

## **Awareness, knowledge and participation of National Health Insurance Scheme (NHIS) among nurses in a tertiary healthcare institution in Southwest Nigeria**

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### **Abstract**

*Background:* The National Health Insurance Scheme (NHIS) was implemented as part of health reform programmes aimed at providing effective health care to all Nigerian citizens. Despite the noble objectives and the enormous benefits of the scheme, little is known about how involved the health workers are.

*Aim:* This study assessed the awareness, knowledge and participation of NHIS among nurses in a tertiary healthcare setting.

*Methods:* The study population was nurses in the Olabisi Onabanjo University Teaching Hospital (OOUTH), Sagamu, Southwest Nigeria. Data was collected using a validated, semi-structured self-administered questionnaire. Variables assessed included; sociodemographic data, awareness, knowledge and participation regarding NHIS. Data were analysed using Statistical package for Social Sciences (SPSS) software version 16 then presented as descriptive analysis and cross tabulation of variables.

*Results:* The mean age of the respondents was 38.3±5.4 years, 98.0% were females and 85.6% were married. There was high level of awareness of the existence of NHIS as evidenced by 57.9% of the respondents having information on NHIS from seminars. Majority (76.5%) had good knowledge of the NHIS (scores of 4-5/5 correct responses) with the remaining 23.3% having fair knowledge (scores of 2-3/5 correct responses). However, only 3.3% of the nurses were currently registered and participating in the scheme. The age of respondents had statistically significant relationship with the level of knowledge ( $X^2 = 9.40$ ;  $p < 0.05$ ).

*Conclusion:* There was high level of awareness on National Health Insurance Scheme among nurses in Olabisi Onabanjo University Teaching Hospital, which did not translate to participation in the scheme.

**Keywords:** *Awareness, knowledge, National Health Insurance Scheme, Nurses, Nigeria.*

### **Résumé**

*Contexte :* Le Projet National d'Assurance Santé (NHIS) a été mis en œuvre dans le cadre des programmes de réforme de la santé visant à fournir des soins de santé efficaces à tous les citoyens nigériens. Malgré les nobles objectifs et les énormes avantages du programme, on sait peu sur comment les agents de santé y sont impliqué.

*But :* Cette étude a évalué la sensibilisation, les connaissances et la participation du NHIS parmi les infirmiers dans un établissement de soins tertiaires.

*Méthodes :* La population étudiée était les infirmiers dans l'Hôpital d'Enseignement Universitaire Olabisi Onabanjo (OOUTH), Sagamu, Sud-Ouest du Nigeria. Les données ont été recueillies à l'aide d'un semi-structuré questionnaire validé, auto-administré. Les variables évaluées incluses; les données sociodémographiques, de sensibilisation, de connaissance et de participation concernant NHIS. Les données ont été analysées en utilisant le logiciel Statistiques pour les Sciences Sociales (SPSS), version 16, présenté ensuite comme une analyse descriptive et un tableau croisé des variables.

*Résultats :* L'âge moyen des répondants était de 38,3 ± 5,4 ans, 98,0% étaient des femmes et 85,6% étaient mariés. Il y avait un grand niveau de sensibilité sur l'existence de l'NHIS comme évident que 57,9% des personnes interrogées avaient des informations sur l'NHIS au cours des séminaires. La majorité (76,5%) avait une bonne connaissance de l'NHIS (scores de 4-5 / 5 réponses correctes), avec les 23,3% restants ayant une connaissance adéquate (scores de 2-3 / 5 réponses correctes). Cependant, seulement 3,3% des infirmières étaient actuellement inscrites et participaient au programme. L'âge des répondants avait une relation statistiquement significative avec le niveau de connaissance ( $X^2 = 9,40$ ;  $p < 0,05$ ).

*Conclusion :* Il y avait un grand niveau de sensibilité sur le Projet National d'Assurance Santé parmi les infirmiers de l'Hôpital d'Enseignement Universitaire Olabisi Onabanjo, qui ne s'est pas traduit à une participation au programme.

**Mots - clés:** *Sensibilisation, Connaissances, Projet National d'Assurance Santé (NHIS), Infirmiers, Nigeria.*

## Introduction

The National Health Insurance Scheme (NHIS) was introduced to ensure that every Nigerian citizen has access to quality healthcare. The scheme was basically designed to facilitate fair financing of healthcare costs through the pooling of resources together within the population [1]. This is against the backdrop that in most developing countries, there is a lack of universal coverage of health care and little equity [2]. In Nigeria, due to numerous factors, access to healthcare is severely limited. The unaffordability of services has been one of the major limitations to healthcare delivery and utilization in the country [3]. Unfortunately, healthcare needs among the population are increasing due to the rising socioeconomic burden [4]. Generally, government expenditure on health in sub-Saharan Africa has been described as “inadequate, insufficient, inequitable and unsustainable” [5]. In Nigeria, despite the significant improvement in government expenditure on health care from 2.8% of the total Gross Domestic Product (GDP) in 1995 to 3.9% in 2013; this still accounts for just 27.6% of total healthcare expenditure [6]. The burden of paying for health care has thus become a performance indicator for assessment of national health systems. In addition, the Nigerian health care delivery system is characterized by poor access to health care services for vulnerable members of the society, especially women and children [7].

The Nigerian NHIS was established under Decree No 35 of May 1999 [8]. The scheme was officially launched on the 6th June, 2005, while commencement of services to enrollees started in September 2005. NHIS was designed to provide minimum economic security for employees with regard to unfavourable losses resulting from accidental injury, sickness, old age, unemployment and premature death of family wage earner. In this scheme, the healthcare of the employee is paid for with funds created by pooling together the contributions of employees (5.0% of basic salary) and employers (10.0% of employer’s basic salary) [9]. This 15.0% contribution covers health care benefit package for the employee, a spouse and four biological children below the ages of 18 years. As at 2013, only 3.5% of the target population had registered on the scheme [10].

The national health scheme was launched with the major aim of improving accessibility and equity in health care delivery. The scheme suffered a long lag between conception and implementation partly due to the opposition by health care professionals and administrators, owing to

misconception and inadequate awareness of the principle of health insurance. The key element in assessing the level of implementation of the scheme in Nigeria is a regular assessment of the awareness and attitude of the health care professionals.

Low awareness has been reported as the major reason for the poor utilization of NHIS [11]. Surprisingly, health care providers who may have the perception that they can take care of themselves medically when ill, do not seem to be exempted from this trend [12]. These healthcare providers (nurses inclusive) influence the quality of care rendered. Nurses form an essential cache of health workers in the delivery of health services. It is therefore imperative that nurses are sufficiently aware and participate actively in this scheme. It is against this background that this study sought to assess the awareness, knowledge and participation of nurses in a tertiary level health care centre of the National Health Insurance Scheme.

## Methods

### *Study design*

This study was a descriptive cross-sectional type.

### *Setting*

The study was carried out in Olabisi Onabanjo University Teaching Hospital (OOUTH) situated in Sagamu, Ogun State, South West Nigeria. Ogun state is one of the 36 states in Nigeria. It has three senatorial districts and fifteen local government areas. There are two public (one federal and one state) and one private tertiary health facilities in the state. Olabisi Onabanjo University Teaching Hospital is located in the East senatorial district of Sagamu local government area. The hospital was founded on the 1<sup>st</sup> of January, 1986. It is the only state tertiary health facility and has a workforce of about 1000 staff, including specialists in various fields. The study was carried out between October and December, 2015. Data was collected using validated, semi-structured self-administered questionnaire which was in line with the objectives of the study. In order to ensure that the tool was valid and appropriate for the data collection, it was pre-tested among twenty nurses (>10.0% of the sample size) at Dideolu Specialist Hospital in Ikenne, another local government area in the state and necessary corrections made.

### *Participants*

This comprised of all the 153 nurses from the twelve different departments in Olabisi Onabanjo University Teaching Hospital (OOUTH) Sagamu. The eligibility

criterion used was that the nurse must be currently employed in OOUTH. All the 153 nurses in the teaching hospital including those on leave, participated in the study. Data was cleaned for inconsistencies in the responses.

#### Variables

Demographic variables were analysed with the awareness, knowledge scores and practice.

#### Data sources/measurement

Information were gathered from the nurses who were the respondents.

#### Bias

The tool was validated before it was used and data was exclusively collected by the investigator.

#### Statistical methods

The Statistical Package for Social Sciences (SPSS) software version 16 was used for data analysis. The questionnaires were analysed using descriptive statistics to compute percentages and averages.

#### Sample size determination and sampling technique

The sample size for this study was determined using the formula for estimation of population prevalence [1] and was based on a 95% confidence level.

$$n = \frac{z^2 pq}{d^2}$$

where n = calculated sample size; z = confidence limit (z = 1.96 at 95% confidence interval); p = the response rate in a similar study (which was 88.9% [15]); q = 1-p; d = degree of accuracy (= 0.05). Calculated minimum sample size was 151. This was then corrected for population <10,000 to obtain a corrected minimum sample size of 131.

#### Departmental distribution of respondents

The distribution of nurses in OOUTH according to department is as follows: Medicine (27.0%), Surgery (25.0%), Paediatrics (21.0%), Obstetrics and Gynaecology (20.0%), Community Medicine and Primary Care (4.0%) and Central Sterile Supply (3.0%).

#### Determination and classification of knowledge scores

A total of five questions were asked which were graded and scored as follows; a total score of 4-5 correct responses was used to indicate good knowledge, 2-3 as fair knowledge and 0-1 as poor knowledge.

#### Ethical considerations

Ethical approval was obtained from the Ogun State Ministry of Health Scientific Committee. Written informed consent was obtained from the respondents, and confidentiality was maintained.

## Results

#### Demographic characteristics

The demographic characteristic of the respondents is shown in table 1. Majority of the nurses in Olabisi Onabanjo University Teaching Hospital were between 40-49 years of age (45.1%) while the minority were between 60 years and above (9.8%) and a very large percentage of them are female (98.0%). It was found that most of them were married (85.6%) while single and widowed nurses constituted 13.7% and 0.7% respectively. In addition, it was also observed that majority of the nurses have 1-2 children (36.6%) and about 24.2% of the nurses have no children (Table 1).

**Table 1:** Demographic characteristics of the respondents

	Frequency	Percentage
<i>Age (years)</i>		
20-29	21.0	13.7
30-39	48.0	31.4
40-49	69.0	45.1
50 and above	15.0	9.8
<i>Sex Distribution</i>		
Male	3.0	2.0
Female	150.0	98.0
<i>Marital Status</i>		
Single	21.0	13.7
Married	131.0	85.6
Widowed	1.0	0.7
<i>Religion</i>		
Christianity	77.0	50.0
Islam	73.0	47.4
Others	4.0	2.6
<i>Number of Children</i>		
None	37.0	24.2
1-2	56.0	36.6
3-4	54.0	35.3
> 4	6.0	3.9

#### Awareness of National Health Insurance Scheme (NHIS)

Nearly all the nurses in Olabisi Onabanjo University Teaching Hospital have heard about NHIS (96.0%) (Figure 1) and 55.6% of them heard about it through Mass/Electronic Media. It was found that 81.0% of the Nurses had correct awareness on at least one of the objectives of NHIS and 65.5% had correct awareness

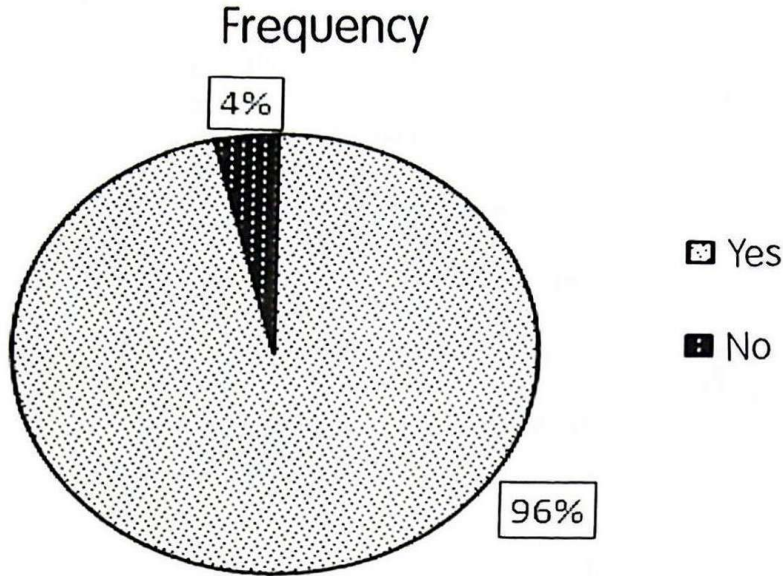


Fig. 1: Have you ever heard about NHIS

on the contribution of NHIS while 26.1% had no awareness on the contribution of NHIS (Table 2).

Table 2: Sources of information and awareness on NHIS

Means of acquisition of awareness about NHIS	Frequency	Percentage
Mass/electronic media	85.0	55.6
Workshop, seminar or conference	56.0	36.6
Workshop and media	12.0	7.8

Majority of the respondents (82.0%) were aware of the benefit package of NHIS, while 18.0% of the nurses did not have any idea of this benefit package.

*Knowledge scores of respondents*

Majority (76.5%) had good knowledge of the NHIS (scores of 4-5/5 correct responses) with the remaining 23.3% having fair knowledge (scores of 2-3/5 correct responses) (Fig. 2).

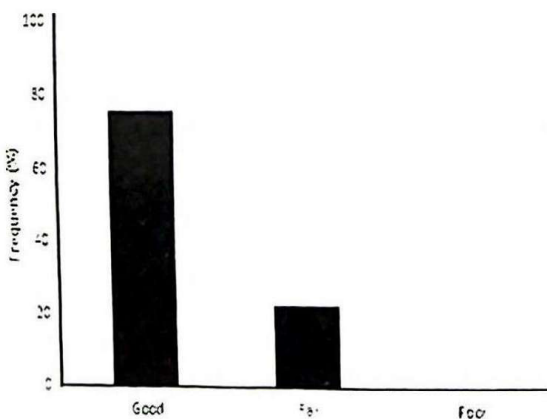


Fig.2: Knowledge scores of respondents

*Participation in NHIS*

Only 3.3% of the nurses were currently registered and participating in the scheme (Table 3).

Table 3: Participation in NHIS

	Frequency	Percentage
Yes	5.0	3.3
No	148.0	96.7
Total	153.0	100.0

*Relationship between age and knowledge*

The age of respondents had statistically significant relationship with the level of knowledge ( $X^2 = 9.40$ ;  $p < 0.05$ ) (Table 4).

Table 4: Relationship between Age of respondents and knowledge

Age	knowledge		Total
	Good	Fair	
20-29	15.0(12.8%)	6.0(16.7%)	21.0
30-39	40.0(34.2%)	8.0(22.2%)	48.0
40-49	55.0(47.0%)	14.0(38.9%)	69.0
≥50	7.0(6.0%)	8.0(22.2%)	15.0
Total	117.0	36.0	153.0

$X^2 = 9.40$ ;  $df = 3$ ;  $p < 0.05$

**Discussion**

Majority of the respondents in this study were married females. This showed similar pattern with a previous study [1] which had 85.0% females and

75.0% of them married. There was also similarity in the modal age group (40-49 years).

The results of this research showed that there was generally a high level of awareness of the existence of NHIS among nurses in OOUTH which is similar to other Nigerian studies on medical health workers that found out that majority of their respondents were aware of the scheme [1,13,14].

Most of the respondents indicated that they got the information on NHIS from seminars. This finding tends to underscore the importance of educational sessions in hospitals where the target audiences are health care professionals. Majority of the respondents had good knowledge of NHIS. They knew at least one objective of the scheme and its benefits which is in line with previous studies [10,15]. A larger percentage of respondents in this study knew the appropriate contribution to be made by employers and employees.

The results showed that majority of the married respondents were not currently on the scheme as their participation was very low. This is contrary to findings from the Jos study [1] where a high level of awareness translated to a high level of participation. This was unexpected as it would be assumed that this group would appreciate the opportunity to ease their health-related financial burden by participating in the scheme.

#### Limitation of the study

The study was a descriptive type which could only generate and test hypothesis. Further studies are required to broaden the knowledge established in this study.

#### Conclusion

This study showed that there was a high level of awareness of the National Health Insurance Scheme among the nurses in Olabisi Onabanjo University Teaching Hospital which did not translate to participation in the scheme. More enlightenment and re-sensitization would improve on the gaps observed in this study.

#### References

1. Lar LA, Mafwalal BM, Ozoilo JU, Dakum LB and Ode GN. Participation in the National Health Insurance Scheme Among Nurses in a Tertiary Teaching Hospital, North central Nigeria. *Journal of Community Medicine and Primary Health Care*. 2013;24(1&2):69-73.
2. McKee M, Balabanova D, Basu S, Ricciardi W and Stuckler D. Universal Health Coverage: A Quest for All Countries But under Threat in Some. *Value Heal*. 2013;16(1):S39-S35.
3. Onah MN, Govender V, Schoen C, *et al*. Out-of-Pocket Payments, Health Care Access and Utilisation in South-Eastern Nigeria: A Gender Perspective. Molyneux S, editor. *PLoS One*. 2014;9(4):e93887.
4. Olakunde B. Public health care financing in Nigeria: Which way forward? *Ann Niger Med*. 2012;6(1):4.
5. Bloom DE, Humair S, Rosenberg L, Sevilla JP and Trussell J. A Demographic Dividend for Sub-Saharan Africa: Source, Magnitude, and Realization. IZA Discussion Paper No. 7855. 2014. Available from: SSRN: <http://ssrn.com/abstract=2374636>.
6. Rancic N and Jakovljevic MM. Long Term Health Spending Alongside Population Aging in N-11 Emerging Nations. *East Eur Bus Econ J*. 2016; 2(1): 2-26.
7. Olugbenga F and Sholeye OAA. Strengthening the Foundation for Sustainable Primary Health Care Services in Nigeria. *Prim Heal Care*. 2014;04(03).
8. Monye FN. An Appraisal of the National Health Insurance Scheme of Nigeria. *Commonw Law Bull*. 2006;32(3):415-427.
9. Chubike N. Evaluation of National Health Insurance Scheme (NHIS) awareness by civil servants in Enugu and Abakaliki. *Int J Med Med Sci*. 2013;5:356-358.
10. Odeyemi IAO and Nixon J. Assessing equity in health care through the national health insurance schemes of Nigeria and Ghana: a review-based comparative analysis. *Int J Equity Health*. 2013;12:9.
11. Ibiwoye A and Adeleke IA. Does National Health Insurance Promote Access to Quality Health Care? Evidence from Nigeria. *Geneva Pap Risk Insur Issues Pract*. 2008;33(2):219-233.
12. Adeniyi AA and Onajole AT. The National Health Insurance Scheme (NHIS): a survey of knowledge and opinions of Nigerian dentists' in Lagos. *Afr J Med Med Sci*. 2010;39(1):29-35.
13. Afolayan JA and Mohammed AT. Influence of New National Health Insurance Scheme on Job Satisfaction of Nurses and Midwives of University of Ilorin Teaching Hospital, Ilorin, Kwara State, Nigeria. *West African J Nurs*. 2011;22:61-69.
14. Karatu DL, Olufunlayo TF and Onigbogi OO. Knowledge of health insurance among primary health-care managers in Shongom LGA, Gombe State, Nigeria. *Nig Q J Hosp Med*. 2012;18-21.
15. Christina CP, Latifat TT, Collins NF and Olatunbosun AT. National health insurance scheme: How receptive are the private healthcare practitioners in a local government area of Lagos state. *Niger Med J*. 2014;55(6):512