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ORIGINAL RESEARCH

Clients' Satisfaction with the Services of the National Health Insurance Scheme at the Moddibo Adama University Teaching Hospital, Yola, Adamawa State

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Abstract

Background: Worldwide, patient satisfaction is one of the cardinal indices for evaluating the quality of healthcare service delivery and the effectiveness of a healthcare system. As consumers of healthcare services, patients have expectations that need to be met.

Objective: To assess clients' satisfaction with the quality of care rendered through the National Health Insurance Scheme in a Nigerian Specialist Medical facility.

Methods: This was a descriptive, cross-sectional study of 403 respondents selected randomly from NHIS enrolees attending the Federal Medical Centre, Yola. The study assessed the enrolee's level of satisfaction at the various service points using a self-administered, semi-structured questionnaire.

Results: The overall average satisfaction score was 61.0%. The satisfaction score on the various aspects of service was as follows: hospital environment/cleanliness (87.9%), doctors' consultation (74.2%), reception/registration (69.5%), laboratory services (64.3%), waiting time (64.2%), staff attitude (60.5%), and availability of prescribed drugs (48.2%) been the lowest.

Conclusion: Overall, patients' satisfaction with the services provided was good, with the hospital environment/cleanliness rated highest and the availability of prescribed drugs the lowest. The current level of patient satisfaction needs to be improved by making drugs more available in the NHIS pharmacy and improving the attitude of staff to work and clients.

Keywords: Clients' satisfaction, Health Insurance Scheme, NHIS, Pharmacy services, Waiting Time.

Introduction

Monitoring and evaluation are central to quality assurance in public health programs. [1] Moreover, social return on investment is increasingly at the heart of public health discourse. [2] Globally, patient satisfaction has become one of the cardinal indices for evaluating the quality of healthcare delivery and the effectiveness of a healthcare system. [3] The concept of patient satisfaction is defined as the patient's judgement on the quality and goodness of care. [4] As consumers of healthcare services, patients have expectations and needs that should be met. [5] Patients' dissatisfaction with services offered by modern medicine has been observed as one of the reasons why some patients prefer to seek treatment from complementary and alternative medical practitioners with dire consequences. [6] While this is a global problem, it is worse in low-and middle-income countries (LMICs) where a myriad of factors such as under-investment in health systems, poor healthcare infrastructure, inadequate funding and policy frameworks, human resource deficit, and insufficient implementations of Public-Private-Partnerships (PPPs), all contribute to poor client's satisfaction with health services experienced by patients. [7, 8]

The National Health Insurance Scheme (NHIS) is a corporate body established under Act 35 of the 1999 Constitution by the Federal Government of Nigeria to improve all Nigerians' health. [9] The scheme aims to provide affordable, timely and accessible healthcare services to all Nigerians through various prepayment systems. In the NHIS prepayment model, participants pay a fixed amount, and the accumulated funds are pooled, allowing for participating Health Maintenance Organizations (HMOs) to pay for individuals needing medical care. [10] A key objective of the NHIS is to maintain a high standard of healthcare delivery services to Nigerians. [9] However, about two decades after

the establishment of the scheme, this objective seems far from being achieved as reports from different centres reveal dissatisfaction of enrollees with services provided under the scheme. Previous studies have documented patients' complaints such as long waiting times, poor attitude of staff to clients and relatives, cumbersome procedures by the health system, delayed registration processes, and unavailability of prescribed drugs, among others. [11, 12] In addition, the often uncondusive physical environment and atmosphere in which service is being delivered have also been shown to have bearings on patient outcome and satisfaction. [13,14]

Studies have reported varying overall satisfaction levels in hospitals offering NHIS services across Nigeria. Most recently, a systematic review of 21 studies in 11 out of the 36 states in Nigeria revealed that overall NHIS satisfaction scores had a mean range (SD) of 64% (17%) with a range of 23% - 96%. The weighted mean for overall NHIS satisfaction scores was 65%. [15] Similarly, variations also exist from one centre to another in the different domains of service delivery and factors associated with satisfaction. A study in Umuahia, southeast Nigeria, reported an overall satisfaction score of 66.8% among NHIS enrollees. [6] In that study, the patients were most satisfied with patient-provider relationship (81.5%) and least satisfied with patient waiting time (48.3%). In Jos, north-central Nigeria, the overall satisfaction was 74%. [16] Two studies in Kano, northwest Nigeria, had 65.8% and 80.5% satisfaction scores, respectively. [17, 18] Furthermore, about three-quarters of participants (73.1%) in Enugu, southeast Nigeria, were satisfied with the quality of services received at the NHIS clinic of the University of Nigeria Teaching Hospital. [19] In contrast, a below-average satisfaction of 48.6% in 2017 was recorded among NHIS enrollees at the University College Hospital (UCH), Ibadan, South-West Nigeria. [20]

The mixed results of overall and domain-specific satisfaction in different NHIS centres show that a one-size-fits-all approach to improving the quality of services in the NHIS scheme may not be suitable across the country. Instead, various centres need to regularly conduct institution-based assessments of patients' satisfaction with the services rendered through the NHIS. The periodic monitoring and evaluation will serve as a veritable auditing tool to guide reforms and policy formulations/ modifications in mitigating existing and evolving challenges in their centres.

This study, therefore, assessed clients' satisfaction with the quality of care being rendered through the National Health Insurance Scheme, especially with respect to the outpatient department of the Federal Medical Centre Yola, Adamawa State. The findings from this study are believed to help identify gaps in patient satisfaction with the NHIS services, which will, in turn, guide policymakers on a program improvement drive.

Methods

Study site

The study was conducted at the then Federal Medical Centre Yola, Adamawa State, Nigeria. The centre was recently upgraded to a teaching hospital status and changed to Modibbo Adama University Teaching Hospital in May 2022. The hospital is located in the ancient town of Yola, the Adamawa State Capital. It was established by the Federal Government of Nigeria in 2000. The hospital is a 500-bed capacity facility that provides primary, secondary, and tertiary care services. The NHIS programme in the facility was launched in August 2000. It has a total of 13,014 enrollees with an average attendance of 750 per week. The Department of Family Medicine, headed by a Consultant Family Physician, manages the NHIS Clinic. The clinic has five doctors, four pharmacists, ten records staff and

two cleaners. It has four consulting rooms with three different sets of doctors per shift. It operates three shifts covering 24 hours a day, including weekends. The NHIS Clinic also has a pharmacy, an accounts section and a medical record unit (MRU). The MRU is managed by four record staff members on the morning shift and one person each for the evening and night shifts.

Study design and population

This descriptive, cross-sectional study was conducted from September 2019 to November 2019. The study population comprised all clients between the ages of 18 and 60 enrolled in the NHIS in FMC Yola, who were regular with treatment and follow-up visits and had accessed care in the hospital on not less than three different occasions within a minimum duration of one month. Critically ill patients and those requiring urgent medical attention, as well as the staff and their relatives, were excluded from the study.

Sample size determination and sampling technique

The minimum sample size for the study was determined using the Leslie-Kish formula for descriptive studies where the population is >10,000 [21]

$$n = Z\alpha^2 pq/d^2$$

Where: n = minimum sample size, $Z\alpha = 1.96$, $p = 63.1\%$ (proportion of enrollees who were satisfied with NHIS services in a study on clients' satisfaction), [11] $q = 1-p$, $d = 5\%$ (degree of precision).

Therefore, the minimum sample size "n" was 357. The assumption of a 10% non-response rate brought the size to approximately 394.

A systematic sampling method was used to select participants for the study. The sampling interval was determined by dividing the average number of clients per day by the number of clients who were intended to be studied for that day. Hence, every n^{th} enrollee was selected until the sample size was attained. The first respondent was selected by balloting between the first n^{th} clients.

Data collection tools and methods

Data was collected using a self-administered, semi-structured questionnaire developed by the researchers using similar studies conducted by different researchers elsewhere.^[10,20] The questionnaire contained information on the socio-demographic and socioeconomic characteristics of the respondents, their reasons for choosing to register with the facility and their satisfaction level with the dimensions of health services such as registration/reception, consultation waiting time, doctor's consultation, laboratory services, availability of prescribed drugs, condition of hospital environment/facilities and hospital staff attitudes. Each satisfaction area was scored on a five-point Likert scale ordinal response. This was then converted to a percentage scale response. The questionnaire was pre-tested among 40 patients (10% of sample size) in another facility with NHIS Clinic (Specialist Hospital Yola). Data was collected daily at the point of exit (the pharmacy unit) using the self-administered questionnaire.

Ethical considerations

The Health Research Ethics Committee of Federal Medical Centre Yola (FMCY/HREC/19/73) approved the study. Prior to recruitment, each respondent provided written informed consent.

Data management

Data entry was done using an Excel® spreadsheet and was imported to IBM SPSS statistics version 27 for analysis. The results were described as frequencies and percentages for categorical variables; mean and standard deviation were derived for continuous variables. The Chi-square test was used to determine the association between service satisfaction and sociodemographic characteristics. The level of statistical significance was set at $p < 0.05$. Scoring and grading were done using the following

operational percentage range definitions: excellent (90-100%), very good (70-89%), good (50-69%), fair (30-49%) and poor (0-29%). Overall satisfaction was defined as the average score of 50% and above in all the domains evaluated, while overall dissatisfaction refers to scores less than 50%. Specifically, satisfaction refers to a score of 50% or more in a specific domain of care evaluated.^[6]

Results

Table I shows that most of the 403 enrollees who completed the survey (351; 87.6%) were less than 50 years of age, and more than half, 225 (55.8%), were males. A total of 299 (74.6%) of the clients were married, 268 (66.7%) practised Islam with the Fulani (119; 29.7%) and Hausa (107; 26.7%) ethnic groups constituting the majority. More than half of the clients (212; 53.9%) had tertiary. Most clients reported having a family size of three or more (281; 71%).

Overall, less than two-thirds (246; 61%) of the clients were satisfied with the NHIS services, while 157 (39%) were not satisfied with them. Across the domains of service, as shown in Table II, the hospital environment had the highest satisfaction score (87.9%), followed by medical consultation (74.2%), while clients were least satisfied with drug availability at the pharmacy (48.2%).

Clients had similar satisfaction with waiting time and laboratory services (64.2%). Table III shows a statistically significant association between religion and satisfaction with NHIS services ($p = 0.029$); clients that belonged to the Islamic religion (175; 65.3%) were more likely to be satisfied with services provided compared to those of the Christian faith (70; 52.2%).

Table I: Socio-demographic characteristics of respondents

<i>Variable</i>	<i>Frequency (Percentage)</i>
Age group (years)	
<30	159 (39.5)
30-39	97 (24.1)
40-49	95 (23.6)
50-59	34 (8.4)
≥60	18 (4.5)
Sex	
Male	225 (55.8)
Female	178 (44.2)
Religion	
Islam	268 (66.7)
Christianity	134 (33.3)
Marital status	
Single	81 (20.2)
Married	299 (74.6)
Separated/Divorced	17 (4.2)
Widowed	4 (1.0)
Ethnicity	
Fulani	119 (29.5)
Hausa	107 (26.5)
Yoruba	25 (6.2)
Igbo	32 (8.0)
Marghi	27 (6.7)
Kilba	18 (4.5)
Others	75 (18.6)
Education	
None	1 (0.2)
Primary	20 (5.1)
Secondary	160 (40.7)
Tertiary	212 (54.0)
Family size	
None	23 (5.8)
1-2	92 (23.2)
3-4	98 (24.8)
>4	183 (46.2)

There were no statistically significant differences in the average satisfaction score according to age groups, sex, and marital status groups ($p = 0.254$, $p = 0.192$, $p = 0.707$, respectively). There was also no statistically significant difference in the average satisfaction scores among respondents distributed according to educational status, grade level and years of registration groups ($p = 0.629$, $p = 0.451$, $p = 0.235$, respectively).

Discussion

The study showed an overall satisfaction of 61%, which is comparable with findings in Jos (61.5%)^[16] but lower than that from Enugu (73.1%),^[19] Ife (75.2%),^[22] and Kano (83%).^[5] Several studies in Nigeria, like those mentioned above, have assessed clients' satisfaction with the NHIS due to its positive impact on access and reduced

financial burden to users. Client satisfaction with healthcare is predictive of their likelihood of continuing use of available healthcare, compliance with medical instructions, and improvement in overall coverage and effectiveness of care. This study found that

satisfaction with the general condition and cleanliness of the hospital environment had the highest scores among all the domains of services assessed. A survey in Kano showed similar findings, [5] while the studies from Nnewi and Ife reported lower figures. [22, 23]

Table II: Average Satisfaction scores for various hospital departments/services

Variable	Score (%)
Hospital Reception/Registration	69.5
Waiting Time	64.2
Doctors' consultation	74.2
Laboratory services	64.3
Availability of drugs	48.2
Staff attitude	60.5
General condition of the Hospital	87.9

A healthcare facility's general condition significantly influences client satisfaction. For this study centre, this can be attributed to the well-planned structure of the hospital, its architectural design and the constant cleanliness ensured by the hospital administration. Beyond the physical environment, satisfaction with doctors' consultations is pivotal to the success of the NHIS in any facility. In the present study, like reports from Keffi, Port-Harcourt and Ife, medical consultation also had high satisfaction scores from most respondents. [11, 22, 24] Studies in Umuahia and Kano reported even higher scores for this domain. [5, 6] This good satisfaction with medical consultation may be associated with doctors' high level of professionalism due mainly to their unique training. Contributory to this may also be the efforts of the Servicom® Department in the hospital to ensure the correct professional attitude by all hospital staff. Satisfaction with medical consultation is pivotal to the success of NHIS.

More than half of the clients in the present study expressed dissatisfaction with drug availability in the centre. This finding corroborates several studies across the country. [5, 11] Non-availability

of prescribed drugs in an NHIS clinic means that clients must pay out-of-pocket for medications in pharmacy shops outside the hospital. This shortcoming actually undermines the primary purpose of any health insurance scheme. Satisfaction with waiting time in the present study was higher than that obtained from a study in Umuahia [6], and it recorded the lowest mean score in Ife. [22] Complaints about long waiting times were also reported in Port-Harcourt. [24] Often, long clinic waiting time reflects the large volume of patients accessing care in each hospital vis-a-vis insufficient health personnel. Measures towards reducing patient waiting time may boost patients' satisfaction. Clients in the present study also reported a low satisfaction score with laboratory services. The cause of dissatisfaction with this domain can be attributed to delays in tissue sample collection and results retrieval, reflecting the laboratory technicians' attitude at their service points. In some studies, patient satisfaction is associated with several sociodemographic and clinical factors. [25, 26] For instance, some studies have reported lower satisfaction rates due to factors such as high levels of education, younger age, and years of enrolment into the scheme. [22, 25, 26]

Table III: Association between sociodemographic characteristics and satisfaction with services

Variable	Satisfaction		χ^2 (p-value)
	Yes (%)	No (%)	
Age group (years)			
<30	102 (64.2)	57 (35.8)	5.34 (0.254)
30-39	60 (61.9)	37 (38.1)	
40-49	51 (53.7)	44 (46.3)	
50-59	19 (55.9)	15 (44.1)	
≥60	14 (77.8)	4 (22.2)	
Sex			
Male	131 (58.2)	94 (41.8)	1.70 (0.192)
Female	115 (64.6)	63 (35.4)	
Religion			
Islam	175 (65.3)	93 (34.7)	7.05 (0.029)
Christianity	70 (52.2)	64 (47.8)	
Marital status			
Single	45 (55.6)	36 (44.4)	2.16 (0.707)
Married	186 (62.2)	113 (37.8)	
Separated/Divorced	12 (70.6)	5 (29.4)	
Widowed	2 (50.0)	2 (50.0)	
Educational status			
Primary	16 (76.2)	5 (23.8)	3.93 (0.269)
Secondary	98 (61.3)	62 (38.8)	
Tertiary	128 (60.4)	84 (39.6)	
Civil Service Grade Level			
1-6	110 (61.5)	69 (38.5)	1.59 (0.451)
7-12	60 (55.0)	49 (45.0)	
13-17	7 (50.0)	7 (50.0)	
Years of registration			
<1	38 (58.5)	27 (41.5)	4.26 (0.235)
2-6	139 (65.9)	72 (34.1)	
5-10	40 (56.3)	31 (43.7)	
>10	18 (51.4)	17 (48.6)	

Contrary to the previous studies, the present study only found an association between religion and satisfaction with quality of service. Being a Muslim was positively associated with satisfaction in this study. In contrast to other studies which reported an association between satisfaction and younger age groups, levels of education and other variables, [17, 20] ours only observed a significant association between satisfaction and religion. A possible explanation for this difference may be the cultural and contextual differences in the study settings, as Islam is the predominant religion of the

respondents in the present study. There might be other explanations for the link between satisfaction and religion, an area that can be researched further in future studies, especially using qualitative study methods. [27]

Conclusion

The overall satisfaction score of NHIS enrolees in the present study was above average but leaves room for improvement. The hospital and NHIS

clinic managers need to investigate the domains that have received the lowest scores, most especially the availability of drugs in the pharmacy unit. This problem defeats the whole essence of any insurance scheme, which is to reduce exorbitant, out-of-pocket expenditures for medications.

Authors' Contributions: AS, SR, DJ, and KK conceived the study, while AS, SR and KK designed it. AS, AG, OF and DJ analysed the data. AS, SR, AGA, OF, and OMA drafted the manuscript, while DJ, OM and KK revised the draft for sound intellectual content. All the authors approved the final version of the manuscript.

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