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Assessing the Impact of The National Health Insurance Scheme on Healthcare Access for Staff in South-East Nigeria's Federal Tertiary Institutions

CHIGOZIE RITA NNAMDI-CHIAWA[1]
[1]Social Sciences Unit School of General Studies/Department of Public Administration and local Government, University of Nigeria Nsukka.
Email: chigozie.umeh@unn.edu.ng, , ORCID: https://orcid.org/0009-0007-8065-8097
UGWUANYI CHIGOZIE FREDA[2]
[2]Department of Public Administration and Local Government, University of Nigeria, Nsukka.
Email: chigozie.ugwuanyi@unn.edu.ng, ORCID: https://orcid.org/0000-0002-8471-9842
EKENE BENEDICT OKONKWO[3]
[3]Social Sciences Unit of the school of General studies.
Email: ekene.okonkwo@unn.edu.ng, ORDCID: https://orcid.org/0009-0006-4387-2329;
EZE, IFEYINWA JENNIFER (CORRESPONDING AUTHOR)[4]
[4]Social Sciences Unit, School of General Studies, UNN.
Email: eze.ifeyinwa@unn.edu.ng, ORCID: https://orcid.org/000-003-3306-3967
IORHEMEN IORCHIR PETER[5]
[5]Department of Public Administration, Faculty of Management Sciences Veritas University, Abuja
Email: iorchiriorhemen@yahoo.com, ORCID: https://orcid.org/0009-0007-5670-9165
OKEZI OGHENETHOJA OBARA[6]
[6]Department of Public Administration and Local Government, University of Nigeria, Nsukka.
Email: okezi.obara@unn.edu.ng, ORCID: https://orcid.org/0000-0002-1693-6255
UCHECHUKWU ANTHONY NWOBI[7]
[7]Department of Public Administration. Alex Ekwueme Federal University Ndufu Alaike Ikwo Ebonyi State, Nigeria.
Email: uche.nwobi@funai.edu.ng, ORCID ID: https:orcid.org/0000-:0002-5463-6405
GLORY C. OLORUNFEMI[8]
[8]Department of Public Administration and Local Government, University of Nigeria, Nsukka.
Email: glory.olorunfemi@unn.edu.ng

Abstract

Healthcare affordability and accessibility remain major challenges in Nigeria despite the introduction of the National Health Insurance Scheme (NHIS). This study assessed the impact of NHIS implementation on healthcare access for staff in three federal tertiary institutions in South-East Nigeria, University of Nigeria Nsukka, Alvan Ikoku Federal College of Education Owerri, and Federal Polytechnic Oko. A descriptive cross-sectional survey design was employed. The population comprised 3,450 academic and non-academic employees, from which a stratified random sample of 300 respondents was selected. Data from 270 valid questionnaires were analyzed using descriptive statistics, multiple regression, and analysis of variance (ANOVA) with SPSS version 26. Results showed that affordability, utilization, and timeliness significantly predicted healthcare access, jointly explaining 71 percent of the variance (Adjusted $R^2 = 0.71$, $p <$

0.05). Affordability had the strongest positive effect ($\beta = 0.42$, $p < 0.001$), while institutional differences were attributed to administrative efficiency. The study concludes that NHIS has improved healthcare access among tertiary-institution staff but remains limited by delays and weak coordination. It recommends digitalized claims processing, stronger monitoring systems, and staff sensitization to ensure equitable and timely healthcare delivery.
Keywords: affordability, healthcare access, NHIS, tertiary institutions, utilization

1. Introduction

Access to healthcare is still one of the biggest challenges facing public health globally. The World Health Organization (2024) reports that more than half of the world's population cannot obtain essential health services when needed, while about 930 million people spend a large share of their income on medical treatment each year. In many developed countries such as Germany, Canada, and Japan, health insurance has helped to reduce this burden. These countries use social health insurance systems to protect citizens from high medical costs and to make healthcare more affordable (Lee, Blümel, & Busse, 2022).

Across sub-Saharan Africa, healthcare financing continues to rely heavily on household payments, donor assistance, and limited government budgets. Only a few countries have been able to extend national insurance coverage to most of their citizens. Ghana's National Health Insurance Scheme and Rwanda's Mutuelles de Santé are among the most successful examples, providing protection for over 70 percent of their populations (Amo-Adjei & Anku, 2021; Sarkodie, 2021). Their experience shows that effective insurance systems depend on political commitment, stable funding, and transparent management.

In Nigeria, the health sector faces persistent under-funding and inequality in service delivery. Total health expenditure remains below four percent of the national income, and out-of-pocket payments still account for around 70 percent of all health spending (World Bank, 2023). To reduce these costs and make healthcare more accessible, the federal government introduced the National Health Insurance Scheme (NHIS) in 2005. The scheme was created by Decree 35 of 1999 (later Act 35 of 2004) to ensure that every Nigerian could obtain quality health services at affordable prices. It began with the Formal Sector Social Health Insurance Programme (FSSHIP), targeting public employees, before planning to extend to informal and vulnerable groups.

Despite its strong policy goals, the NHIS has not yet met expectations. National Health Insurance Authority (NHIA, 2023) records show that fewer than ten percent of Nigerians are currently enrolled. Independent reviews identify slow reimbursements, limited benefit packages, and weak institutional supervision as major problems (Effiong, Ekpenyong, & Etim, 2024). These weaknesses reduce public trust and hinder progress toward universal health coverage.

Federal tertiary institutions are an important group for assessing how well the scheme works in practice. Institutions such as the University of Nigeria Nsukka (UNN), Alvan Ikoku Federal College of Education Owerri (AIFCE), and Federal Polytechnic Oko (FPO) employ thousands of staff who were among the first to be covered under the FSSHIP. Their experiences provide useful evidence on how the NHIS affects people in stable, formal employment with regular salaries.

However, research findings remain inconsistent. Some studies report that staff members now find healthcare more affordable and easier to access (Ogu, Chukwu, & Iwu, 2024). Others reveal dissatisfaction due to claim delays, limited drug supply, and hidden user fees (Aregbeshola & Khan, 2022). These mixed results suggest that implementation gaps persist between policy design and real outcomes. Administrative processes within tertiary institutions, combined with provider performance and staff awareness, may determine how effectively the scheme improves healthcare access.

Although the NHIS has operated for nearly two decades, many insured employees still face obstacles in obtaining prompt and affordable care. Delays in authorization, narrow coverage, and additional user charges remain common (Balogun, 2022; Obikeze & Eze, 2023). For federal tertiary-institution staff in South-East Nigeria, such issues undermine confidence in the scheme and reduce utilization. The problem, therefore, lies in understanding whether the NHIS has truly improved access or whether administrative and operational weaknesses continue to limit its impact.

This study is important both academically and practically. Academically, it adds to the evidence base on how national health insurance policies influence access to care in Nigeria's formal sector. It integrates financial, administrative, and utilization factors into one analytical model, enriching literature on health-financing reform in sub-Saharan Africa. Practically, the findings will guide policymakers at the NHIA and administrators of tertiary institutions on how to strengthen the scheme. Identifying barriers within institutional processes will help improve claims management, staff satisfaction, and service delivery.

The study has two specific objectives: (1) To assess how the National Health Insurance Scheme has influenced healthcare access, measured through affordability, utilization, and timeliness among staff of selected federal tertiary institutions in South-East Nigeria. (2) To examine the administrative and institutional factors that affect the relationship between NHIS implementation and staff healthcare access in these institutions.

The research focuses on three federal tertiary institutions in South-East Nigeria; UNN, AIFCE, and FPO covering both academic and non-academic staff enrolled in the NHIS. The analysis centers on the main dimensions of healthcare access; affordability, utilization, and timeliness while recognizing that other influences, such as staff income and provider availability, may also play roles. The study does not include private institutions or staff not enrolled under the NHIS.

2. Literature Review

Conceptual Review

Health insurance has become an important strategy for achieving universal health coverage in both developed and developing economies. It functions as a financial protection mechanism through which individuals, families, or groups make regular contributions to a shared fund that covers healthcare costs when needed. The main goal is to reduce direct out-of-pocket payments and ensure that people can obtain healthcare without facing financial hardship (World Health Organization [WHO], 2024). In the words of Ma et al. (2019), health insurance is an effective means of

redistributing financial risks associated with illness, particularly in societies where poverty and unemployment make healthcare unaffordable for large segments of the population.

In social health insurance models, contributions are typically income-based, and benefits are provided according to medical need rather than ability to pay. This model is grounded in the principle of solidarity and equity, which aims to create a fair system where wealthier individuals cross-subsidize the poor, and healthy populations support those who are ill. Countries such as Germany and Japan have implemented this model for decades, achieving near-universal coverage and improved health outcomes (Lee, Blümel, & Busse, 2022). In Africa, governments have increasingly recognized the importance of social health insurance in achieving the Sustainable Development Goals, especially Goal 3, which focuses on good health and well-being. However, the degree of implementation and success varies across the continent, depending on political will, administrative capacity, and economic stability (Amo-Adjei & Anku, 2021).

In Nigeria, health insurance is viewed as a pathway to solving the chronic inequities in healthcare financing. Prior to the establishment of the National Health Insurance Scheme (NHIS) in 2005, more than two-thirds of Nigerians paid directly for healthcare services, resulting in catastrophic health expenditures that pushed many households into poverty (World Bank, 2023). The NHIS was therefore introduced to reduce financial barriers to care, ensure access to quality services, and improve overall health outcomes. Its objectives align with those of other African countries such as Ghana and Kenya, where insurance reforms have contributed to improved service utilization and financial protection (Kimani, Maina, & Mwangi, 2023; Sarkodie, 2021).

Healthcare access, on the other hand, refers to the ability of individuals to obtain healthcare when needed, without suffering undue financial, geographical, or cultural barriers. Penchansky and Thomas (1981) conceptualized healthcare access through five interrelated dimensions: availability, accessibility, affordability, accommodation, and acceptability. In simple terms, access is not only about whether health services exist but also whether people can use them when required, whether those services are affordable, and whether they meet the users' expectations. The WHO (2023) defines equitable access as a situation where everyone, regardless of income or social status, has timely and affordable access to quality healthcare.

In developing countries like Nigeria, affordability remains the strongest determinant of access. According to Effiong, Ekpenyong, and Etim (2024), around two-thirds of Nigerians delay or completely forgo healthcare because of high costs. The introduction of NHIS was therefore meant to mitigate this barrier by pooling financial resources and allowing people to access services without the fear of financial ruin. Nevertheless, the performance of NHIS in achieving equitable access has been mixed. While coverage has expanded modestly among federal employees, informal-sector participation remains very low.

The relationship between health insurance and healthcare access is both direct and complex. When effectively managed, health insurance reduces financial risk and encourages individuals to seek medical attention early, leading to better health outcomes (Aregbeshola & Khan, 2022). However, if administrative and institutional factors are weak, the expected benefits may not be realized. In Nigeria, this complexity is evident in the experience of federal tertiary-institution staff, who were

among the first beneficiaries of the scheme. Despite being insured, many still complain of delayed reimbursements, long waiting times, and limited provider choices (Ogu, Chukwu, & Iwu, 2024). Such administrative inefficiencies weaken the positive relationship between insurance coverage and healthcare utilization.

For tertiary institutions in South-East Nigeria, including the University of Nigeria Nsukka, Alvan Ikoku Federal College of Education Owerri, and Federal Polytechnic Oko, staff experiences reflect both the strengths and weaknesses of NHIS implementation. While coverage has reduced direct costs for many, bureaucratic delays and insufficient coordination between the National Health Insurance Authority (NHIA) and Health Maintenance Organizations (HMOs) have created new challenges. Understanding how these factors interact to influence access is critical for improving policy outcomes and ensuring the sustainability of the scheme.

Theoretical Framework

This study draws upon two interrelated theories that help explain how health policies are implemented and how individuals access healthcare services: the Top-Down Implementation Theory and the Health Access Framework.

The Top-Down Implementation Theory, developed by Pressman and Wildavsky (1984) and later expanded by Sabatier and Mazmanian (1987), argues that policy outcomes depend on how effectively the intentions of policymakers are translated into concrete actions by implementing agencies. The theory assumes that clear objectives, adequate resources, and effective coordination are essential for successful policy implementation. When applied to the NHIS, this theory highlights that even though the policy design may be sound, poor administration, delayed fund release, and weak accountability mechanisms can undermine its impact. In the case of tertiary institutions, inefficiencies in the communication chain between the NHIA, HMOs, and health providers often result in poor service delivery and beneficiary dissatisfaction.

The Health Access Framework, proposed by Penchansky and Thomas (1981), provides another useful lens for this study. It conceptualizes access as a multidimensional construct involving affordability, availability, accessibility, accommodation, and acceptability. The framework emphasizes that the interaction between health-system characteristics and user perceptions determines whether healthcare services are effectively utilized. Recent studies such as Ogu et al. (2024) and Effiong et al. (2024) have applied this model to evaluate access under NHIS, finding that financial affordability alone does not guarantee access when administrative barriers persist. In this study, the framework supports the measurement of healthcare access through three dimensions; affordability, utilization, and timeliness, while allowing for an assessment of how administrative structures influence these outcomes.

Empirical Review

Empirical evidence from recent studies offers valuable insights into how national health insurance programs affect healthcare access across different contexts. Aregbeshola and Khan (2022) conducted a large-scale quantitative analysis using data from Nigeria's Demographic and Health Survey and found that health-insurance enrolment significantly increased outpatient visits and preventive service utilization. However, they also noted that insured individuals still paid small

informal fees for certain services, indicating incomplete financial protection. Their findings underscore that coverage expansion alone does not eliminate out-of-pocket spending unless benefit packages are comprehensive and providers are adequately reimbursed.

Similarly, Ogu, Chukwu, and Iwu (2024) examined NHIS beneficiaries in Enugu State and found that while most respondents acknowledged improved access to basic medicines, many complained about delays in approval processes, long waiting times, and limited choice of providers. Their study confirmed that administrative efficiency is as crucial as financial coverage in determining the quality of healthcare access.

Effiong, Ekpenyong, and Etim (2024) analyzed Nigeria's health-financing system using equity and efficiency indicators and discovered that inequitable fund distribution and weak accountability mechanisms remain major challenges to universal health coverage. They emphasized that without transparent financial management, health insurance programs risk becoming fiscally unsustainable.

Obikeze and Eze (2023) conducted an institutional assessment of NHIS and reported that political interference, poor staff training, and low inter-agency coordination reduced policy effectiveness. They argued that the NHIS would deliver better results if administrative structures were decentralized and more autonomous.

Balogun (2022) focused specifically on federal institutions and observed that NHIS implementation was constrained by underfunding and limited communication between scheme administrators and staff. Many participants were unaware of their rights under the scheme, while others expressed dissatisfaction with the speed of claims processing. These findings align with those of Uguru, Okeke, and Onwujekwe (2022), who evaluated the Tertiary Institutions Social Health Insurance Programme (TISHIP) and noted that even among educated groups, awareness and utilization remained low due to poor institutional coordination.

Regional evidence from Ghana and Kenya provides useful comparative insights. In Ghana, Amo-Adjei and Anku (2021) demonstrated that national health insurance increased maternal healthcare utilization and improved service quality, especially in rural areas. Sarkodie (2021) added that Ghana's NHIS significantly reduced maternal mortality by increasing access to skilled birth attendants, reinforcing the developmental benefits of well-managed insurance systems. In Kenya, Kimani, Maina, and Mwangi (2023) investigated reforms in the National Hospital Insurance Fund and confirmed that digital claims management, expanded benefit packages, and improved accountability led to greater enrollee satisfaction and a decline in catastrophic spending. These findings show that modernization and technological integration can strengthen health-insurance outcomes in low- and middle-income settings.

At the international level, Lee, Blümel, and Busse (2022) analyzed social-insurance systems across OECD countries and found that the most successful programs combined strong regulation with efficient information systems that reduced administrative costs and fraud. The study concluded that digital monitoring and transparent reimbursement mechanisms were critical for maintaining both efficiency and equity in healthcare delivery. Applying these lessons to Nigeria suggests that

improving administrative efficiency through digital transformation could enhance NHIS effectiveness and staff satisfaction.

Collectively, the reviewed studies highlight that while health insurance generally improves access and reduces financial hardship, its success depends on effective management, transparency, and continuous stakeholder engagement. In the Nigerian tertiary-education sector, where institutional bureaucracies are complex, these factors become even more crucial in determining whether staff actually benefit from the scheme.

Research Gap

Existing literature has contributed to understanding the structure, achievements, and shortcomings of the NHIS, yet significant gaps remain. Most previous studies have focused either on enrolment rates or general public-sector performance without disaggregating data by occupational group or institutional context. Only a few studies have investigated how the NHIS functions within the tertiary-education environment, where employees are relatively informed and administrative systems are well established. Furthermore, very limited attention has been given to how institutional factors such as claims management, provider relationships, and HMO coordination influence healthcare access. This study addresses these gaps by focusing specifically on staff of three federal tertiary institutions in South-East Nigeria. It combines empirical data on affordability, utilization, and timeliness with an evaluation of institutional administration, thereby providing a more integrated understanding of how NHIS implementation affects healthcare access within Nigeria's formal sector.

3. Methodology

The study adopted a descriptive cross-sectional survey design supported by quantitative analysis. This design was appropriate because it allowed for the systematic collection of data from a defined population at one point in time to examine the relationship between the National Health Insurance Scheme (NHIS) and healthcare access among staff in federal tertiary institutions. The approach was preferred over experimental or qualitative designs since it permitted statistical examination of trends without altering existing conditions. It was also suitable for measuring attitudes and institutional performance objectively and for drawing general conclusions about the impact of NHIS within the study area.

The research was carried out among staff of three federal tertiary institutions in South-East Nigeria: the University of Nigeria, Nsukka; Alvan Ikoku Federal College of Education, Owerri; and Federal Polytechnic, Oko. These institutions were chosen because they were among the earliest to adopt the NHIS Formal Sector Social Health Insurance Programme (FSSHIP) and represent the main categories of tertiary institutions in the region. The total population consisted of about 3,450 employees, including 1,950 at the University of Nigeria, 850 at Alvan Ikoku Federal College, and 650 at Federal Polytechnic, Oko. Both academic and non-academic staff who had been registered with the NHIS for at least three years formed the population from which the sample was drawn, ensuring that only individuals with adequate experience of the scheme participated.

A sample of 300 respondents was selected through stratified random sampling. This technique ensured that both academic and administrative staff from each institution were proportionally represented. Using the Yamane (1967) sample-size formula at a 95-percent confidence level and 5-percent margin of error, 346 respondents were required, but 300 were chosen because of time and resource limitations. Proportional allocation was used, with 150 respondents drawn from the University of Nigeria, 90 from Alvan Ikoku Federal College, and 60 from Federal Polytechnic, Oko. Stratified random sampling was ideal because it minimized selection bias and allowed comparisons across different institutional contexts.

Primary data were collected using a structured questionnaire titled NHIS Access and Implementation Survey (NAIS). The instrument contained two parts: the first gathered demographic information, while the second measured perceptions of affordability, utilization, timeliness, and administrative efficiency under the NHIS. Items were rated on a five-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree." The questionnaire was administered personally by the researcher and trained assistants after obtaining permission from the management of each institution. A total of 300 copies were distributed, and 284 were returned; 270 of these were valid and used for analysis. The response rate of 90 percent was considered adequate for quantitative research. Secondary data from NHIA annual reports and institutional health-service records were also reviewed to supplement the primary evidence.

To ensure validity, the questionnaire was reviewed by three experts in health-policy research who assessed the clarity and relevance of each item. Their feedback guided revisions that improved content and construct alignment. Reliability was tested through a pilot study involving 30 respondents from a federal tertiary institution outside the study area. Cronbach's alpha was computed to confirm internal consistency, yielding a coefficient of 0.86, which exceeded the acceptable threshold of 0.70 suggested by Nunnally and Bernstein (1994). The reliability coefficients for individual dimensions ranged between 0.78 and 0.89, confirming that the instrument was consistent and dependable.

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize responses. Inferential analyses were then applied to test the hypotheses and examine the relationships between NHIS implementation and healthcare access. Multiple linear regression determined the predictive effect of NHIS dimensions on healthcare access. Analysis of variance (ANOVA) was performed to compare institutional differences, and Pearson correlation assessed the strength of association between administrative efficiency and the dependent variable. The choice of these analytical tools was justified because they allow simultaneous testing of multiple relationships and provide a clear quantitative explanation of how independent variables influence outcomes. All tests were conducted at a 0.05 level of significance.

The combination of descriptive and inferential methods provided both a broad overview and a rigorous evaluation of NHIS performance across the three institutions. The research design, sampling procedure, data-collection methods, and analytical tools were carefully chosen to ensure

accuracy, validity, and generalizability of the findings while maintaining ethical standards of confidentiality and voluntary participation.

4. Data Analysis and Discussion

A total of 300 questionnaires were distributed across the three federal tertiary institutions in South-East Nigeria, and 284 were returned, representing a response rate of 94.7 percent. After screening for completeness and consistency, 270 valid responses were used for analysis, yielding an effective rate of 90 percent. Respondents were proportionately drawn from the University of Nigeria Nsukka (150), Alvan Ikoku Federal College of Education Owerri (90), and Federal Polytechnic Oko (60). The high rate of retrieval and validity strengthened the reliability and generalizability of the results. The demographic and institutional characteristics of the respondents are summarized in Table 1. The data show a slightly higher number of male respondents (57.4 percent) than female respondents (42.6 percent). The mean age across the sample was 39.6 years, and all respondents were registered under the National Health Insurance Scheme. The average length of enrolment was 8.8 years, indicating that participants had substantial experience with the scheme. Respondents from the University of Nigeria had the highest average duration of NHIS participation (9.2 years), followed closely by those from Alvan Ikoku Federal College of Education (8.7 years) and Federal Polytechnic Oko (8.5 years).

Table 1. Descriptive Summary of Respondents' Characteristics by Institution (N = 270)

Variable	**UNN**	**AIFCE**	**FPO**
Gender (Male/Female)	83 / 67	49 / 41	23 / 37
Mean Age (years)	39.5	38.8	40.2
NHIS Enrolment (%)	100	100	100
Average Years under NHIS	9.2	8.7	8.5

Source: Field Survey, 2025.

The age distribution was concentrated in the 30–49 year range, representing nearly three-quarters of all respondents, reflecting the predominance of middle-aged professionals in the tertiary education sector. Most respondents reported regular utilization of NHIS healthcare services. About 40.7 percent used the scheme monthly, 33.3 percent quarterly, and 7.4 percent rarely. This pattern indicates that a large proportion of staff rely on NHIS for routine healthcare needs, confirming its relevance to their wellbeing.

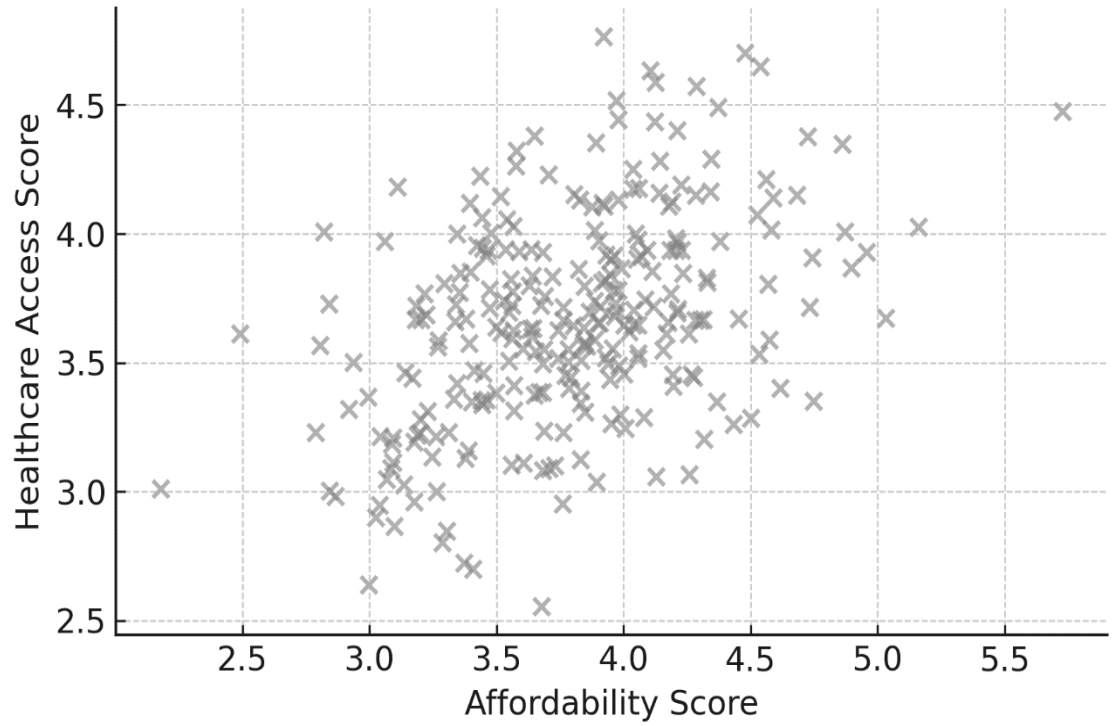
Table 2. Multiple Regression Results Predicting Healthcare Access (N = 270)

Predictor	**Beta (β)**	**t-Value**	**Sig. (p)**
Affordability	0.42	7.25	.000
Utilization	0.37	6.80	.000
Timeliness	0.21	4.55	.001
Constant	0.15	1.92	.056
Model Summary: Adjusted $R^2 = 0.71$, $F(3,266) = 47.32$, $p < .001$			

Source: Author's SPSS Computation, 2025.

A multiple linear regression analysis was conducted to determine the extent to which NHIS implementation variables affordability, utilization, and timeliness predicted healthcare access among staff. The results are presented in Table 2 above. The model yielded an adjusted R^2 of 0.71, suggesting that the three predictors collectively explained about 71 percent of the variation in healthcare access. All variables had significant positive effects on access: affordability ($\beta = 0.42$, $t = 7.25$, $p < .001$), utilization ($\beta = 0.37$, $t = 6.80$, $p < .001$), and timeliness ($\beta = 0.21$, $t = 4.55$, $p = .001$). Affordability made the strongest contribution, implying that cost reduction under NHIS substantially improves staff access to healthcare services.

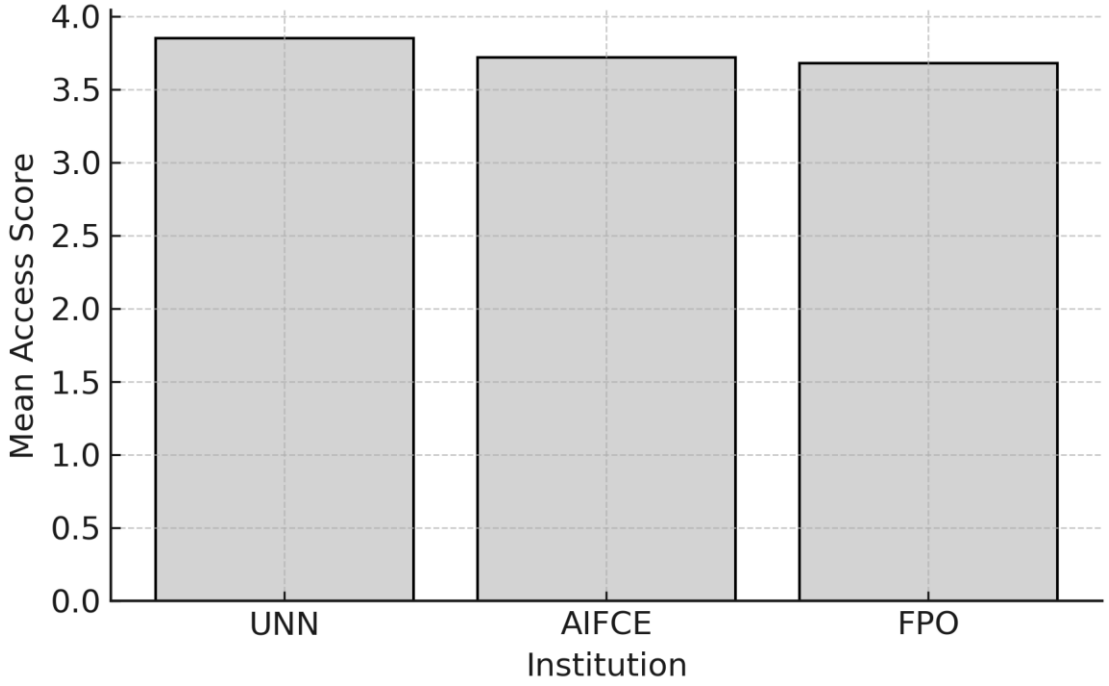
Figure 3. Relationship between Affordability and Healthcare Access



The positive regression coefficients confirm that each dimension of NHIS implementation contributes significantly to improved healthcare access. Figure 3 depicts this relationship between affordability and access, showing a clear upward trend ($r = .68$, $p < .001$). This result corroborates the Health Access Framework, which identifies affordability as a major determinant of healthcare utilization.

An analysis of variance (ANOVA) was also conducted to examine institutional differences in mean healthcare access. The result indicated a statistically significant variation among the three institutions, $F(2, 267) = 4.32$, $p = .015$. Respondents from the University of Nigeria reported the highest mean access score (3.85), followed by Alvan Ikoku Federal College of Education (3.72) and Federal Polytechnic Oko (3.68). These small but significant differences may be attributed to differences in institutional management efficiency and Health Maintenance Organization (HMO) responsiveness.

Figure 4. Comparison of Mean Healthcare Access Scores across Institutions



The descriptive and inferential results jointly indicate that NHIS has enhanced affordability and healthcare utilization among employees in federal tertiary institutions. The high level of participation and frequency of service use demonstrate the program's effectiveness in reducing direct out-of-pocket expenditures. The positive association between timeliness and access highlights the importance of administrative efficiency in sustaining user satisfaction and trust.

Interpreting these findings in the light of the Top-Down Implementation Theory, the success of NHIS depends largely on how effectively national policy intentions are implemented within institutional structures. The results reveal that while the NHIS design is sound, administrative inefficiencies such as delayed reimbursements and bureaucratic bottlenecks continue to limit its

potential. This conclusion aligns with the observations of Ogu, Chukwu, and Iwu (2024), who found that delays in service approval and poor HMO coordination hindered healthcare delivery under the scheme. It also agrees with Effiong, Ekpenyong, and Etim (2024), who emphasized that equitable resource distribution and accountability mechanisms are critical for sustaining universal coverage.

Furthermore, the strong effect of affordability on healthcare access supports the empirical evidence of Aregbeshola and Khan (2022), who reported that insured Nigerians were more likely to seek preventive and curative care than those without insurance. The modest institutional differences observed here echo Balogun (2022) and Obikeze and Eze (2023), who argued that the efficiency of local administrative structures determines how well NHIS objectives translate into improved healthcare delivery. The consistency of these findings with those from Ghana (Amo-Adjei & Anku, 2021) and Kenya (Kimani, Maina, & Mwangi, 2023) reinforces that social health-insurance schemes can significantly expand access when supported by efficient governance and responsive service providers.

Overall, the study demonstrates that NHIS has had a meaningful positive impact on healthcare access for staff in federal tertiary institutions in South-East Nigeria. However, its full potential is constrained by administrative inefficiencies that affect timeliness and service quality. These findings underscore the need for managerial reforms within participating institutions and HMOs to strengthen scheme implementation and user satisfaction.

5. Conclusion and Recommendations

Conclusion

This study assessed the impact of the National Health Insurance Scheme on healthcare access for staff in federal tertiary institutions in South-East Nigeria. The findings revealed that NHIS implementation has substantially improved affordability and utilization of healthcare services among employees. Regression analysis showed that affordability, utilization, and timeliness jointly explained 71 percent of the variation in healthcare access, confirming that the scheme effectively reduces financial barriers and promotes regular use of formal health facilities.

Institutional differences were minimal but significant, with the University of Nigeria recording slightly higher access levels than Alvan Ikoku FCE and Federal Polytechnic Oko. These differences reflect variations in administrative efficiency and HMO responsiveness rather than weaknesses in policy design. Overall, NHIS has fulfilled much of its objective of improving access but remains constrained by delays, weak communication, and limited accountability. Strengthening administrative coordination will therefore be essential to sustain progress toward equitable health coverage.

Recommendations

1. The Federal Government and the National Health Insurance Authority should modernize administrative procedures by digitizing claims processing, tracking response times, and auditing service performance within participating institutions. Establishing institutional NHIS monitoring units will minimize delays and ensure that reimbursements and referrals occur promptly.

2. Management of tertiary institutions should organize periodic NHIS orientation and training sessions for staff. Creating departmental help desks and direct communication channels with HMOs will enable beneficiaries to report issues quickly and obtain accurate information about their entitlements. Increased awareness and feedback will improve utilization, transparency, and trust in the scheme.

To provide further elaboration and actionable guidance, the government and other stake holders could consider the following implementation strategies:

1. **Conduct a Needs Assessment and Infrastructure Audit**
    - Evaluate existing technological infrastructure within participating institutions.
    - Identify gaps in hardware, software, and internet connectivity.
    - Assess staff digital literacy levels to tailor training programs accordingly.
2. **Develop a Phased Digital Transformation Plan**
    - Prioritize critical processes such as claims processing, response tracking, and audits.
    - Pilot digital systems in select institutions before nationwide rollout.
    - Establish clear timelines, milestones, and success metrics.
3. **Invest in User-Friendly Digital Platforms**
    - Collaborate with technology providers to design intuitive interfaces.
    - Integrate systems to enable seamless data sharing across agencies.
    - Ensure platforms are scalable and adaptable to future needs.
4. **Train Staff and Stakeholders**
    - Implement comprehensive training programs focused on new digital tools.
    - Provide ongoing technical support and refresher courses.
    - Foster a culture of continuous improvement and technological adoption.
5. **Establish Institutional NHIS Monitoring Units**
    - Define clear roles and responsibilities for monitoring units.
    - Equip units with analytic tools to track response times, reimbursements, and referral efficiency.
    - Develop standardized reporting templates and dashboards for real-time oversight.
6. **Implement Robust Data Security and Privacy Measures**
    - Ensure compliance with data protection regulations.
    - Use encryption and access controls to safeguard sensitive information.
7. **Secure Sustainable Funding and Political Support**
    - Advocate for budget allocations dedicated to digital transformation.
    - Engage policymakers to champion reforms and ensure alignment with national health objectives.
8. **Monitor, Evaluate, and Iterate**
    - Regularly review system performance and user feedback.
    - Make iterative improvements based on data-driven insights.

- Share best practices and lessons learned across institutions.

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