

Awareness of National Health Insurance Scheme Activities and Service utilization Among Enrolled Employees in Government Institutions in Nigeria

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Abstract

The study examined awareness of National Health Insurance Scheme activities and service utilization among enrolled employees in government institutions in Nigeria. Adopting the survey research method, data was collected from 1200 samples employed in three federal Government Institutions in Calabar, Cross River State, Nigeria using a structured self-developed questionnaire. The samples were selected using the purposive and proportional sampling technique. Descriptive analysis was used to present result and linear regression was used to check the variable under study at 0.05 confidence level. The result from the descriptive analysis revealed that there was moderate knowledge (48 per cent) that there are drugs not on the NHIS drug list. Result also revealed minimal knowledge (30 per cent) that there is some treatment not on the NHIS treatment List. Regression analysis revealed a moderate correlation (30 per cent) between awareness of NHIS activities and service utilisation ($F(1, 1112) = 16.472; p < .000$). The study concludes that there is moderate knowledge about the activities of the NHIS and this affects service utilization and satisfaction. The study recommends among others that the operators of the National Health Insurance Scheme should include more drugs on the prescription list to address the health needs of participants. The scheme should be expanded to cover all medical cases of enrollees. The government and the agencies in charge of the health insurance scheme should carry out periodic assessments of clients' satisfaction with the scheme so as to make future policy decisions for better service delivery.

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Keywords: Awareness; NHIS activities; service utilization; employees; government institutions.

1. Introduction

Years of out-of-pocket spending, the dismal performance of its health system as well as more than 90 per cent of its citizens being without health insurance (Onwujekwu, Hanson & Uzochukwu, 2012), has seen successive Nigerian democratic and military governments make concerted efforts at providing better health services and promoting health equality through different health policies. In spite of these, the Nigerian health system still grapples with various problems (Asakitkpi, 2019; Garba & Ejemba, 2015). These problems are chronicled in various statistics. The average life expectancy of Nigerians is 52, lower than its peers in Africa such as Ghana(61), South Africa (57), Morocco (76.55), Tunisia (76.6), and Egypt (71.9) (Akunne, Okonta, Ukwe, Heise, & Ekwunife, 2019; Abubakaria, ketiah-Amponsahb & Owoo, 2019; Istaiteyeh, 2017). The occurrence of infectious diseases in Nigeria is high. between 2016 and 2018, Nigeria had 177,312 confirmed cases of Lassa fever, 231 cases of Yellow Fever, 269 cases of Monkey Pox (WHO, 2020, Dan-Nwafor, Furuse, Ilori, Ipadeola, et al, 2019; Njidda, Ayebanyi, Obasanya, Ojo, Adedeji, Mba, Oladeji & Ihekweagu, 2018). The country is ranked 123 out of 138 nations on the cases of tuberculosis. The country still experiences high child mortality rate, with 89 mortality per 1000 birth (welcome,2011; Adeloye, David, Olaosun,

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Auta, Adesokan, Gadanya, Opele, Olagbemi, & Iseolurunkanmi, 2017). The Nigerian government, in order to find a solution to the problems bedeviling the Nigerian healthcare system and to provide its citizen with affordable healthcare at all level, introduced the national healthcare insurance scheme in 2005.

The national health insurance scheme was introduced by the Olusegun Obasanjo administration in 2005 to ensure quality access to health care, reduction in inflated and rising cost of healthcare services, ensuring healthcare financial risk protection and ensuring healthcare efficiency (Agba, Ushie, & Osuchukwu, 2010; Abiola, Ladi-Akinyemi, Oyeleye, Oyeleye, Oluwoselu & Abdulkareem, 2019; Ibiam, Bekomson, & Angioha, 2019). Although, there have been gains from its introduction when compared to 20 years ago, the scheme seems to lag in its bit to achieve its ultimate goal. Aregbesola (2018) maintain that only about 5 per cent of the nation's population, mainly federal civil servants and their dependents are registered and are covered by the scheme. Healthcare financing is still a problem. Out of pocket spending on healthcare is still accounting for 72.3 per cent of all healthcare expenditure while government expenditure on healthcare is just 5.3 per cent of its yearly budget (Oyekola, Ojediran, Ajani, Oyeyipo & Rasak, 2020).

Aregbeshola (2018) asserts that various questions have been raised on the activities of the agencies handling the NHIS, as a result of the numerous petitions filed by enrollees and empirical evidence from various states as it concerns unsatisfactory and inhumane treatment meted out to NHIS patients at hospitals. The study by Michael, Suleiman, Gramia and Aliyu (2017), using cross-sectional design to collect data from 202 patients randomly selected from staff attending Amino Kano teaching hospital found a moderate satisfaction with the clinic service, but there was general dissatisfaction with clinical waiting time. Adewole, Adeniji, Adegbrioye, Darria and Ilori (2020) study on patients' knowledge and satisfaction on NHIS in the university teaching hospital found that there was a low level of satisfaction with service delivery. Opara, Amah, Ifeanyichukwu, Agara and Ndubushi (2018) found that participants perceived inferior quality of service by service providers to NHIS enrollees. The study by Daramola, Adenira and Akande (2018) found that the general cause of dissatisfaction with the NHIS scheme was the unavailability of prescribed drugs, long registration process and long waiting time.

The utilization of the National health insurance service is a function of some predisposing factors among which include awareness of NHIS activities. Studies has also shown that knowledge about the activities of the insurance scheme is low in most states in Nigeria. The study of Adibe, Udeogaranya and Ubaka (2015) revealed that employees of the University of Nigeria Nsukka have marginal knowledge of the national health insurance scheme activities. Akintaro and Adewoyin (2015) study on the awareness and attitude towards NHIS in the Nigerian research institute found that although staff are aware of the health insurance scheme, the level of awareness of its activities is low. Olayemi (2017) study found that people lack awareness of the general aspects of the scheme. This study assessed awareness of the national health insurance scheme activities and level of satisfaction of the national health insurance scheme among employees in government institutions in Nigeria.

2. Methods

2.1. Research Instrument

Data were collected using structured questionnaire. A 10-point questionnaire made of four points response scale was developed by the researcher. Participants were expected to rate their awareness of NHIS activities on a scale of 1-4 on the scale of completely true, true, not true, absolutely not true. Their awareness of NHIS activities as expressed was rated against the utilization NHIS scheme. A pre-trial of the research instrument was carried out on the staff of the federal parastatals that are not part of the original participants to test the reliability of the research instrument. The pre-trial was done using Crombach Alpha reliability estimate. The result from the test revealed a Crombach Alpha reliability estimate ranging from 0.51 to 0.65. Nenty (2003) argued that a reliability estimate ranging from 0.50 is considered adequate. Hence, the result was considered reliable and adequate.

2.2. Study Design

The survey research method was adopted for the study. The method involves employing survey instrument to determine the opinion, attitude and preference of a particular population (Ojong, Iji & Angioha, 2019; Angioha, Omang, Ishie & Iji, 2020). It entails structuring the survey instrument to identify variables and their relationship with each other (Ndem, Angioha & Dike, 2020). The survey research design was used to collect needed data for this study from employees of three federal government establishment in Calabar; namely the University of Calabar, University of Calabar Teaching Hospital and the Federal Neuro-Psychiatric Hospital Calabar. According to data gathered from the establishment, the population for this study stands at 9201. A comprehensive break down shows that the University of Calabar has a population of 5492, the University of Calabar Teaching Hospital 2749 and the Federal Neuro Psychiatric Hospital, 960.

2.3. Sample size

1200 participants were used for this study. The population of each federal government establishment was subjected to Taro Yamane sample determinant technique at 0.05 confidence level. for each establishment, the result revealed 400. The calculation is highlighted below.

Taro Yamane (1967) sample determination technique formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where	n	=	Sample size
	N	=	Finite population
	e	=	Level of significance (or limit of tolerable error)
	1	=	Unity (a constant)

Sample Size for University of Calabar Teaching Hospital.

Population for UCTH= 2749.

Using Taro Yamane sample determinant techniques to determine the sample:

$$n = \frac{2749}{2749 + 1(0.05)^2}$$

$$n = \frac{2749}{2750(0.0025)}$$

$$n = \frac{2749}{6.875}$$

$$n = 400$$

Therefor the sample for UCTH is 400.

Population for Federal Neuro-Psychiatric Hospital is 960.

$$n = \frac{960}{960 + 1(0.05)^2}$$

$$n = \frac{960}{961(0.0025)}$$

$$n = \frac{960}{2.4025}$$

$$n = 400$$

Therefore, the sample for Federal Neuropsychiatric Hospital is 400

Population for Federal University of Calabar is 5492.

$$n = \frac{5492}{5492 + 1(0.05)^2}$$

$$n = \frac{5492}{5493(0.0025)}$$

$$n = \frac{5492}{13.73}$$

$$n = 400$$

Therefore, the sample for the University of Calabar is 400

The purposive and proportional sample technique was used to select the 1200 participants for the study. The purposive sampling was used in selecting 3 federal government establishments. The establishments were selected because these establishments approved for the study to be carried out. The establishment selected were the University of Calabar, the University of Calabar Teaching Hospital and Federal Neuro-Psychiatric Hospital, Calabar. Since each of the establishment have their own sample size; the proportional sampling technique was used in selecting the appropriate sample size for each unit or department of each establishment. The proportional sampling was used because the population of each unit or department is known. The researcher then used the purposive sampling technique to select the participants from each unit or department. The inclusion criteria include those staff enrolled in the National Health Insurance Scheme.

2.4. Ethical Consideration

Ethical approval was obtained from the research ethic committee of each of the selected institutions' permission was also sought from the head of units or department in each of the establishments under study. Informed consent was also obtained from each selected participant and the confidentiality of the information supplied by the participants was assured and restriction was put on people assessing collected data.

2.5. Data Collection and Analysis

Required data was collected over four weeks with the aid of 6 research assistants, who were trained on the process of data collection. Data collected was checked to minimize error and missing data. Descriptive analysis was used to present result and linear regression was used to check the variable under study at 0.05 confidence level. Out of 1,200 questionnaires administered, 1,144 were recovered and therefore used for analysis.

3. Findings

3.1. Presentation of Result

Questions were raised according to the objective of the study which was to assess awareness of national health insurance scheme activities and Service utilization among enrolled employees in government institutions in Nigeria. Descriptive statistics (frequency and percentage) was used to answer the research question. Participants' responses are presented in Table 1.

Table 1. Responses on awareness of National Health Insurance Scheme activities and Service utilization

S/N	Statement	Very true	True	Not true	Absolutely not true
1	I am aware that some prescriptions are not on the NHIS drug list	204 (18.00)	346 (30.00)	322 (28.00)	270 (24.00)

2	I require some of the drugs that are not on the NHIS list	16 (1.00)	24 (2.00)	384 (34.00)	720 (63.00)
3	My Health management organization sends me messages on NHIS updates	534 (47.00)	230 (20.00)	224 (20.00)	156 (14.00)
4	I am aware that there are treatments that are not covered by Health insurance	140 (12.00)	202 (18.00)	288 (25.00)	514 (45.00)
5	I understand how the payment structure of the NHIS works	242 (21.00)	420 (37.00)	274 (24.00)	208 (18.00)
6	My knowledge of NHIS activities have made me to utilize my insurance more	204 (18.00)	346 (30.00)	322 (28.00)	270 (24.00)

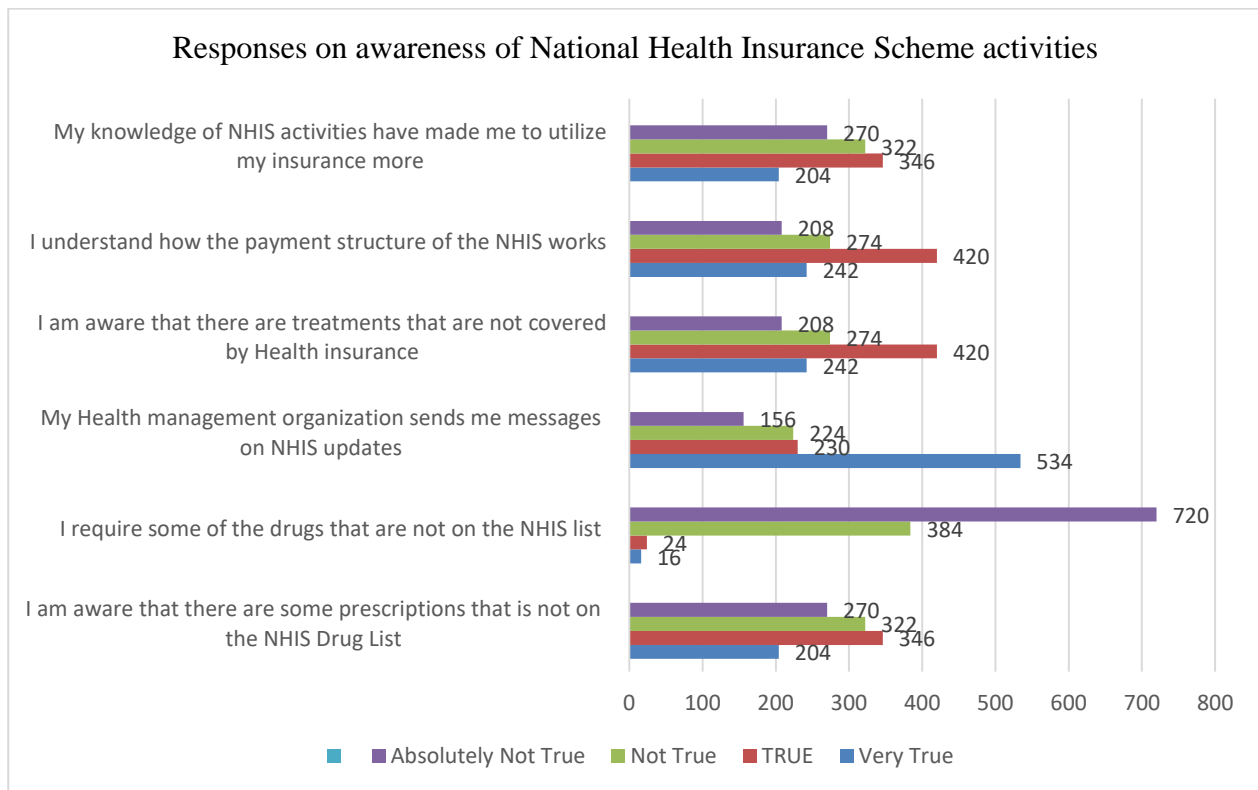


Fig. 1. Responses on awareness of National Health Insurance Scheme activities and Service utilization

Results of analysis as presented in table 2, with graphical illustration in figure 1, shows participants response pattern as follows; on whether they are aware that there are some prescriptions that are not on the NHIS drug list, the responses were as follows; 204 (18.00) very true, 346 (30.00) True, while 322 (28.00) not true and 270 (24.00) absolutely not true. On whether respondents require some of the drugs that are not on the NHIS list, the responses show; 16 (1.00) very true, 24 (2.00) True, 384 (34.00) not true and 720 (63.00) absolutely not true. When asked whether their Health management organizations send them messages on NHIS updates, the responses submitted shows 534 (47.00) very true, 230 (20.00) True 224 (20.00) not true, and 156 (14.00) absolutely not true. On whether respondents are aware that there are treatments that are not covered by Health insurance, the responses shows 140 (12.00) very true, 202 (18.00) True, 288 (25.00) not true and 514 (45.00) absolutely not true. On whether respondents understand how the payment structure of the NHIS works, the following responses were got; 242 (21.00) very true, 420 (37.00) True, while 274 (24.00) not true and 208 (18.00) absolutely not true. On whether their knowledge of

NHIS activities have made them utilize the insurance scheme more, the responses show 204 (18.00) very true, 346 (30.00) True, 322 (28.00) not true and 270 (24.00) absolutely not true.

3.2. Analysis of Data

Data was analyzed using simple linear regression to check the correlates between awareness of NHIS activities and Service utilization. The independent variable is the awareness of National Health Insurance Scheme activities, while the dependent variable is Service utilization. Both variables were measured continuously. The analysis was done at 05 level of significance and the result is presented in table 2

Table 2. Summary of simple linear regression analysis of the contribution of awareness of NHIS activities to Service utilization

Variables	Mean	Std. Deviation
Awareness of NHIS activities	14.9255	3.64173
Access to healthcare	27.6966	14.95803

Model	Sum of Squares	df	Mean Square	F	R	R Square	Adjusted R Square	Sig
Regression	1440.900	1	1440.900	16.472	0.076 ^a	0.030	0.029	0.000 ^a
Residual	247584.547	1112	222.648					
Total	249025.447	1113						

The result of the analysis as presented in table 2 revealed R-value of 0.176^a. The correlation coefficient is a standardized measure of an observed degree of relationship between variables, it is a commonly used measure of the size of an effect, and that values of ± 1 represent a small effect, ± 3 is a medium effect and ± 5 is a large effect. Also, the R² –value of .030 imply that 30per cent of the total variance is accounted for by the predictor variable (NHIS Awareness of NHIS activities). Furthermore, the regression ANOVA revealed that the F (1, 1112) = 16.472; p < .000, is significant. Also, the adjusted R² (.029) shows some shrinkage of the unadjusted value (.030) indicating that the model could be generalized on the population. Based on the result, it was concluded that awareness of NHIS activities significantly contributes to the level of service utilisation.

3.3. Discussion of Findings

Results of analysis of demographic data of respondents revealed that 536 respondents representing 47per cent were males, while 608 representing 53 per cent were females. As for age distribution of respondents', 88 (8 per cent) are below 25 years, 476 (42.00 per cent) are within 26 – 34 years, 352 (31.00 per cent) are within 35 – 44 years, 152 (13.00 per cent) are within 45 – 54 years, 76 (7.00 per cent) are 55 years and above. On marital status; 576 (50.00 per cent) are single, 450 (39.00 per cent) are married, 62 (6.00 per cent) are divorced, while 40 (3.00 per cent) are widows and 26 (2.00 per cent) are widowers. For respondents' educational qualification; 34 (3.00 per cent) have no formal education, 84 (7.00) have primary school education, 42 (4.00 per cent) had secondary school education (GCE/SSCE), 296 (26.00 per cent) have NCE/OND, 554 (48.00 per cent) have HND/B.Sc./B.Ed./B.A, 134 (12.00 per cent).

From the analysis of the data analyzed using descriptive statistics, it was discovered that only a moderate number of employees (48 per cent) are aware that there are drug prescriptions that are not on the NHIS drug list. Most of the respondent (67 per cent) maintain that their Health Management organization keep them up to date on issues that concern NHIS. Findings also revealed that only a minimal number of employees are aware that there are treatments that are not covered by the NHIS. Result also revealed that only a moderate number of employees (58 per cent) understand the payment structure of the NHIS. Results also revealed that below average employees (48 per cent) use the NHIS as a result of their knowledge of NHIS activities.

From the analysis using simple Linear Regression, result revealed that awareness of NHIS activities significantly contributes to the level of service utilisation. This was because the regression ANOVA revealed that the F (1, 1112) =

16.472; $p < .000$, is significant. Also, the adjusted R^2 (.029) shows some shrinkage of the unadjusted value (.030). Also, the R^2 -value of .030 imply that 30per cent of the total variance is accounted for by predictor variable (NHIS Awareness of NHIS activities).

The finding of this study aligns with the results of earlier studies that revealed the weakness of the National Health Insurance Scheme in Nigeria. The study by Michael, Suleiman, Gramia and Aliyu (2017), found a moderate satisfaction with the clinic service and general dissatisfaction with clinical waiting time among staff patients assessing the scheme in Aminu Kano Teaching Hospital. Adewole, Adeniji, Adegbrioye, Darria and Ilori (2020) found that there was a low level of satisfaction with service delivery when they studied patients' knowledge and satisfaction of the NHIS. Opara, Amah, Ifeanyichukwu, Agara and Ndubushi (2018) found that participants perceived inferior quality of service by service providers to NHIS enrollees. In studying the cause of dissatisfaction with the NHIS, Daramola, Adenira and Akande (2018) found that unavailability of prescribed drugs, long registration process and long waiting time were major dissatisfying factors.

Utilizing the services of the Health Insurance Scheme by enrollees could be encumbered by some debilitating factors. Among them is the segregate nature of drugs on the prescription list of the scheme. Enrollees often complain that the drugs needed to address their diagnosed problems are not listed on the drug list covered by the scheme. Another very discouraging factor enrollees face is the fact that the scheme does not cover all medical conditions. When most enrollees present with this uncovered medical cases, they are not attended to. There is also the common perception that the scheme is riddled in corrupt practices that account for the weak operation of the scheme in Nigeria. These challenges have the capacity to weaken enthusiasm of enrollees and potential ones.

4. Conclusion and Practical Implication

The study assessed the awareness of National Health Insurance Scheme activities and service utilization among enrolled employees in government institutions. Result from the analysis of data collected from 1,200 employees of three government institution revealed that there was moderate knowledge (48 per cent) that there are drugs not on the NHIS drug list. Result also revealed minimal knowledge (30 per cent) that there is some treatment not on the NHIS treatment List. Regression analysis revealed a moderate correlation (30 per cent) between awareness of NHIS activities and service utilisation ($F(1, 1112) = 16.472$; $p < .000$). The study concludes that there is moderate knowledge about the activities of the NHIS and this affects service utilization.

Based on this finding the study made the following recommendations. The operators of the scheme should include more drugs on the prescription list to address the health needs of participants. The scheme should be expanded to cover all medical cases of enrollees. The government and the agencies in charge of the health insurance scheme should carry out periodic assessments of clients' satisfaction with the scheme so as to make future policy decisions for better service delivery. Very importantly, public enlightenment campaigns, seminars and workshops should be organized from time to time to create awareness on the activities and objectives of the national health insurance scheme. It is also important to sensitize healthcare providers and health management organizations on the need to provide adequate and quality healthcare to the satisfaction of clients.

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