routinely got referrals to access these services at higher costs in privately owned practices. Currently, my monthly healthcare expenses are similar to what it was before enrolling into the NHIS....so the more things change, the more they remain the same"' (Female, 31 years old)

Technical performance (Poor attitude of Nurses):

Enrolees' dissatisfaction with NHIS services is also due to the impolite attitude and lack of empathy displayed by most of the nurses.:

"The practitioners, especially the nurses, are rude and lack empathy and respect. They do not greet their elders ... and some of them talk to us anyhow not minding our old age" (Female, 61 years old).

Willingness to continue with NHIS:

Table 3: Willingness of NHIS enrolees to continue with NHIS

Willingness to Continue with NHIS	Participants (n=376)	%
Willingness to continue with NHIS as an insured member		
Yes	312	(83.0 %)
No	64	(17.0 %)
Total	**376**	**100**
If no, indication of reason/ reasons		
Not satisfied with the treatment received	50	(78.1 %)
The out-of-pocket expenses of health care is higher than I expected	42	(65.6 %)
The protocols involved in receiving health care services are time-consuming	52	(81.3 %)
My medications are not included in the NHIS	40	(62.5 %)
Poor communication between patients and health care professionals	30	(46.9%)
Waiting time is much	56	(87.5 %)*
Prescribed drugs are always out of stock	54	(84.4 %)
Inadequate treatment	26	(40.6 %)

The majority (83.0 % or 312) of NHIS enrolees were willing to retain membership of NHIS (Table 3), which was significantly (18.233, p = <.0002 two-tailed; 95 % CI = 0.60 – 0.71) higher than those expressing unwillingness to retain NHIS membership. Enrolees unwilling to retain membership in NHIS cited long waiting times, drug stock-out, time-consuming registration protocols, dissatisfaction with treatment, higher than expected out-of-pocket expenses, and non-inclusion of prescribed drugs in the NHIS-approved drug list.

Table 4: Relationship between satisfaction and willingness to continue with NHIS

Participants' Response	Satisfied	Satisfaction unsatisfied	**Total**	X^2	**P value**	**Cr's V**	**Lambda** [A from B]	**Lambda** [B from A]
Willingness to *continue with NHIS* *as an insured member*								
Yes	232	80	312	121.14*	<.0001	0.57	0.61	0.79
No	0	64	64					
Total	**232**	**144**	**376**					

Cr's V = Crammer's V, * = Yates chi-square, corrected for continuity

Out of 312 NHIS enrolees who expressed willingness to retain NHIS membership, 232 were satisfied (Table 4) which was a significant proportion (McNemar Test Result: P < 0.000001, one-tailed), while none of the 64 enrolees who expressed unwillingness to retain NHIS membership were satisfied with the quality of healthcare service received. The willingness to continue with NHIS is strongly associated (X^2 = 121.14, df =1; Crammer's V = 0.57; P < .0001) with satisfaction with the quality of care received. Predicting NHIS enrolees' willingness to retain membership of the NHIS from a knowledge of their level of satisfaction showed a higher accord (lambda[A from B] = 0.83), than when predicting NHIS enrolees' level of satisfaction based on knowledge of their willingness to retain membership of NHIS (lambda[B from A] = 0.79).

The comments of participants in the qualitative study confirmed the above findings, offering additional justifications for their decision to retain NHIS membership, which were as follows.:

Willingness to retain NHIS membership:

Though the majority of NHIS enrolees were unsatisfied with the quality of care, they will retain NHIS membership because the services and medications are reasonably priced resulting in health expenditure being less catastrophic. Some of them explained further: -

"I am not satisfied with the quality of care and the way NHIS is operated. I did not find all that I expected in terms of efficiency and proper organisation but at least the cost of drugs and services is far much cheaper than what we get from local pharmacy stores. I am going to stick with the NHIS and pray that they improve in their services with time.....Rome was not built in a day." (Male, 52 years old).

Unwilling to retain membership of NHIS:

Fewer NHIS enrolees voiced unwillingness to retain NHIS membership in future for reasons that included: long waiting time, drug stock-out, arduous bureaucracy, attitude of most nursing personnel who were impolite and lacked empathy. The following quotes summarise the responses of the enrolees:

Long waiting time:

The lengthy wait times in hospitals before receiving care were cited by some enrolees as a primary reason why they were unwilling to continue their participation in the NHIS.

"How can I be willing to continue patronising the NHIS when *I have to wait all day just to see the doctors and hardly get prompt attention? Sometimes I do not get all the recommended medical services before the closure of work on a hospital visit because of delays. The "wahala" (problems) with this NHIS thing are too much for me to handle. I am not sure that I will retain my membership of NHIS shortly."* (Male, 59 years old).

Drug stock-out and out-of-pocket expenses:

Some NHIS enrolees expressed unwillingness to retain membership due to concerns about perennial drug stock-out.:

"What advantage do I gain from enrolling into the NHIS over those who are not enrolled? I keep buying drugs from private pharmacy stores in town at high cost because most of the prescribed drugs are usually not available at the hospital pharmacy. (Male, 60 years old).

"I am unsatisfied that the important drugs I needed are always not available at the hospital pharmacy. Then what is the use of retaining my membership of the NHIS?" (Female, 47 years old).

Bureaucratic bottle-necks:

Enrolees are unwilling to retain NHIS membership due to cumbersome bureaucratic procedures for generating treatment codes, which delay clinical appointments and sometimes deny them doctors' consultations during their hospital visits.

"To generate a single code is so gruelling and takes almost half a day if one is lucky… One wonders whether this is worth all the trouble." (Female, 55 years old).

"We are unsatisfied that half a day and more is spent generating codes to access treatment under NHIS. How can I continue like this? They are simply inefficient." (Female, 48 years old).

"To get the NHIS codes seems like getting the Carmel through the eyes of a needle. More than half of the day is spent getting the treatment codes and paperwork from the NHIS. I am doubtful if I won't die in emergencies before the codes are obtained." (Female, 61 years old).

"It takes a long time to get anything done for those of us under the NHIS. We spend so many hours at various points trying to generate the NHIS treatment codes for different prescribed diagnostic

investigations, and treatments. A whole day is spent on each hospital visit. I am so discouraged and do not see how I can continue to retain NHIS membership..... I rather go to the chemist or a private hospital when I am sick." (Male, 45 years old).

Technical performance (Nurses):

"Some of the practitioners, especially the nurses, are ill-tempered and ill-mannered....When we want to make some enquiries about something that is not clear to us, they do not care if we are in pain or how sick we are, they just talk anyhow and make us feel miserable and disrespected." (Female, 58 years old).

Discussion

Patients' satisfaction with the healthcare services received:

This study revealed that the majority of the NHIS enrolees were either satisfied or strongly satisfied with the quality of healthcare services received at the hospital, and constituted a significant proportion of the study sample. Several personal and group factors seem to influence enrolees' satisfaction with the quality of care they received including quick recovery from illness after treatment, assurance of receiving unadulterated drugs, easy accessibility to many specialized healthcare services, and a significant reduction in healthcare expenditure. These factors may also encourage utilization and retention of NHIS membership which may contribute to universal health coverage and improved health indices of the population. A previous study observed that satisfaction in healthcare is influenced by factors such as individual or group standards but subsequently influences compliance with treatment regimens [37]. Satisfaction is also linked to utilization, follow-up with healthcare interventions and compliance with prescribed treatment regimens [37] which should translate to reduced disease burden and improved health indices. Satisfaction in care recipients can increase their willingness to act as information dissemination agents, potentially promoting health intervention among potential consumers/end users. [37]). Consequently, patient satisfaction is not only crucial for evaluating care excellence [38], and the level of fulfilment with health system services [4], but also impacts service utilization and retention, and can influence enrolees' decision to retain NHIS membership thereby highlighting its relevance in strengthening strategies for uptake of NHIs which may have translational relevance for the poorly subscribed and underutilised community health insurance scheme.

The proportion of enrolees who were satisfied with the quality of the NHIS services (61.8%) in this study is similar to 63% reported elsewhere [39] which is greater than 56% reported in Nnewi, Anambra State, [40], and 53% in Enugu, Enugu State, [41], both in South East, Nigeria but less than 75% reported in Ibadan, Oyo State, South West, Nigeria, 83% in Kano, Northern Nigeria [42] and 84% in Benin, Edo state, South-South, Nigeria [43]. These findings suggest two things. First, the quality of healthcare services differed across the various regions of Nigeria. Secondly, the differences in socio-cultural practices, literacy level and infrastructural development across the regions of Nigeria could elicit varied enrolees' expectations and eventually modulate their level of satisfaction with the quality of care received from the NHIS. Therefore, interventions to improve NHIS enrolees' satisfaction with healthcare service delivery should vary according

to specific socio-cultural environments and should not remain the same country-wide. Implications of this finding are that the willingness to uptake community health insurance should be relative to specific socio-cultural contexts.

The findings of this study also revealed that enrolees' satisfaction could be affected by different factors such as perceived attitude/behaviour of care providers, the level of primary and secondary care, time spent to make an appointment, unavailability of drugs and non-inclusion of prescribed drugs on NHIS-approved drug list, as well as unavailability of some diagnostic and support services resulting to out-of-pocket expenditure which agrees with previous authors [24, 25]. Invariably, enrolee dissatisfaction can be attributed to service gaps, organizational dysfunction, poor healthcare financing, and interpersonal factors. NHIS should explore software applications to enhance patient appointment systems/treatment code generation, and solar systems as alternative power sources for ensuring access to diagnostic and support services. The approved drug list should also be expanded to cover treatments for other disease conditions presently left out while ensuring the availability of high-quality products, and reducing wastage to minimize drug stock out and out-of-pocket expenditure by enrolees whose prescribed treatments are not covered by the NHIS. Health workers, especially nurses, should prioritize empathy and civility, ensuring patients' respect, rights, and dignity. This is important because disrespectful attitudes of health workers (especially nurses) have a negative additive impact affecting service components like waiting time and mannerisms [44]. These factors are likely to undermine the NHIS's goal of running a social health insurance scheme, minimizing out-of-pocket payments, and healthcare inequity to ensure universal health access for improved population health indices [17] and attainment of the SDG Target 3.4.

Willingness to Continue with NHIS:

The key reasons (long waiting time, drug stock-out, bureaucratic bottlenecks, technical performance – poor attitude of Nurses) mentioned by enrolees who were unwilling to retain NHIS membership were also the major causes of their unsatisfaction with the quality of care received under the NHIS. The findings that 38.3% of NHIS enrolees were dissatisfied with the quality of care they received, and 17% were unwilling to retain membership supports the view that satisfaction has some influence on enrolees' willingness to retain NHIS membership. These findings align with the findings of previous studies in Ghana [45–47] which found that health insurance negatively impacts care quality, healthcare utilization, enrolment, renewal, satisfaction, and safety indicators for both insured and uninsured patients. However, another [48] in Asia contradicted these findings and revealed that NHIS implementation improves nursing care, facilities, structures, patient satisfaction, and safety indicators. Similarly, the findings of some previous studies in Nigeria and Ghana [40, 49, 50] also contradict the findings of this study because they reported positive perceptions of care quality among health insurance enrolees. These differences highlight varied impacts of personal factors and community standards on enrolees' satisfaction. Given that most of the reasons for enrolee unsatisfaction include interpersonal factors, a patient-centred care approach could reduce this trend, but requires further evidence to guide policy and practice.

Relationship between satisfaction and willingness to continue with NHIS:

The majority of the NHIS enrolees in this study were willing to retain membership of the NHIS just like they were satisfied with the services available at the hospital, demonstrating that satisfaction could be the key driver of NHIS enrolees 'health-seeking behaviour and agrees with a previous view [51]. It was also revealed that treatment outcomes are less likely to influence enrolees' willingness to retain membership of the NHIS at the hospital as none of the enrolees who indicated their unwillingness to retain membership of the NHIS cited poor treatment outcome as a reason. Rather, the unwilling enrolees cited the unsatisfactory state of affairs regarding inefficient administrative and clinical protocols as some of the key reasons for their unwillingness to retain future membership in the NHIS. Therefore, enrolees' satisfaction with the quality of care is a vital link to their future intention to use the service or recommend it to others [52]. A significant proportion of those who showed willingness to retain membership of the NHIS in this study were satisfied with the quality of the healthcare services they received at the NHIS service clinics. Importantly, none of the enrolees who expressed unwillingness to retain membership of the NHIS was satisfied with the quality of healthcare services provided at the hospital. Thus, patient satisfaction could predict to some extent the sustainability of NHIS coverage and uptake. The finding that enrolees' willingness to retain membership of the NHIs was significantly dependent on satisfaction buttresses the role of consumer satisfaction as a key driver in enrolees' health-seeking behaviour. The fact that the strength of the relationship between enrolees' satisfaction and willingness to retain membership of the NHIS was strong, reinforces this view. The Lambda test in this study further revealed that factors promoting enrolees' satisfaction are more likely to determine their willingness to retain NHIS membership, but not all factors influencing enrolees' willingness to retain membership will determine their satisfaction with care quality. Therefore, health interventions and policy strategies aimed at increasing the uptake and retention of membership of the NHIS must target factors that promote consumer satisfaction more than the factors that influence willingness to retain membership of the NHIS, among other drivers of health-seeking behaviour.

Conclusion

Policy implications of the study:

NHIS enrolees satisfaction with the quality of care is hindered by low institutional capacities and organizational weaknesses which compromise the structural competency of the healthcare service delivery, and which in part, were factors (long waiting time, drug stock-out, bureaucratic bottle-necks, technical performance – the poor attitude of Nurses) that also underlie their unwillingness to retain membership of the NHIS. Consequently, these factors should be mitigated in policy interventions if significant improvement in the uptake of NHIS by the uninsured would be realised. The findings of this study indicate that regularly collecting and utilising data on enrolees' satisfaction with care quality at NHIS service clinics is crucial for policy adjustments and deterring poor institutional governance and practices. Lessons learnt in this context are also relevant for community health insurance schemes which have performed poorly in terms of enrolment in relevant states.

Implication for research:

The findings that a reasonable proportion of enrolees in this study were not satisfied did not agree with other studies cited above which found that the enrolees were satisfied. However, differences may be due to different measurement approaches/tools, criteria, and cut-off points for the criterion employed in determining who was satisfied or not. For instance, Iloh et al., [53]utilised a quantitative approach and stated that patients who scored 50 % and above in the assessed domains were considered satisfied while those who scored less than 50 % were dissatisfied. Thus, unlike the current study, Iloh et al’s [53] method of assessment of enrolees' satisfaction with quality of care was based on half of the sample's opinion and may have a less positive tilt if a majority opinion is considered. Therefore, when conducting a study or comparing results across studies, methodological differences in the assessment procedures and instruments should be taken into consideration or standardised.

Abbreviations

National Health Insurance Scheme NHIS

Out-of-pocket OOP

Health Maintenance Organizations HMOs

Sustainable Development Goal SDG

lower-middle-income countries LMICs

Declarations

Ethics approval and consent to participate

This University of Research Ethics Committee of the Ebonyi State University approved this study – EBSU/DRIC/UREC/VOL.04/095. Participants' confidentiality was maintained by using code numbers instead of names and ensuring that records were destroyed at the end of the study. Participants gave their written informed consent, before participation and after the purpose of the study was explained to them. Informed consent was obtained from a parent and/or legal guardian for human participants who were below the age of 16 years. They were informed of their right to withdraw from the study at any time of their choice and these rights were strictly respected following the Helsinki declarations.

Consent to publish

Not applicable

Availability of data and materials

The datasets supporting the conclusions of this article are available in the institutional repository of Ebonyi State University, Abakaliki, Nigeria, and will be made easily available on request when required. All

requests for the study data should be addressed to the corresponding author via email: sam.ibeneme@unn.edu.ng.

Competing interests

The authors declare that there is no conflict of interest

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Authors' Contributions

GCI conceived the study, participated in fieldwork, its design and coordination, performed the statistical analysis and helped draft the manuscript. SCI and CU conceived of the study participated in fieldwork and drafted the manuscript. AON, GF, participated in the design of the study, fieldwork, and coordination and helped draft the manuscript. CCO, NCO participated in the design and helped draft the manuscript. All authors read and approved the final manuscript. All authors read and approved the final manuscript.

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