



## Impact of Education on Knowledge and Attitude of Civil Servants in Oyo State Secretariat, Agodi, Ibadan Towards National Health Insurance Scheme

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**Abstract: Introduction:** In the challenging landscape of healthcare financing in developing nations like Nigeria, the National Health Insurance Scheme (NHIS) stands as a pivotal solution. This study delves into the perceptions of civil servants within the Oyo State Secretariat, Agodi, Ibadan, regarding NHIS, acknowledging the fundamental role robust healthcare systems play in sustainable socio-economic development. Despite high awareness levels (100%), our research revealed a significant gap in knowledge, with only 41.2% of participants demonstrating an average understanding of NHIS. Attitudes were diverse, with 47.0% showing positivity towards the scheme. Understanding these nuances, particularly in the context of education, is imperative for devising targeted strategies.

**Objectives:** This research aims to assess the impact of education on NHIS awareness, delve into civil servants' knowledge and attitudes regarding NHIS, analyze educational influences on these attitudes, and investigate the relationship between knowledge and attitudes among civil servants regarding NHIS.

**Methods of Analysis:** Utilizing a descriptive cross-sectional approach, this study surveyed 300 civil servants in key ministries. ANOVA tests were employed to discern the influence of education on both knowledge and attitudes, revealing significant educational impacts on knowledge ( $p < 0.001$ ). These findings underscore the critical role education plays in shaping understanding about NHIS among civil servants.

**Results:** The study paints a demographic picture where the majority of respondents (54.0%) fell within the 21-30 age range, primarily comprising females (64.7%) with diverse educational backgrounds. While NHIS awareness was universal (100%), only 41.2% demonstrated average knowledge levels. Attitudes varied, with 47.0% expressing positivity towards NHIS. Educational qualifications significantly influenced knowledge ( $F = 6.175, p < 0.001$ ), emphasizing the need for targeted educational interventions.

**Conclusion:** Awareness of the NHIS is prevalent among civil servants in the Oyo State Secretariat; however, there is a substantial variation in the levels of knowledge. Education appears to be a critical factor influencing this knowledge discrepancy. Comprehending these dynamics is essential for developing well-informed policies and specific interventions aimed at reducing the knowledge disparity.

**Recommendations:** Implement focused educational initiatives tailored to various educational backgrounds and professional levels within civil service. Collaborate with healthcare facilities to ensure accurate information dissemination about NHIS, emphasizing its benefits and coverage options. Tailor communication strategies to address specific demographic needs, enhancing understanding and positive attitudes towards NHIS. Regularly assess NHIS awareness and knowledge levels among civil servants to inform ongoing educational efforts. Foster public-private partnerships to bolster NHIS implementation, ensuring seamless access to quality healthcare for all. Emphasize the pivotal role of education in shaping public attitudes and knowledge regarding NHIS, fostering a culture of informed decision-making and policy acceptance.

## Background

In developing nations such as Nigeria, healthcare financing presents a significant challenge, leading to limited access to quality healthcare services (Otoyemi, 2018). A healthy population is vital for sustainable socio-economic development, underscoring the importance of robust healthcare systems (Obembe, 2019). However, in countries like Nigeria, the provision of accessible and affordable healthcare remains problematic, often characterized as inadequate, insufficient, inequitable, and unsustainable (Olugbenga-Bello & Adebimpe, 2010). The burden of paying for healthcare stands as a crucial performance indicator for evaluating national health systems, as highlighted in the World Health Report.

Health insurance, defined by Edozien (2017), operates as a system wherein individuals make payments to a third party, ensuring coverage for healthcare expenses in case of illness. The National Health Insurance Scheme (NHIS), a vital healthcare reform initiative, aims to insure the national population against healthcare costs and can be administered by public, private, or hybrid sectors (Wikipedia, 2015). Despite the potential of NHIS to enhance healthcare accessibility, its acceptance among civil servants in the Oyo State Secretariat, Agodi, Ibadan, remains uncertain. One influential factor in this acceptance is the level of education attained by civil servants. However, there exists a significant research gap concerning the relationship between education, knowledge acquisition, and attitudes of civil servants towards NHIS in this specific context. This gap in understanding how education impacts civil servants' knowledge and attitudes regarding NHIS in Oyo State Secretariat, Agodi, Ibadan, is a critical concern.

Addressing this gap becomes imperative to devise targeted strategies that enhance NHIS acceptance, improve healthcare access, and contribute significantly to the socio-economic development of the region. The objectives encompass exploring the impact of educational on NHIS understanding, delving into civil servants' knowledge and attitudes towards NHIS, analyzing how education influences these attitudes, and examining the intricate relationship between knowledge and attitudes among civil servants regarding NHIS.

By bridging this knowledge gap, the research offers valuable insights that can inform policy decisions, provide feedback to the government and stakeholders, and ultimately pave the way for a more effective NHIS implementation. This, in turn, can significantly enhance healthcare accessibility and foster socio-economic development within the region. The implications of this study extend beyond its immediate scope, contributing to the broader discourse on healthcare reform and education's role in shaping public attitudes and policy acceptance.

## **MATERIALS AND METHODS**

### **Study Area**

The Oyo State Secretariat, situated in Agodi, Ibadan, serves as the central hub of administrative activities in Oyo State, Nigeria. It houses key government offices, representing the epicenter of governance. Located in the heart of Ibadan, the state capital, it enjoys accessibility to a diverse population, including civil servants and residents from various socio-economic backgrounds. This diverse demographic mirrors the broader society, with civil servants representing various educational backgrounds and professional expertise. It is vital for studying the impact of education on their knowledge and attitudes towards the National Health Insurance Scheme (NHIS). Despite its central location in the state capital, evaluating the NHIS's effectiveness remains pivotal. This study was conducted among civil servants enrolled with the NHIS, specifically in the Ministry of Health, Ministry of Commerce, and Ministry of Finance in Oyo State Secretariat, Ibadan, Oyo state.

### **Research Design**

This is a descriptive cross-sectional study, this was preferred because it allows to collect data from a specific population at a single point in time. In this case, researchers could conduct surveys and interviews among civil servants in the Ministry of Health, Ministry of Commerce, and Ministry of Finance in Oyo State Secretariat to assess their knowledge and attitudes towards the NHIS. By collecting data at one specific moment, researchers can gain insights into the current perceptions and educational influences among the civil servants

### **Sample Size and Sampling Technique**

A stratified sampling method was employed to ensure representation from various educational levels and departments within the Ministry of Health, Ministry of Commerce, and Ministry of Finance. The study involved a total of 300 respondents.

### **Data collection and Management**

A structured questionnaire comprising 30 items, designed by the researchers, was employed to collect data from the respondents. The questionnaire consisted entirely of closed-ended questions and was structured into three sections: Section A focused on Socio-Demographic Data, Section B assessed the Knowledge of Civil Servants regarding the NHIS, and Section C explored the Attitudes of Civil Servants towards the NHIS. To ensure ease of administration, detailed explanations and instructions were provided to both respondents and assistants, aiming to enhance the validity and reliability of the data. Prior to the main study, a pilot study was conducted at the federal secretariat. The collected data were analyzed using SPSS version 21, resulting in a reliability score of 0.89.

### **Ethical consideration**

Informed consent was obtained from participants, ensuring confidentiality and privacy. Ethical approval from ethics committees of the Oyo state Secretariat was obtained before conducting the study to ensure the well-being and rights of the participants.

**RESULTS****Table 1: Socio-demographic Characteristic of the Respondents****Socio-demographic Characteristic of the Respondents**

<b>Variables</b>	<b>Frequency (300)</b>	<b>Percent (100)</b>
<b>Age</b>		
21-30years	162	54.0
31-40years	115	38.3
41-50years	23	7.7
<b>Sex</b>		
Male	106	35.3
Female	194	64.7
<b>Marital Status</b>		
Single	95	31.7
Married	188	62.7
Divorce	8	2.7
Widowed	9	3.0
<b>Religion</b>		
Christianity	181	60.3
Islam	115	38.3
Traditional	4	1.3
<b>Educational Qualification</b>		
SSCE	15	5.0
ND	48	16.0
HND	117	39.0
BSC	99	33.0
Post graduate	18	6.0
<b>No of children</b>		
1-2	86	28.6
3-4	91	30.3
5 and above	5	1.7
None	118	39.3
<b>Grade Level</b>		
1-3	48	16.0
4-6	99	33.0
7-9	100	33.3
10-12	5	1.7
13-15	10	3.3
<b>Ethnic Group</b>		
Yoruba	277	92.3
Igbo	23	7.7
<b>Family Status</b>		
Monogamous	250	83.3
Polygamous	50	16.7

The socio-demographic characteristics of the respondents in Table 1 indicate that the majority of participants fell within the age range of 21-30 years (54.0%), with a substantial proportion being female (64.7%). Additionally, a significant percentage of the respondents were married (62.7%) and identified as Christians (60.3%). In terms of educational qualifications, HND holders (39.0%) were the largest group, and a considerable number had no children (39.3%). The distribution of respondents across various grade levels and ethnic groups showed diversity, with the Yoruba ethnic group being predominant (92.3%). The majority of the respondents reported a monogamous family status (83.3%).

**Table 2: Knowledge of the respondents on NHIS**

<b>Variables</b>	<b>Frequency (300)</b>	<b>Percent (100)</b>
<b>Have u heard about NHIS?</b>		
Yes	300	100.0
<b>If yes where?</b>		
School	42	14.0
Hospital	23	7.7
Media	58	19.3
Place of work	172	57.3
Others	5	1.7
<b>Which of the following best describes NHIS?</b>		
A health insurance scheme that is established to improve the health of all Nigerians at an affordable cost	256	85.3
An insurance scheme that is meant to reduce the payment of health care of government workers	33	11.0
An insurance scheme that is meant to reduce the payment of health care for private workers	8	2.7
A scheme employment of the youths	3	1.0
<b>The prevailing factor that informed the formation of NHIS include the following except</b>		
General poor state of health services	57	19.0
Reduction in funding of healthcare	117	39.0
Poverty among citizens	54	18.0
Provision of adequate care	48	16.0
I dont know	24	8.0
No Response	0	0.0
<b>National health insurance scheme is a</b>		
Federal government establishment	249	83.0
State government policy	14	4.7
Private company	9	3.0
NGO project	12	4.0
I don't know	16	5.3
<b>It is the responsibility of employers (both private and public)</b>		
Pay the 10% of the basic salary as its contribution to employee care cost	136	45.3
Determine the type of treatment its employee should receive	32	10.7
Approve the healthcare facility the employee should access	14	4.7
Determine the prices of drugs presented for the employee	2	0.7
All of the above	107	35.7
I don't know	9	3.0
<b>Which of these is not a benefit of NHIS to Nigerians?</b>		
Employment opportunities for health professional	21	7.0
Civil servants will resort to traditional healthcare practice	250	84.9
Patient will have access to care at no or low cost	20	6.7
I don't know	3	2.5
<b>What is the role of the HMOs in the scheme?</b>		
Open accounts for HSPs	30	10.0



Receive remittance from NHIS council	42	14.0
Make payment to HSPs	42	14.0
Render reports to NHIS	15	5.0
All of the above	171	57.0
I dont know	0	0.0
<b>How is the scheme funded?</b>		
Workers' contributions only	10	3.3
Government's contributions only	30	10.0
Joint contributions by workers and government Capitation	260	87.0

In Table 2, evidently all 300 respondents were aware of NHIS, primarily learning about it at their places of work (57.3%). The majority correctly identified NHIS as a health insurance scheme established to improve the health of all Nigerians at an affordable cost (85.3%). Factors motivating NHIS formation, such as the general poor state of health services and reduction in funding for healthcare, were recognized, except for poverty among citizens (18.0%). NHIS was overwhelmingly recognized as a federal government establishment (83.0%), and the role of employers was understood, including their responsibility to approve healthcare facilities and determine treatment types. The benefits of NHIS were acknowledged, with 84.9% recognizing that civil servants would not resort to traditional healthcare practices, and 87.0% understanding that the scheme is funded through joint contributions by workers and the government, including capitation.

**Table 3: Knowledge Score of Respondents on NHIS**

Variables	Frequency (300)	Percentage (100)
<b>Knowledge</b>		
Poor	106	35.3
Average	123	41.2
Good	71	23.5

Table 3 represents the knowledge scores of 300 respondents regarding the National Health Insurance Scheme (NHIS), it is evident that 35.3% of the respondents were categorized as having poor knowledge, 41.2% had average knowledge, and 23.5% demonstrated good knowledge about NHIS. This distribution highlights the varying levels of understanding among the respondents, with a significant portion falling into the average knowledge category.

**Table 4: Attitude of respondents towards NHIS**

Variables	Frequency (300)	Percentage (100)
<b>Are u enrolled with NHIS?</b>		
Yes	224	74.7
No	76	25.3
<b>If yes, which hospital did you register in?</b>		
Primary healthcare	48	16.0
State hospital	111	37.0
Tertiary healthcare	65	21.0
<b>For how long have you been enrolled with NHIS?</b>		
0-5 years	118	39.3
6-10 years	42	14.0
11-15 years	55	18.3
16-20 years	6	2.0
Above 20years	6	2.0
No Response	73	24.3
<b>I do not consider NHIS as a program that can improve health for all Nigerians at an affordable cost.</b>		
Strongly agree	42	14.0
Agree	48	16.0

Disagree	141	47.0
Strongly Disagree	9	23.0
<b>I do not like the fact that NHIS provides health benefits only for employees, spouses, and four biological children below the age of 18. I consider it discrimination against polygamy and an attempt to control birth.</b>		
	54	18.0
	93	31.0
Strongly Agree	144	48.0
Agree	9	3.0
Disagree		
Strongly Disagree		
<b>I like to participate in NHIS since it gives every Nigerian access to good health care services</b>		
Strongly Agree	149	49.7
Agree	141	47.0
Disagree	15	5.0
<b>NHIS covers certain prescribed drugs and diagnostic tests, so I don't believe many healthcare benefits can be enjoyed under the program</b>		
	27	9.0
Strongly Agree	135	45.0
Agree	144	48.0
Disagree	9	3.0
Strongly Disagree		
<b>I do not like the exclusion of epidemics and injuries resulting from natural disasters from the benefit package of NHIS, as it may be difficult for the scheme to achieve meaningful success.</b>		
	42	14.0
Strongly Agree	180	60.0
Agree	105	35.0
Disagree	9	3.0
Strongly Disagree		
<b>Due to inadequate publicity and lack of correct information about the scheme, I always have doubts concerning the success of the program.</b>		
	45	15.0
Strongly Agree	78	26.0
Agree	186	62.0
Disagree	6	2.0
Strongly Disagree		
<b>NHIS helps maintain high standard of healthcare delivery.</b>		
Strongly agree	135	45.0
Agree	141	47.0
Disagree	24	8.0
<b>I do not support the idea that only four children can be registered as primary dependants under NHIS.</b>		
Strongly agree	63	21.0
Agree	93	31.0
Disagree	150	50.0
Strongly disagree	9	3.0

Table 4 illustrates the attitudes of the respondents towards the National Health Insurance Scheme (NHIS). The data shows that a significant majority, 74.7%, are enrolled in NHIS, with 37.0% registering in state hospitals and 18.3% being enrolled for 11-15 years. Regarding attitudes, 47.0%

disagreed that NHIS could improve health for all Nigerians at an affordable cost, while 48.0% disagreed with the exclusion of certain benefits for polygamous families and limitations on the number of children covered. Additionally, 49.7% appreciated NHIS for providing access to healthcare services for all Nigerians, while 45.0% disagreed that the scheme's coverage of prescribed drugs and tests was limiting. Moreover, 60.0% disagreed with the exclusion of epidemics and natural disaster injuries from NHIS benefits. A notable 62.0% expressed doubts due to inadequate publicity, and 47.0% agreed that NHIS helps maintain a high standard of healthcare. Finally, 50.0% disagreed with the limitation of registering only four children under NHIS, indicating a range of opinions and concerns among the respondents.

**Table 5: Attitude Score of respondents towards NHIS**

	Frequency (300)	Percent (100)
<b>Attitude</b>		
Poor	159	53.0
Good	141	47.0

The attitude scores of 119 respondents towards the National Health Insurance Scheme (NHIS) reveal that 53.0% of them had a poor attitude, while 47.0% demonstrated a positive attitude. This data indicates a diverse range of perspectives among the respondents regarding their perception of NHIS. (Table 5)

**Table 6: Effect of Respondents Educational Qualification on Attitude towards NHIS**

ANOVA					
Attitude					
	Sum of Squares	Df	Mean Square	F	Sig.
<b>Between Groups</b>	99.754	4	24.938	1.340	0.260
<b>Within Groups</b>	2122.246	296	7.162		
<b>Total</b>	2222.000	300			

Table 6 presents the results of an ANOVA examining the impact of respondents' educational qualifications on their attitudes toward the National Health Insurance Scheme (NHIS). The analysis shows that the variation in attitudes among different educational qualification groups, as indicated by the Between Groups Sum of Squares (99.754), is not statistically significant ( $F = 1.340$ ,  $p = 0.260$ ). The Degrees of Freedom (Df) between groups is 4, while within groups it is 296, totaling the overall Df of 300. The Mean Square Within Groups, representing the average variance within each group, is 7.162. This suggests that educational qualifications do not have a significant effect on attitudes toward NHIS among the respondents.

**Table 7: Effect of Respondents Educational Qualification on Knowledge on NHIS**

ANOVA					
Knowledge on NHIS					
	Sum of Squares	Df	Mean Square	F	Sig.
<b>Between Groups</b>	21.001	4	5.250	6.175	.000
<b>Within Groups</b>	96.932	295	0.328		
<b>Total</b>	117.933	299			

The ANOVA results for the effect of respondents' educational qualification on their knowledge about the National Health Insurance Scheme (NHIS) reveal a statistically significant difference among different educational qualification groups ( $F = 6.175$ ,  $p < 0.001$ ). The Between Groups Sum of Squares (21.001) indicates the variation in knowledge levels between these groups, and the Degrees of Freedom (Df) between groups is 4. Within each educational qualification group, the variance is represented by the Within Groups Sum of Squares (96.932) with 295 degrees of freedom. This suggests that educational qualifications have a significant impact on respondents' knowledge



about NHIS, emphasizing the importance of education in understanding the healthcare program. (Table 7)

## Discussion

The research findings indicate that the majority of participants, accounting for 54.0%, fell within the age range of 21-30 years, with a substantial portion being female (64.7%). Furthermore, a significant percentage of respondents were married (62.7%) and identified as Christians (60.3%). In terms of educational qualifications, the study revealed that HND holders constituted the largest group at 39.0%. Interestingly, a considerable number of participants reported having no children (39.3%).

Ethnically, the respondents exhibited diversity, with the Yoruba ethnic group being predominant at 92.3%. The majority of the participants reported a monogamous family status (83.3%). All 300 respondents demonstrated awareness of the National Health Insurance Scheme (NHIS), primarily acquiring knowledge about it in their workplaces (57.3%). Impressively, 85.3% correctly identified NHIS as a health insurance scheme established to enhance the health of Nigerians at an affordable cost. This aligns with previous research by Geoffrey Setswe et al. in 2015, which indicated a high awareness level of NHIS among respondents (80.3%).

However, the study found that the methods of information dissemination, particularly through hospitals and other media, were not highly effective. This result is consistent with the findings of Olugbenga and Adebimpe in 2010, where only 40% of respondents were aware of NHIS through television. The research also revealed that employers contribute 10% of the basic salary to support employee healthcare costs, emphasizing the joint contributions by workers and the government for NHIS funding.

Contrary to Campbell et al.'s 2014 study, this research showed that respondents had only average knowledge of NHIS. This finding was in line with previous studies such as those conducted by Akintaro and Adewoyin in 2015 and Onuekwusi and Okpala in 1998, which reported low to average levels of knowledge among participants regarding the services provided by the National Health Insurance Scheme.

Additionally, the study highlighted the significant impact of educational qualifications on respondents' knowledge and attitude towards NHIS, emphasizing the pivotal role of education in comprehending the healthcare program. This result corresponds with previous studies, including those by the National Centre for Biotechnology Information in 2009 and Akintaro and Adewoyin in 2015, which demonstrated the joint effect of educational level and marital status on attitudes toward the National Health Insurance Scheme. However, this finding contradicts the results of Gbadamosi, Hamadu, and Yusuf's 2009 study, which identified only marital status as having a significant influence on people's attitudes toward insurance.

## Conclusion and recommendations

The study's findings underscore the diverse awareness levels about the National Health Insurance Scheme (NHIS) among participants, with a concentration in the 21-30 age group, primarily comprising females with varying educational backgrounds. Despite a generally high awareness, the study highlights average knowledge and attitudes towards NHIS, underscoring the necessity for focused educational efforts. Consequently, the study recommends the implementation of targeted educational initiatives tailored to specific demographics, aiming to dispel misconceptions and enhance understanding of NHIS benefits and enrollment processes. Additionally, collaborating with healthcare facilities and community leaders to establish accessible information dissemination points can ensure the provision of accurate and updated information, facilitating informed decisions about NHIS coverage and services.

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