

Enrollees' Knowledge and Satisfaction with National Health Insurance Scheme Service Delivery in a Tertiary Hospital, South West Nigeria

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Abstract

Background: Social health insurance scheme provides a platform for mobilizing revenue for health and enhances universal health-care coverage. In addition, knowledge about patients' satisfaction with health care under the scheme will help in identifying gaps and provides evidence toward strengthening the scheme. This study assessed enrollees' knowledge about the National Health Insurance Scheme (NHIS) and satisfaction with health services provided under the scheme. **Materials and Methods:** The study was a descriptive cross-sectional survey conducted among the NHIS enrollees accessing health-care services in the University College Hospital, Ibadan. A total of 373 individuals were consecutively recruited for the study, and a semi-structured, pretested interviewer-administered questionnaire was used to obtain information from respondents. Descriptive statistics was used to present results, and Chi-square test was used to test for the association between categorical variables. The level of significance was set at $P < 0.05$. **Results:** The mean age was 42.5 ± 10.0 years. Of the respondents, 209 (56.0%) were male and 359 (96.2%) were married. About two-thirds, 227 (60.9%), had good knowledge about the NHIS. Majority of the respondents 303 (81.2%) reported paying for some of the costs of service (drugs, laboratory tests, consultation fees, and X-ray) through out-of-pocket and of these, 218 (71.9%) reported that such payments were occasional. Overall, slightly more than half, 197 (52.8%), of the respondents were satisfied with service delivery under the scheme. Female respondents were significantly more satisfied with health-care services ($\chi^2 = 3.894, P = 0.048$). **Conclusion:** There was good knowledge of NHIS, but the level of satisfaction with service delivery was not outstandingly appreciable. There is an urgent need to improve on all areas of quality of service to improve satisfaction with care among enrollees in the scheme.

Keywords: Health insurance scheme, Nigeria, out-of-pocket payments, patients' experiences, patients' satisfaction, universal health coverage

INTRODUCTION

Globally, policymakers are continually making efforts to reform the health system with a special focus on improving access to affordable quality health care.¹ In achieving this, social health insurance (SHI) has been prominent among the various health-care financing methods adopted around the world. The SHI provides a platform for mobilizing revenue to provide health-care services for the population and minimize poverty that could be associated with the cost of care and therefore enhance universal health coverage (UHC).² The National Health Insurance Scheme (NHIS) of Nigeria was established over a decade ago as a public-private tripartite arrangement with a sole objective of making quality and affordable health-care accessible for all.³

Literature has shown that where there is access to affordable health-care services, patients' satisfaction with health service provision play enormous role in determining treatment outcomes.⁴ Even so, patients' experience and satisfaction is often determined by waiting time, availability of essential medical equipment, attitude of facility health-care

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workers, physical environment of the facility, and other health-care consumables.⁵ Consequently, measures to improve treatment outcomes must take into consideration the important determinants of patients' satisfaction.

In Nigeria, efforts are being made to realize UHC, and it is equally germane to ensure that enrollees are satisfied with health service delivery under the NHIS so as to ensure the success of the program. Similarly, knowledge about patients' satisfaction with health care under the scheme will help in identifying gaps and provides evidence toward strengthening the scheme. Therefore, this study assessed enrollees' knowledge about the NHIS and satisfaction with health services provided under the scheme.

MATERIALS AND METHODS

The study was a descriptive cross-sectional survey conducted among NHIS enrollees accessing health-care services in the University College Hospital (UCH), Ibadan. Currently, the hospital has 850-bed spaces and 163 examination couches, while bed occupancy rates range from 55% to 60%.⁶ There are about 20,000 enrollees registered under the NHIS in the health facility. The study population included all enrollees receiving care under the NHIS in the UCH. The study, however, excluded NHIS enrollees on admission as well as dependents of the NHIS principal beneficiaries.

The sample size was determined using the Leslie Kish formula $n = z_{\alpha}^2 p (1 - p) / d^2$ where $P = 0.57$, is the proportion of people accessing health care through health insurance scheme in a previous study.⁷ A total of 373 individuals were consecutively recruited for the study. Ethical approval was obtained from the Oyo State Research Ethical Review Committee. Permission to conduct the study was granted by the UCH management. Written informed consent was obtained from individual participants before the questionnaire administration. Participation was voluntary, and confidentiality was maintained.

The study was conducted using a quantitative method of data collection. A semi-structured pretested interviewer-administered questionnaire was used. The questionnaire was divided into four sections. Section A: Sociodemographic characteristics of respondents; Section B: Assessment of the knowledge of the respondents; Section C: The assessment of the satisfaction of enrollees about the scheme; and Section D: The assessment of the opinions of respondents about NHIS and the received services.

Data were collected over a period of 4 weeks, with an average of 20 respondents recruited per day. Data cleaning was done to minimize error and missing data. Descriptive statistics was used to present results, and Chi-square test was used to test for the association between categorical variables at $P < 0.05$ level of statistical significance.

RESULTS

Sociodemographic profile of respondents accessing health-care services in University College Hospital, Ibadan under the National Health Insurance Scheme

Table 1 shows the sociodemographic profile of respondents. The mean age was 42.5 ± 10.0 years, and more than half of the respondents 209 (56.0%) were male, majority 359 (96.2%) were married, and had acquired tertiary education 322 (86.3%).

Knowledge of the National Health Insurance Scheme by enrollees

Table 2 shows the knowledge of enrollees about NHIS. Those who reported having been on the scheme for <5 years were higher in number compared to those who had spent more number of years (54.2% vs. 35.9%). Majority of the respondents knew the full meaning of NHIS, 309 (82.8%). In addition, 273 respondents (73.2%) knew the meaning of Health Maintenance Organisation (HMO). An appreciable number of participants, 260 (69.7%) were able to identify the HMO responsible for the purchase of health-care services for them. Overall, 227 (60.9%) had good knowledge about the objectives of NHIS. Majority of the respondents, 344 (92.2%), had never complained to their HMO. However, among those who had ever complained, the most common complaints, 12 (41.4%), was long waiting time in the process of accessing health-care services.

Table 1: Sociodemographic characteristics of participants

Sociodemographic characteristics (n=373)	Frequency (%)	Cum total
Age		
<30	27 (7.2)	27
30-39	127 (34.0)	154
40-49	128 (34.3)	282
≥50	91 (24.5)	373
Mean age±SD	42.5±10.0	
Sex		
Male	209 (56.0)	209
Female	164 (44.0)	373
Marital status		
Single	14 (3.8)	14
Married	359 (96.2)	373
Educational status		
No formal education	6 (1.6)	6
Primary	4 (1.1)	10
Secondary	41 (11.0)	51
Postsecondary (tertiary, others)	322 (86.3)	373
Religion		
Christianity	339 (90.9)	339
Islam	34 (9.1)	373
Ethnicity		
Hausa	4 (1.1)	4
Ibo	23 (6.2)	27
Yoruba	305 (81.8)	332
Others	41 (11.0)	373

SD – Standard deviation

Experiences with payment for health-care services among National Health Insurance Scheme enrollees at University College Hospital, Ibadan

Table 3 shows the pattern of payment during a visit to health facility. Majority of the respondents 303 (81.2%) claimed paying for some of the costs of services (including the costs of drugs, laboratory tests, consultation fees, and X-ray) through out-of-pocket; however, majority 218 (71.9%) reported it was occasional. Only a small number, 107 (35.3%) reported paying part of the cost of care in the current hospital visit, and a smaller number, 12 (4.0%), reported ever been denied access to care for an inability to pay for care under the scheme.

Patients' satisfaction with health-care services under the National Health Insurance Scheme

NHIS enrollees' satisfaction with the services received was shown in Table 4. Majority of the respondents 344 (92.2%) reported they had never had any reason to complain to their HMOs about services received in health facilities. Of those who reported a complaint, long waiting time, problems with referrals, drugs and/or services not covered under the scheme were the most cited complaints in 12 (41.4%), 5 (17.2%), and 5 (17.2%), respectively, among others. However, a large number of the respondents 255 (68.4%) were of the opinion that service delivery was better than what it was before the establishment of the NHIS, while general satisfaction with care under the scheme was only in 197 (52.8%) of the study participants.

Sociodemographic correlates of patients' satisfaction with services provided under the National Health Insurance Scheme

Table 5 shows the association between socio-demographic factors and patients' satisfaction with the NHIS services accessed at UCH, Ibadan. Results showed that only gender was significantly associated with satisfaction of NHIS services; female respondents were more satisfied with NHIS services ($\chi^2 = 3.894, P = 0.048$).

DISCUSSION

The majority of the participants in this study were in the productive age group which reflected the workforce demographic profile of Nigeria, and as well as membership of the NHIS. This also reiterates the disproportionate distribution of coverage of the NHIS in favor of the working population, especially those in the formal sector. This does not bode well for the health and welfare of individuals in that are either retired or working in the informal sector. Knowledge of the NHIS among participants was similar to findings in a previous similar study,⁸ but higher than it was in some previous studies conducted in this environment.⁹ The observed differences may be due to the difference in the timing of conducting the studies. There is the possibility that knowledge of the general population and more especially the scheme enrollees about the program increases with time as a result of better exposure to

Table 2: General knowledge of the National Health Insurance Scheme among enrollees

Variable	Frequency (%)	Cum total
Length of stay on the scheme (years)		
0-<5	202 (54.2)	202
5-10	134 (35.9)	336
Missing	37 (9.9)	373
Meaning of the NHIS		
Correct	309 (82.8)	309
Incorrect	64 (17.2)	373
Meaning of HMO		
Correct	273 (73.2)	273
Incorrect	100 (26.8)	373
Correct name of HMO		
Yes	260 (69.7)	260
No	113 (30.3)	373
Ever made complaints to HMO		
Yes	29 (7.8)	29
No	344 (92.2)	373
Types/categories of complaints (n=29)		
Attitude of staff	2 (6.9)	2
Delay/waiting time too long	12 (41.4)	14
Change of hospital/referral issue	5 (17.2)	19
Persistent pain/ailment	2 (6.9)	21
Dugs/test not covered	5 (17.2)	26
Poor service	1 (3.4)	27
Refusal of treatment	2 (6.9)	29
Knowledge about the NHIS		
Good (4 questions answered correctly)	227 (60.9)	227
Fair (2 to 3 questions answered correctly)	47 (12.6)	274
Poor (0 to 1 question answered correctly)	99 (26.5)	373

NHIS – National Health Insurance Scheme, HMO – Health Maintenance Organisation

Table 3: Pattern of payment among the National Health Insurance Scheme enrollees receiving health-care services at University College Hospital, Ibadan

Variable	Frequency (%)	Cum total
Still offset some costs through OOP		
Yes	303 (81.2)	303
No	70 (18.8)	373
Frequency of payment (n=303)		
Occasionally	218 (71.9)	218
Always	85 (28.1)	303
Paying part of the current hospital visit (n=303)		
Yes	107 (35.3)	107
No	196 (64.7)	303
Denied care for inability to pay (n=303)		
Yes	12 (4.0)	12
No	291 (96.0)	303

OOP – Out-of-pocket

information with regards to the scheme. Poor knowledge of health insurance has been identified as a factor that contributes

Table 4: Enrollees expressed satisfaction with care under the scheme

Variable	Frequency (%)	Cum total
Ever made complaints to HMO, frequency (%)		
Yes	29 (7.8)	29
No	344 (92.2)	373
Types/categories of complaints (n=29), frequency (%)		
Delay/waiting time too long	12 (41.4)	12
Change of hospital/referral issue	5 (17.2)	17
Drugs/test not covered	5 (17.2)	22
Others	7 (24.2)	29
Respondents opinion about the NHIS (n=373)		
Opinion, frequency (%)		
Better than before the scheme	255 (68.4)	255
Same as before the scheme	111 (29.8)	366
Poorer than before the scheme	1 (0.3)	367
I do not know	6 (1.6)	373
Ever been denied access to care in this facility, n (%)		
Yes	11 (2.9)	11
No	362 (97.1)	373
Reasons for denial of health care service (n=11), n (%)		
Services not available	1 (0.3)	1
Inadequate personnel	2 (0.5)	3
Problem with required equipment	2 (0.5)	5
Name not found on the hospital enrollees list	0	5
Authorization code not available	1 (0.3)	6
Others	5 (31.0)	11
Overall satisfaction, frequency (%)		
Generally not satisfied	169 (45.3)	180
Generally satisfied	197 (52.8)	366

NHIS – National Health Insurance Scheme, HMO – Health Maintenance Organisation

to low enrolment in any insurance scheme in the general populace,¹⁰ while increase awareness and knowledge about it has been shown to influence the level of enrolment.¹¹

It is important to note that less than one-tenth of the participants ever complained to the HMOs. This may signify satisfaction with services received in the health facility, as was claimed by participants or as a result of inadequate knowledge of the process of lodging a complaint. Among those who had a complaint, it was majorly as a result of long waiting time. This may be as a result of heavy workload in the facility being a referral center for lower-level health institutions in the immediate environment and far away from facilities within and outside Nigeria. A similar study conducted in Bangladesh, waiting time was one of the most cited factors that determined patients' satisfaction.¹²

Some of the patients reported making part-payment of health-care services received; however, majority claimed it never prevented them from receiving needed care. Part-payment of the cost of care is one of the strategies to minimize demand-side moral hazard which is one of the common causes of health-care market failure.¹³ It is noteworthy that many of the patients were of the opinion that health-care service delivery under the scheme was better than it was without the scheme; however, just about half of the participants were satisfied with the quality of service under the scheme. This was similar to findings in a previous study by Mohammed *et al.*, among health insurance enrollees in Nigeria.¹⁴ However, satisfaction with care was found to be slightly higher in an earlier study conducted in Southeastern Nigeria.¹⁴ Perceived satisfaction with care is a proxy for the assessment of quality of health-care services.

In this study, gender was associated with respondents' satisfaction with health service delivery. More female enrollees

Table 5: Association between sociodemographic factors and patients' satisfaction of the Scheme (n=373)

Variable	Service satisfaction of NHIS			χ^2	P
	Dissatisfied, n (%)	Satisfied, n (%)	Total, n (%)		
Age					
<30	10 (37.0)	17 (63.0)	27	3.744	0.290
30-39	53 (42.7)	71 (57.3)	124		
40-49	64 (52.9)	57 (47.1)	121		
>50	40 (44.9)	49 (55.1)	89		
Sex					
Male	104 (50.7)	101 (49.3)	205	3.894	0.048
Female	65 (40.4)	96 (59.6)	161		
Marital status					
Single	5 (46.5)	8 (61.5)	13	0.323	0.570
Married	164 (46.5)	189 (53.5)	353		
Educational status					
No formal/primary	0	4 (100)	4	3.806	0.283
Secondary	17 (42.5)	23 (57.5)	40		
Postsecondary	149 (47.2)	167 (52.8)	316		
Length of stay on NHIS					
0-<5	86 (43.2)	113 (56.8)	199	1.477	0.224
5-10	78 (49.7)	79 (50.3)	356		

NHIS – National Health Insurance Scheme

than male enrollees reported that they were satisfied with health service delivery, ($\chi^2 = 3.894, P = 0.048$). This finding is supported by a similar study conducted by Oladapo and Osiberu in 2009.¹⁵ Other sociodemographic variables such as age, marital status, educational status, and number of years enrolled in NHIS were not significantly associated with reported satisfaction with health service delivery. However, findings in similar studies showed that age¹⁶ and marital status¹⁴ are important factors associated with patients' satisfaction with health-care services.

CONCLUSION AND RECOMMENDATION

This study assessed patients' knowledge and satisfaction with health services provided under the NHIS. The study revealed that patients' knowledge about the NHIS was good. This was reflected in the number of enrollees who knew the full meaning of NHIS and the HMO that acts as agents through which the NHIS offset their medical bills. Even so, more than half of the respondents, 227 (60.9%), had good knowledge about the objectives of NHIS. However, overall satisfaction with health care provided under the scheme was expressed by only 52.0% of the respondents. This shows that a lot still needs to be done to ensure that adequate and quality health-care services are received by NHIS enrollees. Expectedly, this will have a positive impact on patients' satisfaction with care, improve treatment outcomes, and ensure the general realization of the underlying goals of the NHIS program.

Similarly, this study showed that satisfaction with health service delivery was associated with gender as more females reported that they were satisfied with services compared with male respondents. Overall, while efforts are being made to achieve UHC, it is also important to ensure that patients are satisfied with service delivery. This can be achieved by sensitizing health-care providers as well as HMOs regarding the role of quality service delivery and patients' satisfaction in realizing the objectives of access to affordable health-care services.

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Conflicts of interest

There are no conflicts of interest.

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