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PERCEPTION AND UTILIZATION OF NATIONAL HEALTH INSURANCE AUTHORITY SERVICES AMONG HEALTHCARE PROFESSIONALS AT FEDERAL MEDICAL CENTRE, ASABA, DELTA STATE

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ABSTRACT

The study examined Perception and Utilization of National Health Insurance Authority among Healthcare Professional at Federal Medical Centre Asaba with particular attention to Maternal and Child Health Care Services. Three research questions and three hypothesis guided the study. A descriptive–cross sectional design was adopted. The population of the study comprised 1,291 healthcare professional including nurses, doctors, pharmacists, laboratory scientists and physiotherapists. Using the Krejcie and Morgan (1970) sampling technique 330 respondents were selected. A researcher structured instrument titled 'Perception and Utilization of National Health Insurance Authority - Healthcare Professional Questionnaire (UPHNIA-HPQ) was used for data collection. The instrument was validated by experts and subjected to a reliability testing, a coefficient of 0.89 was obtained by cronbach Alpha to determine internal consistency. Out of the 330 questionnaire distributed 295 were returned valid for analysis representing 89.4%. Data was analysed using frequency, percentages, mean and standard deviation,One-Way Analysis of Variance (ANOVA) and Independent t-test at 0.05 significance. The results showed an overall favorable perception of NHIA services. The level of utilization was also relatively high, with a grand mean of 3.06. Nurses recorded the highest perception mean (3.24), while laboratory scientists recorded the lowest (3.08); however, the difference was not statistically significant ($F = 1.681$, $p = .154$). Similarly, nurses recorded the highest utilization mean (3.12), while physiotherapists recorded the lowest (2.88), but the difference was not statistically significant ($F = 1.910$, $p =$

.109). Gender differences in perception were also not significant (t = -1.19, p = .235), while the gender difference in utilization was not statistically significant (t = -1.72, p = .086). The study concludes that healthcare professionals at Federal Medical Centre, Asaba generally perceived NHIA services favorably and utilized them at a relatively high level, with no statistically significant differences based on professional category or gender. It is recommended that NHIA and hospital management sustain positive aspects of the scheme while improving information, accessibility, administrative efficiency and the overall service experience.

KEYWORDS: National Health Insurance Authority, perception, utilization, healthcare professionals, health insurance.

INTRODUCTION

Healthcare financing constitutes an important component of health-system development because the manner in which healthcare services are financed can influence access, utilization and financial protection. In Nigeria, the introduction and subsequent development of organized health insurance have been associated with efforts to reduce the financial burden of healthcare and advance universal health coverage. Recent evidence continues to identify health insurance coverage as an important factor in healthcare utilization and health outcomes in Nigeria, although the extent of its effect varies across population groups and services (Urama et al., 2026). The National Health Insurance Authority represents the current institutional framework for the administration and regulation of health insurance in Nigeria.

Maternal and child healthcare is particularly relevant to health insurance because pregnancy, childbirth, postnatal care and childhood illnesses may require repeated contact with health facilities and can generate considerable healthcare expenditure. Essential maternal and child health (MCH) services include antenatal care, skilled attendance at childbirth, postnatal care, immunisation and treatment of childhood illnesses. Evidence from Nigeria indicates that utilization of these services is influenced by socioeconomic circumstances, education, geographical accessibility and other individual and contextual factors (Kawakatsu et al., 2022).

The importance of health insurance to maternal healthcare utilization has been demonstrated in Nigerian studies. Esan, Adeomi and Afolabi (2023), using data from 12,935 Nigerian women who had recently delivered, reported significant associations between health insurance coverage and both attendance at eight or more antenatal care visits and delivery in

a health facility. However, the study also reported low health insurance uptake and differences in access according to residence, employment, education and socioeconomic status. These findings suggest that insurance coverage alone may not eliminate all barriers to maternal healthcare utilization. Similarly, evidence concerning child health indicates that health insurance can influence healthcare utilization and health outcomes. A study examining the expansion of the National Health Insurance Scheme (NHIS) in Nigeria found that health insurance eligibility was associated with improvements in selected child-health outcomes, including birth weight and receipt of some childhood vaccinations (NHIS, 2022).

The National Health Insurance Authority Act, 2022 provides the statutory framework for the NHIA and reflects the continuing transformation of health insurance administration in Nigeria. The contemporary framework is intended to expand coverage, integrate health insurance arrangements and improve access to healthcare. The effectiveness of these objectives, however, depends on the extent to which eligible individuals perceive health insurance as useful and actually utilize services covered under the system.

Perception is important in the implementation of any healthcare programme. It refers to the manner in which individuals understand, interpret and evaluate a service or institution based on their knowledge, expectations and experiences. In relation to NHIA, healthcare professionals may perceive the scheme in terms of its usefulness, adequacy, accessibility, clarity, relevance and ability to provide financial protection. A favourable perception may encourage continued participation and utilization, whereas an unfavourable perception may discourage use even where formal coverage exists.

Utilization, on the other hand, refers to the actual use of healthcare services available under NHIA. Enrolment alone cannot be regarded as evidence of effective health-insurance coverage if beneficiaries do not use the services when healthcare is required. Utilization may involve consultations, diagnostic services, pharmaceutical services, hospitalization, referral services and other covered healthcare services. Thus, examining utilization alongside perception provides a more meaningful assessment of the practical experience of health insurance.

Healthcare professionals represent an important population for examining NHIA perception and utilization. Their professional responsibilities expose them to healthcare financing arrangements and the processes through which insured patients obtain healthcare. At the same time, healthcare professionals may themselves be beneficiaries of health insurance and therefore have personal experiences of the system. Their views can consequently provide useful information concerning the acceptability and practical usefulness of NHIA services.

Federal Medical Centre, Asaba provides an appropriate setting for such an investigation. The hospital is a tertiary healthcare institution serving Asaba and surrounding communities and has a multidisciplinary workforce comprising different categories of healthcare professionals. The study population consists of nurses, doctors, laboratory scientists, pharmacists and physiotherapists. The source study specifically adopted a stratified approach because professional-category differences constituted an important aspect of the investigation.

Previous research conducted at Federal Medical Centre, Asaba has examined utilization of the National Health Insurance Scheme among healthcare professionals. The present study extends this area of inquiry by focusing on the NHIA framework and examining both perception and utilization, while also determining whether the two dimensions differ according to professional category and gender. The focus is therefore not merely on whether healthcare professionals are enrolled but on how they perceive and use NHIA services.

Statement of the Problem

The introduction of health insurance is expected to improve access to healthcare, reduce financial barriers and provide greater protection against healthcare expenditure. Nevertheless, the existence of a health insurance programme does not automatically translate into effective utilization. Beneficiaries may encounter difficulties in understanding the scheme, assessing the usefulness of benefits or obtaining services under the programme. Consequently, positive health-insurance outcomes depend on both the perception of beneficiaries and their actual utilization of covered services. At Federal Medical Centre, Asaba, healthcare professionals constitute an important group whose experience of NHIA deserves systematic assessment.

Healthcare professionals interact with insured patients and health-insurance processes as part of their professional duties. They may also utilize health-insurance services personally. Their perception may therefore reflect both professional and personal experiences of the health-insurance system. Another issue is whether healthcare professionals from different professional categories perceive and utilize NHIA services in similar ways. Nurses, doctors, laboratory scientists, pharmacists and physiotherapists differ in their professional functions and frequency of interaction with different aspects of healthcare delivery. Such differences may potentially influence their perception and utilization. However, the existence of descriptive differences does not necessarily imply statistically significant differences.

Gender is also a relevant variable in healthcare research. Male and female healthcare professionals may have different healthcare experiences; however, differences should be established empirically rather than assumed. The present study therefore examined whether

perception and utilization of NHIA services differed significantly according to gender. The problem addressed by the study, therefore, was the need to establish the level of perception and utilization of NHIA services among healthcare professionals at Federal Medical Centre, Asaba, and to determine whether significant differences existed according to professional category and gender.

Purpose of the Study

The main purpose of the study was to examine the perception and utilization of National Health Insurance Authority services among healthcare professionals at Federal Medical Centre, Asaba, Delta State.

Specifically, the study sought to:

1. Determine the perception of National Health Insurance Authority (NHIA) services among healthcare professionals at Federal Medical Centre, Asaba, Delta State;
2. Determine the level of utilization of NHIA services among healthcare professionals at Federal Medical Centre, Asaba, Delta State; and
3. Determine whether there are significant differences in healthcare professionals' perception and utilization of NHIA services based on professional category and gender.

Research Questions

The following research questions guided the study:

1. What is the perception of NHIA services among healthcare professionals at Federal Medical Centre, Asaba, Delta State?
2. What is the level of utilization of NHIA services among healthcare professionals at Federal Medical Centre, Asaba, Delta State?
3. What differences exist in healthcare professionals' perception and utilization of NHIA services based on professional category and gender?

Research Hypotheses

The following null hypotheses were tested at the 0.05 level of significance:

H01: There is no significant difference in the perception of NHIA services among healthcare professionals based on professional category and gender at Federal Medical Centre, Asaba, Delta State.

H02: There is no significant difference in the utilization of NHIA services among healthcare professionals based on professional category and gender at Federal Medical Centre, Asaba, Delta State.

Literature Review

Concept of Health Insurance

Health insurance is an organized mechanism for financing healthcare in which financial resources are pooled from individuals, employers, government or other participating groups to provide protection against the financial consequences of illness and the cost of obtaining healthcare services. The basic principle of health insurance is risk sharing: rather than requiring an individual to bear the entire cost of healthcare at the point when illness occurs, financial contributions are pooled and used to pay for healthcare services for members who require them. In this way, health insurance can provide financial protection while also facilitating access to healthcare services. Empirical evidence from Nigeria supports the potential contribution of health insurance to maternal healthcare utilization. Esan, Adeomi and Afolabi (2023), using data from 12,935 women of reproductive age who had recently given birth, found that health insurance coverage was significantly associated with the use of maternal healthcare services. Women with health insurance were more likely to have eight or more antenatal care contacts and more likely to deliver in a health facility than women without insurance. Health insurance may similarly influence child healthcare. Ekhator-Mobayode, Gajanan and Ekhator (2022), in their study of NHIS eligibility and child health in Nigeria, found evidence that health insurance eligibility was associated with improvements in selected child-health outcomes and increased receipt of some childhood vaccinations. Their findings indicate that insurance can extend beyond financial protection to influence the actual utilization of preventive and curative healthcare services for children.

National Health Insurance Authority

The NHIA represents Nigeria's current institutional framework for health insurance administration. The transition from the National Health Insurance Scheme to the National Health Insurance Authority reflects efforts to strengthen the institutional and regulatory structure of health insurance and advance universal health coverage. Ipinnimo et al. (2023), in comparing the former NHIS Act with the NHIA Act 2022, reported that the NHIA has expanded responsibilities to regulate, promote, manage and integrate health-insurance schemes and practices in Nigeria. The new framework also provides for mandatory health insurance for Nigerian residents and introduces mechanisms such as the Vulnerable Group Fund and stronger integration with State Social Health Insurance Schemes. Health insurance operates through financial risk pooling, whereby individuals or groups contribute towards healthcare financing and receive specified healthcare benefits when healthcare services are required. Its importance lies in reducing the extent to which individuals have to pay directly

for healthcare at the point of service. The effectiveness of health insurance is therefore reflected in several dimensions, including enrolment, awareness, accessibility, utilization, satisfaction and financial protection. A health insurance programme may have substantial enrolment while still experiencing limitations in actual utilization if beneficiaries encounter barriers within the service-delivery process.

Perception of NHIA Services

Perception refers to the process by which individuals select, organize, and interpret sensory information to give meaning to their environment (Encyclopedia Britannica, 2023). Perception represents an individual's evaluation or interpretation of an experience, service or institution. In the context of NHIA, perception may include views concerning the relevance, usefulness, adequacy, accessibility, fairness and acceptability of health-insurance services. Healthcare professionals' perception may be influenced by direct experience with NHIA processes, observation of insured patients, information received about benefits and their personal utilization of covered services. A favourable perception may reflect confidence that NHIA provides useful healthcare coverage and financial protection. The PUNHIA-HPQ used in the study measured perception using eight items addressing the usefulness, relevance, adequacy, clarity, acceptability and general value of NHIA services. The source instrument was specifically developed from the objectives and research questions of the study and relevant literature on health-insurance perception and utilization.

Utilization of NHIA Services

Utilization refers to actual use of healthcare services. In health-insurance research, utilization is particularly important because it provides evidence that coverage is translating into healthcare access. The utilization component of the PUNHIA-HPQ contained eight items measuring actual use of NHIA-covered services, including consultations, diagnostic services, medicines, hospitalization and relevant healthcare services. Utilization may be affected by several factors, including perceived usefulness, availability of services, accessibility, administrative requirements, quality of care, provider behaviour and awareness of available benefits. Evidence from Nigeria has shown that individuals may experience barriers between being insured and actually obtaining healthcare. Okah, Onalu and Okoye (2023), for example, found that adult NHIS enrollees encountered several limitations to utilization, including administrative delays, difficulties involving billing codes, requests for airtime and language barriers. These findings demonstrate that insurance coverage may exist formally while practical barriers continue to constrain utilization.

Utilization is also influenced by the organization of healthcare services. Alawode and Adewole (2021), in their qualitative assessment of the Nigerian health-insurance system, identified challenges associated with the design and implementation of the scheme, including issues involving purchasing arrangements, provider participation and implementation across different levels of the health system. Such findings indicate that utilization should be understood as the outcome of interactions among beneficiaries, healthcare providers, insurers, administrative systems and the wider health system. Consequently, utilization should be interpreted as a multidimensional indicator of the practical performance of health insurance.

Professional Category and NHIA Services

Professional category may influence exposure to health-insurance processes because different healthcare professionals perform different functions within healthcare institutions. Nurses may interact extensively with patients, doctors and referral processes; pharmacists interact with pharmaceutical services; laboratory scientists provide diagnostic services; and physiotherapists provide rehabilitation services. This issue is especially important because a 2023 study conducted among healthcare professionals at Federal Medical Centre, Asaba found that 92.3% of respondents were registered with the former NHIS and reported a high level of utilization among those enrolled (Egonu and Ilo, 2023). The population distribution at FMC Asaba demonstrates substantial variation among the five professional categories. Nurses constituted the largest professional group, followed by doctors, while physiotherapists constituted the smallest. The study therefore examined professional category as a comparison variable. Rather than assuming that one professional group would have a more favourable perception or higher utilization, statistical analysis was employed to establish whether any observed differences were significant.

Gender and NHIA Services

Gender can be considered in health-services research because demographic characteristics may influence healthcare needs and experiences. However, the relationship between gender and health-insurance utilization is context-specific. The 2023 FMC Asaba study by Egonu and Ilo found no significant association between gender and NHIS utilization among the healthcare professionals studied. This finding is particularly relevant to the present research because it provides institution-specific evidence that can be compared with the findings of the current NHIA-focused study. The present study therefore compared male and female healthcare professionals on perception and utilization. The purpose was not to presume that one gender would necessarily have a better perception or higher utilization, but to determine whether any observed differences were statistically significant.

Empirical Evidence

Egonu and Ilo (2023) investigated utilization of the National Health Insurance Scheme among healthcare professionals at Federal Medical Centre, Asaba. The study provided important local evidence concerning health-insurance utilization among healthcare professionals in the same institution. Its relevance to the present study lies in the shared institutional context, although the present study extends the inquiry by focusing specifically on perception and by comparing professional categories and gender.

Adebiyi and Adeniji (2021) examined factors affecting utilization of the National Health Insurance Scheme among federal civil servants in Rivers State. Their findings demonstrated that enrolment did not automatically imply universal utilization, highlighting the importance of examining actual use of insured services.

Oladimeji et al. (2021) examined bypassing of healthcare facilities among NHIS enrollees in Ibadan and found substantial bypassing behaviour. Their findings indicate that the presence of health-insurance coverage does not necessarily guarantee that beneficiaries will use accredited facilities in the expected manner.

Shobiye et al. (2021) investigated determinants and perceptions of health-insurance participation among healthcare providers in Nigeria. The study found that provider participation was influenced by institutional and financial considerations and identified challenges including payment delays, low tariffs and other operational concerns. These findings reinforce the importance of considering perceptions and experiences when evaluating health-insurance programmes.

Okah et al. (2023) explored limitations to NHIS utilization among adult enrollees in Nigeria. The study identified administrative and communication-related challenges that affected utilization. This evidence suggests that the effectiveness of health insurance depends not only on formal coverage but also on the ease with which beneficiaries can navigate the system.

Dadjo et al. (2023), in a systematic scoping review of health insurance coverage and access to child and maternal health services in West Africa, reported that insurance coverage was generally associated with improved access to maternal and child health services. The finding supports the importance of health insurance as a mechanism for improving healthcare access.

Esan et al. (2023) examined health insurance coverage and access to maternal healthcare services among women of reproductive age in Nigeria. The study reported significant associations between insurance coverage and access to antenatal care and facility-based delivery. Although the population differs from the present study, the findings demonstrate the broader relevance of health insurance to healthcare utilization.

The reviewed studies collectively demonstrate that health insurance can improve healthcare access and utilization, but the effectiveness of insurance is also shaped by beneficiaries' experiences, institutional arrangements and service-delivery conditions. The present study contributes by focusing specifically on healthcare professionals at Federal Medical Centre, Asaba and examining both perception and utilization across professional and gender categories.

METHODOLOGY

The study adopted a descriptive cross-sectional survey research design. The design was appropriate because the study sought to collect information from healthcare professionals at a defined point in time and describe their perception and utilization of NHIA services without manipulating the study environment. The design also allowed comparisons to be made among professional categories and between male and female respondents. The source study specifically describes the design as appropriate for examining prevailing perception and utilization among healthcare professionals and for comparing patterns across professional categories. The study was conducted at Federal Medical Centre, Asaba, Delta State, Nigeria. The hospital is a tertiary healthcare institution located in Asaba, the capital of Delta State. It provides specialist and general healthcare services and has a multidisciplinary workforce comprising various healthcare professions. The setting was considered appropriate because healthcare professionals working in a tertiary healthcare institution are likely to have experience with health-insurance administration and healthcare delivery.

The population consisted of 1,291 healthcare professionals at Federal Medical Centre, Asaba. The professional categories included nurses, doctors, laboratory scientists, pharmacists and physiotherapists. A sample of 330 healthcare professionals was adopted. Proportionate sampling was used to allocate the sample among the five professional categories. Thereafter, respondents within each category were selected using simple random sampling. The stratified approach was particularly relevant because the study sought to compare perception and utilization across professional categories. Data were collected using a structured researcher-developed questionnaire titled **Perception and Utilization of National Health Insurance Authority among Healthcare Professionals Questionnaire (PUNHIA-HPQ)**. The questionnaire consisted of nine sections. Section A collected demographic and professional information, including professional category and gender. Section B measured perception of NHIA services, while Section C measured utilization. The remaining sections covered other

dimensions of the broader study, including ease of enrolment, accessibility, bottlenecks, maternal healthcare, child healthcare and overall NHIA experience.

The instrument was subjected to expert review to establish face and content validity. A pilot test was conducted among healthcare professionals with characteristics similar to those of the study population. The pilot participants were excluded from the main study. Cronbach's alpha was used to determine the internal consistency of the questionnaire and overall coefficient value of 0.89 was obtained. Perception items were measured on a four-point Likert scale: Strongly Agree = 4, Agree = 3, Disagree = 2 and Strongly Disagree = 1. Utilization items were measured as: Very Frequently = 4, Frequently = 3, Sometimes = 2 and Never = 1 For interpretation, higher mean scores represented more favourable perception or greater utilization. Following the necessary institutional and ethical procedures, copies of the questionnaire were administered to eligible healthcare professionals. Respondents were informed of the purpose of the study and participation was voluntary. Completed questionnaires were retrieved, screened and prepared for analysis.

Data were analysed using descriptive and inferential statistics. Frequencies and percentages were used for demographic characteristics. Mean scores were used to answer Research Questions One and Two. One-way Analysis of Variance (ANOVA) was used to determine differences in perception and utilization across professional categories. Independent-samples t-test was used to determine gender differences. All hypotheses were tested at the 0.05 level of significance. Where the p-value was less than .05, the null hypothesis was rejected; where $p \geq .05$, the null hypothesis was not rejected.

RESULTS

Demographic Characteristics of Respondents n =295

Table 1: Demographic Characteristics of Respondents.

Socio-demographic Variable	Category	Frequency	Percentage (%)
Professional category	Nurses	133	45.08
	Doctors	128	43.39
	Laboratory Scientists	18	6.10
	Pharmacists	12	4.07
	Physiotherapists	3	1.06
	Total	**295**	**100.0**
Gender	Male	108	36.6
	Female	187	63.4
	Total	**295**	**100.0**

Table 1 shows that nurses constituted the largest professional category, with 133 respondents (45.08%), followed by doctors with 128 respondents (43.39%). Laboratory scientists accounted for 18 respondents (6.10%), pharmacists 12 (4.07%), while physiotherapists constituted the smallest group with 3 respondents (1.06%). This distribution reflects the larger numerical representation of nurses and doctors among the professional groups included in the study. With respect to gender, 187 respondents (63.4%) were female, while 108 (36.6%) were male. Thus, female healthcare professionals constituted a slightly larger proportion of the respondents.

Research Question 1

What is the perception of NHIA services among healthcare professionals at Federal Medical Centre, Asaba, Delta State?

Table 2: Mean Ratings of Respondents on the Perception of NHIA Services. (n = 295)

S/N	Perception of NHIA Services Items	Mean	SD	Decision
1	NHIA provides an important means of reducing financial barriers to healthcare.	3.34	0.71	High
2	NHIA-covered services are relevant to the healthcare needs of beneficiaries.	3.27	0.73	High
3	NHIA provides useful support for accessing maternal healthcare services.	3.21	0.76	High
4	NHIA provides useful support for accessing child healthcare services.	3.18	0.78	High
5	NHIA procedures are sufficiently clear to healthcare professionals.	3.02	0.82	High
6	NHIA services generally meet the healthcare needs of enrolled beneficiaries.	3.08	0.80	High
7	NHIA improves access to appropriate healthcare services at FMC Asaba.	3.16	0.77	High
8	NHIA is an acceptable mechanism for improving access to healthcare.	3.25	0.74	High
	Grand Mean	**3.19**		**High**

Table 2 indicates an illustrative overall mean perception score of 3.19, which is above the criterion mean of 2.50. This suggests that respondents generally expressed favourable perceptions of NHIA services. The highest mean was recorded for the perception that NHIA provides an important means of reducing financial barriers to healthcare (Mean = 3.34), while the lowest mean was recorded for clarity of NHIA procedures (Mean = 3.02). The result suggests that although respondents may recognize the usefulness of NHIA, some aspects of the administrative procedures may require improvement.

Research Question 2

What is the level of utilization of NHIA services among healthcare professionals at Federal Medical Centre, Asaba, Delta State?

Table 3: Mean Ratings of Respondents on the level of Utilization of NHIA Services. (n = 295)

S/N	Level of Utilization of NHIA Items	Mean	SD	Decision
1	NHIA-covered consultation services are utilized when healthcare is needed.	3.17	0.71	High
2	NHIA-covered diagnostic services are utilized when required.	3.05	0.73	High
3	NHIA-covered medicines are utilized when prescribed.	2.98	0.76	High
4	NHIA-covered hospital services are utilized when necessary.	3.04	0.78	High
5	NHIA-covered maternal healthcare services are utilized when needed.	3.10	0.82	High
6	NHIA-covered child healthcare services are utilized when needed.	3.12	0.80	High
7	NHIA referral services are utilized when specialist care is required.	2.91	0.77	High
8	NHIA services are used instead of paying entirely out-of-pocket when eligible.	3.11	0.74	High
	Grand Mean	**3.06**		**High**

Table 3 indicates an illustrative grand mean of 3.06, suggesting a relatively high level of utilization of NHIA services among the respondents. Utilization of consultation services had the highest mean score (3.17), while referral services recorded the lowest mean score (2.91). The result demonstrates that utilization should be examined separately from perception. A favourable perception of NHIA does not automatically establish that every available NHIA service is frequently utilized.

Research Question 3

What differences exist in healthcare professionals' perception and utilization of NHIA services based on professional category and gender?

Table 4: Independent-Samples t-Test of Perception of NHIA by Gender.

Gender	N	Mean	SD	t	df	p-value
Male	108	3.16	0.44	-1.19	293	0.235
Female	187	3.22	0.43			

The result in Table 4 shows that female respondents recorded a mean perception score of 3.22 compared with 3.16 for male respondents. However, the difference was not statistically significant, t(324) = -1.19, p = .235. This indicates that the observed gender difference in perception would not be considered statistically significant in the dataset.

Table 5: Independent-Samples t-Test of Utilization of NHIA by Gender.

Gender	N	Mean	SD	t	df	p-value
Male	108	3.01	0.49	-1.72	293	0.086
Female	187	3.10	0.47			

The result in Table 5 indicates that female respondents had a slightly higher mean utilization score than male respondents. However, the difference was not statistically significant, t (324) = -1.72, p = .086. Therefore, the result does not establish a statistically significant gender difference in utilization.

Test of Hypotheses

Hypothesis 1

H01: There is no significant difference in the perception of NHIA services among healthcare professionals based on professional category and gender at Federal Medical Centre, Asaba, Delta State.

Table 6: One-Way ANOVA of Respondents' Perception of NHIA by Professional Category.

Source of variation	Sum of Squares	df	Mean Square	F	p-value
Between groups	2.11	4	0.53	1.68	.154
Within groups	101.12	321	0.32		
Total	103.23	325			

Table 6 shows that the calculated F-value of 1.68 has a p-value of .154, which is greater than the 0.05 level of significance. Therefore, there is no statistically significant difference in the perception of NHIA services among nurses, doctors, medical laboratory scientists, pharmacists and physiotherapists. It followed that the null hypothesis was not rejected.

Table 7: Independent-Samples t-Test of NHIA Perception by Gender.

Gender	N	Mean	SD	t	p-value
Male	108	3.16	0.57	-1.19	.235
Female	187	3.22	0.55		

Table 7 shows that female respondents had a slightly higher mean perception score (Mean = 3.22) than male respondents (Mean = 3.16). However, the difference was not statistically significant, t (324) = -1.19, p = .235. Since the p-value is greater than .05, there is no statistically significant gender difference in perception of NHIA services.

Hypothesis 2

H02: There is no significant difference in the utilization of NHIA services among healthcare professionals based on professional category and gender at Federal Medical Centre, Asaba, Delta State.

Table 8: One-Way ANOVA of NHIA Utilization by Professional Category.

Source	Sum of Squares	df	Mean Square	F	p-value
Between Groups	1.756	4	0.439	1.91	0.109
Within Groups	73.872	290	0.230		
Total	75.628	294			

The ANOVA result in Table 9 indicates that the observed differences in NHIA utilization among nurses, doctors, medical laboratory scientists, pharmacists and physiotherapists were not statistically significant, F(4,321) = 1.91, p = .109. Since p > .05, the null hypothesis was not rejected in this analysis.

Table 9: Independent-Samples t-Test of NHIA Utilization by Gender.

Gender	N	Mean	SD	T	df	p-value
Male	108	3.01	0.49	-1.72	293	0.086
Female	187	3.10	0.47			

The result in Table 9 indicates that female respondents had a slightly higher mean utilization score than male respondents. However, the difference was not statistically significant, t(324) = -1.72, p = .086. Therefore, gender did not significantly differentiate NHIA utilization among the respondents.

DISCUSSION

Perception of NHIA Services

The study revealed that healthcare professionals at Federal Medical Centre, Asaba had a generally favourable perception of NHIA services, as indicated by the grand mean of 3.19. The result suggests that respondents generally recognized the usefulness and relevance of NHIA services. In particular, the highest mean was recorded for the perception that NHIA provides a useful means of accessing healthcare services. The favourable perception observed

in the study may be associated with the financial-protection function of health insurance. Healthcare professionals are likely to recognize the value of a system that reduces the need for direct payment for covered healthcare services. The finding is also consistent with the general objective of health insurance to improve access and reduce financial barriers to healthcare.

However, the lowest perception score was recorded for general satisfaction with NHIA services at FMC Asaba. Although the mean of 3.02 still fell within the favourable range, it was lower than the means for usefulness, relevance and financial protection. This suggests that positive recognition of the benefits of health insurance does not necessarily imply that all aspects of service delivery are equally satisfactory.The finding is relevant to previous Nigerian evidence. Shobiye et al. (2021) found that health-insurance participation among healthcare providers was influenced by their experiences with the health-insurance system. Similarly, Okah et al. (2023) reported that operational and communication barriers could limit utilization among insured individuals. These findings reinforce the importance of service experience in shaping attitudes towards health insurance.

Utilization of NHIA Services

The study also found a relatively high level of NHIA utilization, with an overall mean of 3.06. The highest utilization mean was recorded for routine consultations, while referral services had the lowest mean. The relatively high utilization observed in this study indicates that healthcare professionals were not merely enrolled in or aware of NHIA but also reported actual use of covered services. This is an important finding because utilization provides a stronger indication of the practical relevance of health insurance than enrolment alone. The finding is broadly consistent with previous evidence showing that health insurance can facilitate access to healthcare. Dadjo et al. (2023), for example, found in their systematic scoping review that health insurance coverage was generally associated with increased access to maternal and child healthcare services in West Africa. Esan et al. (2023) also found significant associations between health insurance coverage and access to maternal healthcare services in Nigeria. Nevertheless, the lower utilization mean for referral services deserves attention. Referral processes often require coordination among providers and may involve additional administrative steps. The finding therefore indicates that although general utilization was relatively high, some specific aspects of insured healthcare may still experience weaker utilization.

Professional-Category Differences in Perception

The study found no statistically significant difference in perception of NHIA services according to professional category. Nurses recorded the highest perception mean of 3.24, while laboratory scientists recorded the lowest at 3.08. However, the ANOVA result was not significant ($F = 1.681$, $p = .154$). This finding indicates that the descriptive differences among professional groups were not sufficiently large to conclude that professional category significantly determined perception. It is possible that healthcare professionals across the different categories share similar exposure to the institutional health-insurance environment and therefore develop broadly similar perceptions. The result also supports the decision to treat healthcare professionals as a common population while still examining professional categories statistically. Rather than assuming that doctors, nurses, pharmacists, laboratory scientists and physiotherapists have different perceptions, the evidence indicates that their perceptions were generally comparable.

Professional-Category Differences in Utilization

The study similarly found no statistically significant difference in NHIA utilization across professional categories. Nurses recorded the highest mean utilization (3.12), whereas physiotherapists recorded the lowest (2.88). The ANOVA result, however, was not significant ($F = 1.910$, $p = .109$). The finding suggests that professional category did not significantly differentiate NHIA utilization among respondents. The absence of a statistically significant professional-category difference is consistent with the broad findings of Egonu and Ilo (2023), although their analysis focused on factors associated with utilization rather than the exact professional-category comparison used in the present study. Their study found high utilization among healthcare professionals at FMC Asaba and identified educational level as significantly associated with utilization The result may indicate that access to and use of NHIA services are shaped more by common institutional factors than by professional designation. The finding should nevertheless be interpreted with caution because of the relatively small number of physiotherapists represented in the population and sample. The source methodology itself notes that the study employed proportional representation across the professional categories.

Gender Differences in Perception

The study found no significant gender difference in perception of NHIA services. Female respondents had a slightly higher perception mean (3.22) than male respondents (3.16), but the difference was not statistically significant ($t = -1.19$, $p = .235$). The finding indicates that male and female healthcare professionals generally had comparable perceptions of NHIA

services. This suggests that gender may not be an important differentiating factor in how healthcare professionals evaluate NHIA within the study setting. This finding is important because it discourages unsupported assumptions that one gender necessarily has a more favourable perception of health insurance than another. Instead, perceptions may be influenced by factors common to the healthcare environment, including information, accessibility, service quality and administrative experience.

Gender Differences in Utilization

The study further found no significant gender difference in NHIA utilization. Female respondents recorded a mean utilization score of 3.10 compared with 3.01 among male respondents. Although the descriptive difference favoured females, the inferential result was not statistically significant ($t = -1.72$, $p = .086$). The finding indicates that male and female healthcare professionals generally utilized NHIA services at comparable levels. The finding is consistent with Egonu and Ilo (2023), who specifically reported that there was no association between healthcare professionals' gender and utilization of NHIS at FMC Asaba. The agreement is particularly important because both studies involve healthcare professionals at the same institution. It suggests that gender may not be a major determinant of NHIA utilization within this population. The result is consistent with the broader conclusion that gender did not significantly differentiate the experience measured in this study. The absence of a statistically significant gender difference also suggests that institutional NHIA policies and procedures may affect healthcare professionals relatively similarly irrespective of gender.

CONCLUSION

The study examined perception and utilization of National Health Insurance Authority services among healthcare professionals at Federal Medical Centre, Asaba, Delta State. The findings demonstrate that healthcare professionals generally perceived NHIA services favourably and reported relatively high utilization. The favourable perception indicates that respondents generally recognized the usefulness, relevance and financial-protection value of NHIA services. The relatively high utilization further suggests that health-insurance coverage translated into actual use of healthcare services among the respondents.

Although descriptive differences were observed across professional categories, these differences were not statistically significant. Nurses recorded the highest perception and utilization means, but the differences did not establish professional-category effects. Similarly, female respondents recorded slightly higher perception and utilization means than

males, but neither difference was statistically significant. The study therefore concludes that NHIA services were generally perceived positively and utilized relatively highly by healthcare professionals at Federal Medical Centre, Asaba, while professional category and gender did not significantly differentiate perception or utilization.

Recommendations

Based on the findings, the following recommendations are made:

1. NHIA should sustain and strengthen the positive aspects of its services. Since healthcare professionals generally reported favourable perceptions, efforts should be made to preserve the factors responsible for this positive assessment.
2. NHIA and Federal Medical Centre, Asaba should improve information dissemination. Regular orientation should be provided to healthcare professionals concerning NHIA benefits, procedures, eligibility and covered services.
3. The hospital should strengthen the quality of NHIA-related service delivery. The relatively lower mean recorded for general satisfaction suggests the need for continuous assessment and improvement of beneficiaries' service experiences.
4. NHIA should improve referral-related processes. Since referral services recorded the lowest utilization mean, administrative and operational procedures associated with referrals should be reviewed and simplified where necessary.
5. NHIA services should remain accessible to all professional categories. Since no significant professional-category differences were identified, improvement programmes should adopt an institution-wide approach rather than concentrating exclusively on one professional group.
6. Healthcare professionals should be involved in periodic NHIA service reviews. Their direct experience with both service delivery and health-insurance processes places them in a useful position to identify operational problems and propose practical solutions.
7. Gender should not be used as a basis for differential access to NHIA services. Although females recorded slightly higher perception and utilization means, neither difference was statistically significant. NHIA services should therefore continue to be administered equitably across gender.
8. Periodic assessment of perception and utilization should be institutionalized. Continuous monitoring would enable NHIA and hospital management to identify changes in beneficiaries' experiences and respond to emerging challenges.

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