

# Awareness, Knowledge, and Perception of the National Health Insurance Scheme among National Youth Service Corp Members in Kano, Nigeria

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## Abstract

**Background:** The lofty objectives of the National Youth Service Corp (NYSC) are not only predicated on healthy graduates of tertiary institutions but also graduates who are confident in making informed health-related decisions. Therefore, Corp members' awareness, knowledge, and perception of the National Health Insurance Scheme (NHIS) and its programs become imperative. **Materials and Methods:** This was a cross-sectional study involving 203 participants selected by convenience sampling technique from NYSC members during Orientation Camp in June 2019. A self-administered questionnaire was used to collect data regarding their sociodemographics, awareness, knowledge, and perception about the NHIS. **Results:** The mean age of respondents was  $25.8 \pm 2.3$  years; they were predominantly males (136 [67.0%]) with university degrees 131 (64.5%); 200 (98.5%) were aware of the NHIS and its programs. Although 161 (80.5%) respondents had at least average knowledge of the NHIS, only 97 (48.5%) had adequate knowledge. One hundred and fifty-eight (79.0%) respondents benefited from the Tertiary Institutions Social Health Insurance Programme (TISHIP) as students; 114 (57.0%) viewed TISHIP as a good program; however, 194 (97.0%) felt that the NHIS services should be extended to NYSC members, while 188 (94.0%) were willing to participate in the scheme if its services were extended them. **Conclusion:** Although awareness level was high, adequate knowledge of the NHIS was low and their perception about TISHIP is unimpressive; most were willing to participate in the NHIS. Current mass NHIS-programs education campaigns and services offered by NHIS-accredited health-care facilities need improvement; fast-tracking of processes necessary for the extension of NHIS services to NYSC members is required.

**Keywords:** Awareness, knowledge, National Health Insurance Scheme, National Youth Service Corps, perception, tertiary institutions health insurance program

## INTRODUCTION

The National Youth Service Corps (NYSCs) was established by decree No. 24 of 1973 as one of the strategies to reconstruct, reconcile, and rebuild the Nigerian nation after the dark history of the civil war.<sup>[1]</sup> The scheme envisaged the production of highly disciplined, patriotic, industrious, detribalized youths with high moral values, spirit of self-reliance, who will develop ties among the youths and contribute to the accelerated growth of the economy.<sup>[2]</sup> With this lofty mandate, the health of NYSC members during the 1-year national service is undoubtedly crucial, especially as there is an established relationship between good health and increased productivity.<sup>[3-6]</sup>

For several years, the scheme provided first-aid services via NYSC doctors to their fellow NYSC members during the orientation camps and seriously ill ones were referred to neighboring health-care facilities in the host state. However, the orientation camp clinics are now supervised by on-ground

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consultant physicians to reinforce the importance the NYSC attaches to the health of NYSC members. Furthermore, NYSC members have had to pay out of pocket for their health-care needs during the service year using the stipends they receive. Hence, the media announcement in 2018 that the federal government will soon enroll NYSC members into the National Health Insurance Scheme (NHIS) was loudly applauded.<sup>[7]</sup> However, the implementation of this idea is yet to commence.

Furthermore, NYSC members' uptake of the NHIS services may be influenced by their awareness and perception of the scheme.<sup>[8,9]</sup> There are varying reports of the level of satisfaction with the services offered by the Tertiary Institutions Social Health Insurance Programme (TISHIP) enjoyed by students of tertiary institutions in Nigeria (from where NYSC members have attended).<sup>[10,11]</sup> For instance, despite the high level of awareness reported in a study at Nnamdi Azikiwe University, Awka, Southeast Nigeria, 56.3% of students never benefited from the TISHIP services and 52.8% were dissatisfied with the quality of services provided.<sup>[11]</sup>

To our knowledge, there has been no study that has assessed the awareness, knowledge, and perception of the NHIS among NYSC members in Nigeria. Hence, we sought to assess the level of awareness, knowledge, and perception of the NHIS among NYSC members in Kano. It is hoped that the study result will aid in strategic planning for the enrollment of NYSC members and improvement of NHIS services to NYSC members when its services are eventually extended to them.

## MATERIALS AND METHODS

### Study design and setting

This was a descriptive cross-sectional study carried out at the State NYSC Orientation Camp located in Karaye local government area of Kano State, Northwest Nigeria. The NYSC members are Nigerian graduates of universities, polytechnics, and other tertiary institutions who are on a mandatory 1-year national service. The national service year begins with a 3-week orientation course in designated orientation camps in all states and Federal Capital Territory; the orientation course involves physical training, drills, and lectures on the tradition of the host state and the objectives of the NYSC.<sup>[12]</sup> The NYSC camp clinic is overseen by consultants from the Department of Family Medicine of Aminu Kano Teaching Hospital (AKTH). The study population was all Batch A, NYSC members at the Kano State NYSC Orientation Camp in June 2019.

### Eligibility criteria

All NYSC members who volunteered to participate were included; however, those who declined consent were excluded from this study.

### Sample size estimation

Using 83.8% (proportion of university students who knew that TISHIP ensures that every high institution student has access to quality health care, in Awka, Nigeria)<sup>[11]</sup> and the formula  $[n/1 + n/N]$  for estimating minimum sample size

for populations  $<10,000$ <sup>[13]</sup> (as the state received about 2,400 NYSC members during the preceding orientation camp), a sample of 192 was, therefore, obtained. However, with a questionnaire retrieval rate of 94% among students of a tertiary institution in Awka, South-East Nigeria,<sup>[11]</sup> an additional 6% was added to give 205.

### Sampling method, data collection, and study procedure

This study adopted a convenience sampling technique. Participants were given a pretested self-administered questionnaire after obtaining consent and explaining study objectives. The questionnaires were administered during scheduled camp lectures. The questionnaire was developed by the researchers and pretested on the preceding batch of NYSC members. The questionnaire was in the English language (Nigeria's official language). The internal validity of the questionnaire was determined using Cronbach's alpha and a value of 0.81 was obtained. The questionnaire assessed participants' sociodemographic characteristics (age, sex, state of origin, name of the institution of graduation, degree obtained, tribe, and religion) and awareness (two questions), knowledge (seven questions plus the two awareness questions), and perception (four questions) of the NHIS. Most questions were close ended. Open-ended questions were used to assess any specific services the NYSC members would want from the NHIS and the reasons why participants would be unwilling to participate in the NHIS when NHIS services is eventually extended to them. A 4-point Likert scale response was used to assess their knowledge of TISHIP. The knowledge items were scored as follows: 1 = strongly agree, 2 = agree, 3 = strongly disagree, and 4 = disagree. Ratings of 1 or 2 were considered "Agreement" with the statement, whereas ratings of 4 or 5 were rated as "Disagreement."

### Data management

Data were entered and analyzed using Data were entered and analyzed using Epi Info version 7.1.1.14 (2012; CDC, Atlanta, Georgia). Continuous variables were summarized using measures of central tendencies such as mean; categorical variables were presented in frequency tables. Every correctly answered "knowledge question" was scored "one," whereas every wrongly answered or unanswered knowledge question was scored "zero." Awareness of the NHIS was defined as having heard of the NHIS before and/or having known about TISHIP as a student. Percentage knowledge score (total correct score/total possible score  $\times$  100) was categorized into poor (0%–49.9%), average (50.0%–69.9%), and good (70.0–100.0) according to Michael *et al.*<sup>[14]</sup> This was then defined as "adequate NHIS knowledge" (percentage knowledge score of  $\geq 70\%$  or good knowledge) and inadequate knowledge (score  $<70\%$ , poor and average knowledge).

### Ethical concerns

Ethical approval (NHREC/21/08/2008/AKTH/EC/2511) was obtained from the Research Ethics Committee of AKTH Kano. Written informed consent was obtained from each study

**Table 1: Respondents' sociodemographic characteristics**

Variable	n (%)
Age	
19-24	57 (28.1)
25-30	146 (71.9)
Sex	
Male	136 (67.0)
Female	67 (33.0)
Region of origin	
North-Central	39 (19.2)
North-East	11 (5.4)
North-West	25 (12.3)
South-East	56 (27.6)
South-South	45 (22.2)
South-West	27 (13.3)
Tribe	
Hausa	25 (12.3)
Fulani	3 (1.5)
Igbo	61 (30.1)
Yoruba	36 (17.7)
Others	78 (38.4)
Qualification obtained	
Higher National Diploma	72 (35.5)
University degree	131 (64.5)
Religion	
Christianity	146 (71.9)
Islam	57 (28.1)

participant. Permission was also obtained from the Kano State Coordinator of the NYSC. The outcome is to be forwarded to the state NHIS office.

## RESULTS

### Respondents' sociodemographic characteristics

Of the 205 questionnaires given to eligible NYSC members, 203 was retrieved (constituting a response rate of 99.0%) and were used for the analysis. Their mean age was  $25.8 \pm 2.3$  years (ranging from 19.0 to 30 years). They were mostly males (136, 67.0%), from the South-Eastern region of Nigeria (56, 27.6%) comprising Abia, Anambra, Ebonyi, Enugu, and Imo states, and of the Igbo tribe (61, 30.1%) [Table 1]. Most of the respondents had obtained a university degree 131 (64.5%). They were predominantly Christians 146 (71.9%).

### Awareness and knowledge of the National Health Insurance Scheme

One hundred and ninety-five (96.1%) respondents had heard of the NHIS before this study [Table 2]. Their source of information was mainly from their school authority 49 (24.1%) and family and friends 44 (21.7%). As students, only 74 (36.4%) knew about the TISHIP; however, 200 (98.5%) respondents were aware of the NHIS (i.e., heard of NHIS and knew about TISHIP). The mean knowledge score of respondents was  $66.3\% \pm 22.0\%$  (range, 11.0%–100.0%). The

**Table 2: Respondents' awareness and knowledge of National Health Insurance Scheme**

Question	n (%)
Awareness of the NHIS program	
Unaware	3 (1.5)
Aware	200 (98.5)
Have you heard about NHIS before?	
No	6 (3.0)
Yes	197 (97.0)
How did you get to know about NHIS?*	
Radio	30 (14.8)
TV	32 (15.8)
Newspaper	16 (7.9)
Social media	21 (10.3)
Family and friends	44 (21.7)
School authorities	49 (24.1)
Others**	32 (15.8)
As a student did you know about the TISHIP?	
No	129 (63.6)
Yes	74 (36.4)
What does the abbreviation NHIS stand for? (n=200)	
Correct answer	152 (76.0)
Incorrect answer	48 (24.0)
The NHIS can improve healthcare delivery in Nigeria (n=200)	
Agree <sup>†</sup>	180 (90)
Disagree	20 (10)
The TISHIP is a program under the NHIS (n=200)	
Agree <sup>†</sup>	157 (78.5)
Disagree	43 (21.5)
Students' and government's contributions are involved in funding TISHIP	
Agree <sup>†</sup>	121 (60.5)
Disagree	79 (39.5)
TISHIP ensures that students of higher institutions have access to high-quality health care (n=200)	
Agree <sup>†</sup>	147 (73.5)
Disagree	53 (26.5)
The FSSHIP is a program under the NHIS (n=200)	
Agree <sup>†</sup>	130 (65.0)
Disagree	70 (35.0)
The FSSHIP covers the principal enrollee, the spouse, and four biological children above 18 years (n=200)	
Agree	164 (82.0)
Disagree <sup>†</sup>	36 (18.0)
Knowledge score (%)	
11.0-49.9 (poor)	39 (19.5)
50.0-69.9 (average)	64 (32.0)
70.0-100.0 (good)	97 (48.5)
Inadequate	103 (51.5)
Adequate	97 (48.5)

\*Respondents selected  $\geq 1$  option; \*\*NYSC members in camp, hospital, NHIS official, and billboards; <sup>†</sup>Correct answer. TISHIP: Tertiary Institutions Social Health Insurance Programme, FSSHIP: Formal Sector Social Health Insurance Programme, NHIS: National Health Insurance Scheme, NYSC: National Youth Service Corp

highest proportion of respondents 97 (48.5%) had adequate knowledge score.

**Table 3: Respondents' perception of the Tertiary Institutions Social Health Insurance Programme (n=200)**

Question	n(%)
Did you ever benefit from the TISHIP?	
No	158 (79.0)
Yes	42 (21.0)
What is your view about the TISHIP?	
Good	114 (57.0)
Bad	9 (4.5)
Not sure	77 (38.5)
Do you think the NHIS should be extended to NYSC members?	
No	6 (3.0)
Yes	194 (97.0)
Are you willing to participate in the Scheme if it is extended to NYSC members?	
No	12 (6.0)
Yes	188 (94.0)
Reasons for unwillingness to participate (n=12)	
TISHIP services were unreliable/drugs out-of-stock most times	5 (2.5)
Unnecessary now	2 (1.0)
No response	5 (2.5)

TISHIP: Tertiary Institutions Social Health Insurance Programme, NHIS: National Health Insurance Scheme, NYSC: National Youth Service Corp

### Respondents' perception of the Tertiary Institutions Social Health Insurance Programme

Of the 200 respondents who were aware of the NHIS, most respondents 158 (79.0%) benefited from the TISHIP while they were students [Table 3]. Similarly, 114 (57.0%) felt that the TISHIP was a good program; 194 (97.0%) thought the NHIS services should be extended to the NYSC members and 188 (94.0%) were willing to participate in the scheme if it was extended to the NYSC members. Reasons given by 5 (2.5%) respondents for their unwillingness to participate in the NHIS were that the scheme was unreliable and that drugs were out-of-stock most times.

### DISCUSSION

This was a study on the awareness, knowledge, and perception of the NHIS among NYSC members. We found that their mean age was 25.8 years (range 19–30); this age group belongs to the prime working age, and adequate knowledge about the NHIS may be useful in making health-related decisions required to remain productive both in the service year and thereafter. We also observed that 98.5% of the respondents were aware of the NHIS; this is similar to the 92.3% obtained among government workers in Cross River State, South–South Nigeria.<sup>[15]</sup> However, there is a variance in the proportion of respondents who had heard of the NHIS (97%) and those who knew about TISHIP (a program under the NHIS)<sup>[16]</sup> when they were students (36.4%); this finding differs from what was obtained by Anetoh *et al.*, in Awka, South-East Nigeria where all respondents (students) knew about TISHIP.<sup>[11]</sup> This

difference may be explained by differences in the intensity of NHIS awareness campaigns in tertiary institutions in Nigeria and the study populations. This is corroborated by the few respondents (24.1%) who heard about the NHIS from their school authorities in this study as against 44.5% of respondents who heard about TISHIP during school orientation programs and from their school clinic in the Awka study.<sup>[11]</sup>

Furthermore, a majority of respondents (80.5%) had at least average knowledge of NHIS; however, less than half (48.5%) of the respondents had adequate knowledge of the scheme. This result suggests the need for improvements in the existing awareness/education campaign programs in all tertiary institutions as well as in the print and electronic media.

On the perception of respondents toward the TISHIP, only 21.0% of the respondents reported that they benefited from the program when they were students. This finding differs from the 56.3% of students who benefitted from the program in the Awka study.<sup>[11]</sup> This difference could be due to varying level of implementation of the TISHIP among tertiary institutions in Nigeria, especially in the private- and state-owned institutions. In addition, among institutions that have implemented the program, low satisfaction with services could also be responsible for respondents' perception about the scheme;<sup>[10]</sup> in this study, only 57% of the respondents felt that TISHIP was a good program, reflecting the reservations that respondents had about the program. However, 97% of the respondents believed that NHIS services should be extended to NYSC members during the service year, and 92.6% of them were willing to participate in the scheme when NHIS services are eventually extended to NYSC members. This finding may not be unrelated to the anticipated catastrophic health-care expenditure that could arise should they fall sick during the service year, knowing that they will only receive monthly stipends as wages. Among the few respondents who declined participation in the NHIS when its services are eventually extended to them, they cited reasons such as participation being unnecessary now, NHIS services were unreliable, and accredited facilities have drugs out-of-stock most times. The reasons given corroborate reported correlates of dissatisfaction with NHIS services nationwide, including no satisfactory explanation for prescribed unavailable drugs.<sup>[17,18]</sup>

For the specific services the NYSC members wanted NHIS to offer them, the respondents listed the supply of insecticide-treated bed nets in the camp, vaccination against common disease prevalent in the host state, and life/disability insurance during the service year. These demands may not be unconnected with media reports of untimely death of few NYSC members during national service. These deaths are often from infectious diseases and when they are victims of violent communal/religious clashes and Nigerian elections (where they are used as ad hoc staff).

### Policy implication

Our findings suggest that in tertiary institutions where TISHIP is implemented, the intensity of awareness campaigns in campuses



should be stepped up while making TISHIP mandatory for all tertiary institutions in the country. Stakeholders (NHIS and Health Maintenance Organizations) should also step up their monitoring and evaluation mandate over health-care facilities accredited for the TISHIP. Misapplication of the scheme guidelines should be identified and offenders appropriately reprimanded. Most NYSC members are willing to participate in the NHIS, hence the need to fast track the process of extending services to the NYSC members.

### Weaknesses and strengths of the study

The weaknesses of this study include the use of only selected questions to assess participants' knowledge of the different aspects of the NHIS and use of convenience sampling technique that may be prone to selection bias. Furthermore, lack of similar studies in this population made comparison difficult. In spite of these weaknesses, this study serves as an important baseline and findings exposed the awareness, knowledge, and perception of NYSC members and clearly suggested the need for policy change to improve and modify services offered by TISHIP and other NHIS programs (especially extending NHIS services to NYSC members).

### CONCLUSION

Although the respondents' awareness level was high, adequate knowledge of the NHIS was low and perception about TISHIP is just average; most respondents were willing to participate in the NHIS. Therefore, current mass NHIS programs awareness/education campaigns and services offered by NHIS-accredited health-care facilities need improvements; fast track of processes necessary for the extension of NHIS services to NYSC members is also required.

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### Conflicts of interest

There are no conflicts of interest.

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