Published by

British Journal of Contemporary Research

BEXFORD PUBLISHING

The National Health Insurance Scheme (NHIS): Low Enrolment and Coverage Gaps in Rural Communities in Niger State

Review Article | Volume 1 | Issue 4 | 2026 | Article Number: 016

Accepted: 19 August 2026 | Published: 10 September 2026 | ISSN: 2979-8582 (Online)

Crossref : **https://doi.org/10.67693/BJCR-6487RQSH**

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Abstract

The National Health Insurance Scheme (NHIS), now re-established as the National Health Insurance Authority (NHIA) under the NHIA Act of 2022, was established in Nigeria to provide accessible, affordable, and equitable healthcare services and reduce out-of-pocket expenditure. Despite this mandate, rural communities continue to record low enrollment, estimated below 10%, and persistent coverage gaps that limit progress toward universal health coverage. This study examined the determinants of low enrolment and coverage gaps in the NHIS among rural communities in Niger State, Nigeria. Anchored on Rational Choice Theory, which posits that individuals make decisions based on perceived costs and benefits, the study assessed the influence of awareness, affordability, accessibility, and administrative processes on NHIS participation among rural residents. A descriptive survey research design was adopted. Data were collected using a structured questionnaire administered to 400 rural residents selected from Borgu, Lapai, Munya, Shiroro, and Wushishi Local Government Areas of Niger State, with 380 questionnaires retrieved and analyzed. Descriptive statistics and simple linear regression were used to analyze the data at a 0.05 level of significance. The findings revealed that awareness of the NHIS significantly influenced enrolment and coverage ($R = 0.621$, $R^2 = 0.386$, $\beta = 0.621$, $p < 0.05$). Affordability of contributions significantly affected enrolment ($R = 0.584$, $R^2 = 0.341$, $\beta = 0.584$, $p < 0.05$). Accessibility to NHIS-accredited healthcare facilities significantly influenced coverage ($R = 0.667$, $R^2 = 0.445$, $\beta = 0.667$, $p < 0.05$). Administrative and operational processes also had a significant effect ($R = 0.603$, $R^2 = 0.364$, $\beta = 0.603$, $p < 0.05$). All null hypotheses were rejected. The study concludes that low enrolment and coverage gaps constrain the effectiveness of the NHIS in rural Niger State. It is recommended that targeted community-based sensitization and enrollment drives be intensified to improve awareness, accessibility, and participation in the NHIS.

Keywords: National Health Insurance Scheme, Low Enrolment, Coverage Gaps, Rational Choice Theory, Rural Communities, Niger State

INTRODUCTION

Universal Health Coverage (UHC) has become a major global health priority because it seeks to ensure that all people have access to quality healthcare services without experiencing financial hardship. Health insurance remains a key strategy for achieving this goal by reducing out-of-pocket healthcare expenditure and improving access to essential health services. Despite considerable progress in many developed countries, health insurance enrolment remains low in many low- and middle-income countries, particularly among rural populations due to poverty, inadequate healthcare infrastructure, low awareness, and geographical barriers (Barasa et al., 2021; Kazungu & Barasa, 2023). This challenge is more evident in Africa, where although many countries have implemented health insurance schemes, coverage remains relatively low in rural communities because of socio-economic inequalities, limited access to healthcare facilities, and weak institutional capacity, resulting in persistent disparities in healthcare access between urban and rural populations (Ly et al., 2022; Apeagyei & Sahu, 2024)

Nigeria has undertaken several reforms to strengthen its health insurance system, including the transition from the National Health Insurance Scheme (NHIS) to the National Health Insurance Authority (NHIA) following the enactment of the National Health Insurance Authority Act, 2022. The Act aims to accelerate the achievement of Universal Health Coverage by expanding health insurance to vulnerable populations and making health insurance mandatory for all residents. Despite these reforms, health insurance coverage remains low, with less than 10 percent of Nigerians enrolled in formal health insurance schemes, while the majority, particularly those living in rural communities and working within the informal sector, continue to rely on out-of-pocket payments for healthcare services (National Health Insurance Authority, 2023; Onoka et al., 2022; Welcome et al., 2024). Studies have identified poverty, inadequate awareness, low educational attainment, poor accessibility to accredited healthcare facilities, and weak institutional implementation as major factors responsible for the persistently low enrolment across rural Nigeria (Onoka et al., 2022; Welcome et al., 2024).

Niger State reflects many of the challenges associated with NHIS enrollment in rural Nigeria due to its vast geographical size and predominantly rural population. Although the National Health Insurance Scheme (now the National Health Insurance Authority) has expanded its programmes to improve access to quality healthcare across the country, enrolment among rural residents in Niger State remains relatively low. Many households continue to rely on out-of-pocket healthcare payments, while factors such as poverty, inadequate awareness of the NHIS, long distances to accredited health facilities, poor road infrastructure, low educational attainment, and the predominance of informal occupations influence participation in the scheme. These conditions shape the pattern of NHIS coverage and healthcare utilization in many rural communities across the state, where access to healthcare services is closely associated with the availability and uptake of the national health insurance programme.

STATEMENT OF THE PROBLEM

The National Health Insurance Scheme (NHIS), now the National Health Insurance Authority (NHIA), was established to ensure equitable access to quality healthcare services and reduce out-of-pocket healthcare expenditure in line with the goal of Universal Health Coverage (UHC). Ideally, the scheme is expected to provide financial protection and improve access to healthcare for all Nigerians, particularly vulnerable populations and rural communities where the burden of disease and poverty is relatively high.

However, this expectation has not been fully realized in many rural communities across Nigeria, where NHIS enrollment remains low, and health insurance coverage is limited. Many rural households continue to depend on out-of-pocket payments for healthcare due to factors such as poverty, inadequate awareness of the scheme, poor healthcare infrastructure, long distances to accredited health facilities, and the predominance of informal employment. These conditions limit access to quality healthcare services and reduce the utilization of health insurance.

To improve coverage, the Federal Government has implemented several reforms, including the enactment of the National Health Insurance Authority (NHIA) Act, 2022, the expansion of the Basic Health Care Provision Fund, and programmes aimed at extending health insurance to vulnerable and informal sector populations. Despite these interventions, low enrolment and coverage gaps continue to characterize many rural communities.

In Niger State, where a large proportion of the population resides in rural areas, many households remain outside the NHIS and continue to finance healthcare through out-of-pocket payments. Although the NHIA has introduced measures to expand health insurance coverage, enrollment among rural residents remains relatively low, creating persistent gaps in healthcare access. It is this situation that necessitates an investigation into NHIS low enrolment and coverage gaps in rural communities in Niger State, Nigeria.

OBJECTIVE OF THE STUDY

The main objective of this study is to examine the determinants of low enrolment and coverage gaps in the National Health Insurance Scheme (NHIS) among rural communities in Niger State, Nigeria. The specific objectives are to:

1. Examine the influence of the level of awareness of the National Health Insurance Scheme (NHIS) on enrolment among rural residents in Niger State.
2. Assess the effect of the affordability of NHIS premiums on enrolment among rural households in Niger State.
3. Determine the influence of the availability and accessibility of NHIS-accredited healthcare facilities on coverage gaps among rural communities in Niger State.
4. Examine the effect of administrative and operational challenges in the implementation of the National Health Insurance Scheme (NHIS) on coverage gaps among rural communities in Niger State.

Research Questions

The study was guided by the following research questions:

1. What is the influence of the level of awareness of the National Health Insurance Scheme (NHIS) on enrolment among rural residents in Niger State?
2. How does the affordability of NHIS premiums affect enrolment among rural households in Niger State?
3. To what extent does the availability and accessibility of NHIS-accredited healthcare facilities influence coverage gaps among rural communities in Niger State?
4. How do administrative and operational challenges in the implementation of the National Health Insurance Scheme (NHIS) influence coverage gaps among rural communities in Niger State?

Hypotheses

The following null hypotheses were formulated to guide the study:

i. H_{01}: The level of awareness of the National Health Insurance Scheme (NHIS) has no significant

influence on enrolment among rural residents in Niger State.

ii. H_{02}: The affordability of NHIS premiums has no significant effect on enrolment among rural households in Niger State.

iii. H_{03}: The availability and accessibility of NHIS-accredited healthcare facilities have no significant influence on coverage gaps among rural communities in Niger State.

iv. H_{04}: Administrative and operational challenges in the implementation of the National Health Insurance Scheme (NHIS) have no significant effect on coverage gaps among rural communities in Niger State.

CONCEPTUAL CLARIFICATIONS

National Health Insurance Scheme (NHIS)

The National Health Insurance Scheme (NHIS) is a social health insurance programme designed to promote equitable access to healthcare services through financial risk pooling, reduction of out-of-pocket healthcare expenditure, and improved healthcare utilization. Eze, Iseolorunkanmi, and Adeloye (2024) conceptualize the National Health Insurance Scheme (NHIS) as Nigeria's principal health financing mechanism established to achieve Universal Health Coverage (UHC) through financial risk pooling, equitable access to healthcare services, and protection against catastrophic out-of-pocket healthcare expenditure. According to the authors, the scheme is intended to improve healthcare utilization and ensure that individuals receive essential healthcare services without financial hardship. However, they note that low enrolment, weak implementation, and inadequate healthcare infrastructure have continued to limit the effectiveness of the scheme.

This view is supported by Ifeagwu et al. (2021), who argue that social health insurance remains an important strategy for achieving financial protection and improving access to healthcare services, particularly among vulnerable populations. However, while Eze et al. (2024) emphasize institutional and implementation challenges as major constraints to NHIS effectiveness, Ifeagwu et al. (2021) broaden the argument by stressing that successful health insurance systems require strong governance structures, adequate financing, effective healthcare delivery systems, and efficient resource allocation. This suggests that establishing a health insurance programme alone is insufficient to guarantee universal health coverage without strengthening the broader health system within which the scheme operates.

Similarly, Erinoso, Inyang, and Rock (2023) describe NHIS as a mechanism for expanding healthcare access through equitable financing and increased population coverage. Their position aligns with Eze et al. (2024) regarding the role of health insurance in reducing financial barriers to healthcare utilization. However, Erinoso et al. (2023) argue that limited participation among informal sector workers, inadequate awareness of the scheme, and affordability challenges remain significant barriers to achieving universal health coverage in Nigeria. This perspective extends the argument of Eze et al. (2024) by demonstrating that the effectiveness of NHIS depends not only on institutional reforms but also on addressing demand-side factors that influence individuals' decisions to enroll.

From these perspectives, scholars generally agree that the National Health Insurance Scheme is a social health insurance programme established to improve equitable access to quality healthcare through financial risk sharing and protection against catastrophic healthcare expenditure. However, they differ in explaining the factors responsible for the persistent limitations of the scheme. While Eze et al. (2024) attribute the challenges largely to implementation weaknesses and infrastructural deficiencies, Ifeagwu et al. (2021) emphasize the importance of health system capacity and governance, whereas Erinoso et al. (2023) highlight awareness, affordability, and enrolment challenges. Therefore, this study conceptualizes the National Health Insurance Scheme as Nigeria's public health insurance programme designed to provide

affordable and quality healthcare through financial risk pooling, while recognizing that its effectiveness in rural communities is constrained by low enrolment and persistent coverage gaps.

COVERAGE GAPS

Coverage gaps refer to deficiencies in the extent to which individuals or populations are protected by health insurance and are able to access essential healthcare services without financial hardship. Endalamaw et al. (2022) conceptualize coverage gaps as the inequalities and deficiencies that prevent universal health coverage from reaching all segments of the population, particularly vulnerable and underserved groups. The authors argue that coverage gaps arise when health systems fail to provide equitable access to quality health services, financial protection, and essential medicines. This perspective suggests that coverage is not merely determined by insurance enrollment but also by the availability, accessibility, and quality of healthcare services.

The foregoing conceptualization is supported by Okeke et al. (2023), who contend that coverage gaps are reflected in disparities in health service availability, accessibility, quality, and utilization despite existing health insurance policies. While Endalamaw et al. (2022) emphasize universal health coverage from a global perspective, Okeke et al. (2023) argue that, in Nigeria, persistent shortages of healthcare personnel, inadequate health infrastructure, weak service delivery, and geographical inequalities continue to widen coverage gaps, particularly in rural communities. Their argument extends the view of Endalamaw et al. (2022) by demonstrating that health insurance coverage alone does not necessarily translate into effective access to healthcare services.

Similarly, Ogundeji et al. (2023) describe coverage gaps as the disconnect between health policy objectives and the actual delivery of equitable healthcare services to the population. According to the authors, inadequate health financing, weak institutional capacity, poor governance, and limited implementation of health insurance reforms have continued to prevent Nigeria from achieving universal health coverage. This perspective corroborates the views of Okeke et al. (2023) by emphasizing that coverage gaps are largely systemic and require comprehensive policy and institutional reforms rather than merely increasing health insurance enrollment.

From these perspectives, scholars generally agree that coverage gaps extend beyond the absence of health insurance to include inequitable access to quality healthcare services, financial protection, and essential health interventions. While Endalamaw et al. (2022) emphasize equity in universal health coverage, Okeke et al. (2023) focus on deficiencies in healthcare service delivery, whereas Ogundeji et al. (2023) attribute coverage gaps to broader policy and governance challenges. Consequently, this study conceptualizes coverage gaps as the inadequacies in health insurance protection and access to NHIS-covered healthcare services experienced by rural communities as a result of limited availability and accessibility of accredited healthcare facilities, weak service delivery, and administrative constraints.

LOW ENROLMENT

Low enrolment in the National Health Insurance Scheme (NHIS) refers to the inadequate participation of eligible individuals in the health insurance programme, resulting in a significant proportion of the population remaining outside the formal health financing system. Aregbeshola and Khan (2023) conceptualize low enrolment as the persistently low participation of eligible individuals in the National Health Insurance Scheme (NHIS), particularly among informal sector workers, despite the availability of the scheme. The authors argue that low enrolment reflects the inability of health insurance programmes to attract and retain eligible populations, thereby limiting progress towards universal health coverage. Their empirical findings indicate that factors such as low educational attainment, poor socioeconomic status,

distance to healthcare facilities, and inadequate exposure to health information significantly contribute to non-enrolment in Nigeria.

This conceptualization is supported by Alo, Akamike, Okedo-Alex, and Nwonwu (2023), who describe low enrolment as inadequate participation in health insurance programmes among eligible populations arising from individual, socioeconomic, and health system-related factors. While Aregbeshola and Khan (2023) emphasize socioeconomic and demographic barriers as major determinants of non-enrolment, Alo et al. (2023) extend the discussion by arguing that enrolment decisions are also shaped by employment status, income level, educational attainment, and awareness of health insurance benefits. Thus, low enrolment is not merely a consequence of poverty or demographic characteristics but results from the interaction between individual circumstances and broader structural barriers affecting participation.

Similarly, Okah, Onalu, and Okoye (2023) view low enrolment as a situation where a considerable proportion of the eligible population remains excluded from health insurance coverage, thereby reducing access to affordable healthcare services. The authors argue that low enrolment is associated with poor public confidence in the scheme, administrative challenges, inadequate awareness, and dissatisfaction with the experiences of existing beneficiaries. This perspective complements the arguments of Aregbeshola and Khan (2023) and Alo et al. (2023) by demonstrating that individuals' willingness to enrol is influenced not only by socioeconomic factors but also by perceptions regarding the effectiveness and quality of services provided under the scheme.

From these perspectives, scholars generally agree that low enrolment represents inadequate participation of eligible populations in health insurance programmes, which undermines the achievement of universal health coverage. However, they differ in explaining its underlying causes. While Aregbeshola and Khan (2023) emphasize socioeconomic and demographic constraints, Alo et al. (2023) highlight the combined influence of individual and health system factors, whereas Okah et al. (2023) stress the importance of service quality, public confidence, and administrative effectiveness. Therefore, this study conceptualizes low enrolment as the limited participation of eligible rural residents in the National Health Insurance Scheme due to inadequate awareness, affordability challenges, limited accessibility to accredited healthcare facilities, and operational constraints affecting the implementation of the scheme.

THEORETICAL FRAMEWORK

This study is anchored on the Rational Choice Theory (RCT), propounded by George C. Homans (1961) and further developed by James S. Coleman (1990). The basic assumption of Rational Choice Theory is that individuals are rational actors who make decisions by evaluating available alternatives and selecting the option that maximizes their expected benefits while minimizing associated costs. The theory assumes that individuals possess preferences, have the capacity to assess available choices, and are motivated by self-interest in pursuing outcomes they consider beneficial. It further assumes that decisions are influenced by factors such as information availability, perceived utility, affordability, accessibility, and expected outcomes. Therefore, individuals are more likely to participate in a programme when they perceive that the expected benefits outweigh the financial, social, or administrative costs associated with participation.

However, Rational Choice Theory has been criticized by scholars such as Simon (1957), who argues that individuals do not always make perfectly rational decisions because they operate under conditions of limited information and cognitive capacity. Sen (1977) further contends that human decisions are influenced not only by self-interest but also by social values, obligations, and ethical considerations. These criticisms suggest that broader social and institutional conditions beyond rational calculations sometimes shape individual choices.

Notwithstanding these criticisms, Rational Choice Theory is relevant to this study because it provides a useful explanation of why rural residents decide to enrol or not enrol in the National Health Insurance Scheme (NHIS). The theory suggests that individuals are more likely to enrol when they perceive the benefits of NHIS participation to outweigh the associated costs. In this regard, awareness of NHIS provides the information necessary for decision-making, affordability of premiums determines the financial cost of participation, availability and accessibility of accredited healthcare facilities influence the expected benefits of enrollment, while administrative and operational challenges affect the perceived ease or difficulty of participation. Therefore, Rational Choice Theory provides an appropriate framework for explaining how these factors influence low enrolment and persistent coverage gaps in NHIS among rural communities in Niger State.

METHODOLOGY

The study adopted a descriptive survey research design**.** The population of this study comprised residents of selected rural communities in Niger State, Nigeria. The population of this study was drawn from residents of five selected rural Local Government Areas (LGAs) in Niger State, namely Borgu, Lapai, Munya, Shiroro, and Wushishi. These LGAs were selected due to their predominantly rural characteristics and the challenges associated with healthcare accessibility, NHIS awareness, affordability of contributions, and availability of accredited healthcare facilities. The study population comprised adult residents (18 years and above), including both NHIS enrollees and non-enrollees, whose responses were relevant for assessing the factors responsible for low enrolment and coverage gaps in the scheme. The projected population of the selected LGAs constituted the target population from which the sample size was determined.

Table 1: Projected Population Distribution of Selected Rural Local Government Areas in Niger State (2025)

S/N	Selected Local Government Area	Projected Population (2025)
1	Borgu LGA	280,450
2	Lapai LGA	107,650
3	Munya LGA	330,021
4	Shiroro LGA	404,200
5	Wushishi LGA	186,700
	Total	**1,309,021**

Source: National Population Commission (NPC) population projection estimates (2025).

Considering the total population size of 1,309,021 from the selected rural Local Government Areas, Taro Yamane's formula was used to determine the sample size for the study. The formula is stated as follows:

$$n = \frac{N}{1+N(e)^2}$$

Where:

n = Sample size

N = Population size

e = Level of significance (0.05)

Therefore, using the study population of 1,309,021, the formula was applied as follows:

$$n = \frac{1{,}309{,}021}{1+1{,}309{,}021(0.05)^2} n = \frac{1{,}309{,}021}{1+1{,}309{,}021(0.0025)} n = \frac{1{,}309{,}021}{1+3{,}272.55}$$

$$n = \frac{1{,}309{,}021}{3{,}273.55} n = 399.8$$

The study adopted a simple random sampling technique for the selection of respondents from the five selected rural Local Government Areas (LGAs) in Niger State, namely Borgu, Lapai, Munya, Shiroro, and Wushishi. The technique was considered appropriate because it provided every eligible member of the study population with an equal opportunity of being selected, thereby reducing selection bias and improving the representativeness of the sample. A total of 400 respondents were selected from the five LGAs through a random selection process. The respondents were drawn from the selected LGAs as follows: Borgu LGA (80 respondents), Lapai LGA (80 respondents), Munya LGA (80 respondents), Shiroro LGA (80 respondents), and Wushishi LGA (80 respondents). The selection included both NHIS enrollees and non-enrollees among adult residents (18 years and above). This approach ensured adequate representation of the selected rural communities and provided relevant information for assessing the factors responsible for low enrolment and coverage gaps in the National Health Insurance Scheme.

Data for this study were collected primarily through a structured questionnaire administered to adult residents in the selected rural communities of Borgu, Lapai, Munya, Shiroro, and Wushishi Local Government Areas of Niger State. The instrument obtained information on factors influencing NHIS low enrolment and coverage gaps, including awareness of the scheme, affordability of contributions, accessibility of NHIS-accredited healthcare facilities, and administrative challenges. Secondary data were obtained from relevant textbooks, journal articles, government publications, NHIA reports, and other related documents.

The data collected were analysed using descriptive statistics such as frequency counts, percentages, mean scores, and standard deviations. A benchmark mean score of 3.0 was adopted for decision-making, where items with mean scores of 3.0 and above were accepted, while those below 3.0 were rejected. Inferential statistics were used to test the formulated hypotheses at a 0.05 level of significance. Multiple regression analysis was employed to determine the influence of awareness, affordability, accessibility, and administrative challenges on NHIS enrolment and coverage gaps in rural communities in Niger State. The model was specified as follows:

$$LE = \beta_0 + \beta_1(AW) + \beta_2(AF) + \beta_3(AC) + \beta_4(AD) + \varepsilon$$

Where:

LE = Low Enrolment and Coverage Gaps in NHIS

AW = Awareness of NHIS

AF = Affordability of NHIS Contributions

AC = Accessibility of NHIS-accredited Healthcare Facilities

AD = Administrative and Operational Challenges

β_0 = Constant term

β_1 - β_4 = Regression coefficients

ε = Error term

Data Presentation and Analysis

This chapter presents and analyses data collected from the field through questionnaires administered to respondents in the selected rural communities of Borgu, Lapai, Munya, Shiroro, and Wushishi Local Government Areas of Niger State. A total of 400 questionnaires were administered, out of which 380 were properly completed and retrieved, representing a response rate of 95%.

Table 2: Socio-Demographic Characteristics of Respondents

Attributes	Frequency (N = 380)	Percentage (%)
Gender		
Male	207	54.5
Female	173	45.5
Age (Years)		
18-30	129	33.9
31-40	151	39.7
41-50	70	18.4
51 Years and Above	30	8.0
Marital Status		
Single	143	37.6
Married	217	57.1
Divorced/Separated	20	5.3
Educational Qualification		
No Formal Education	70	18.4
Primary Education	98	25.8
Secondary Education	132	34.7
Tertiary Education	80	21.1
Total	**380**	**100.0**

Source: Field Survey, 2026.

The table presents the socio-demographic characteristics of the 380 respondents drawn from the selected rural communities of Borgu, Lapai, Munya, Shiroro, and Wushishi Local Government Areas of Niger State. The findings indicate that male respondents constituted 54.5% of the sample, while females accounted for 45.5%, showing a relatively balanced representation of both genders. Regarding age distribution, respondents within the age range of 31-40 years formed the largest group (39.7%), followed by those aged 18-30 years (33.9%), while respondents aged 41-50 years and 51 years and above accounted for 18.4% and 8.0% respectively. This suggests that most respondents were within the active working-age population and were capable of providing relevant information on factors influencing NHIS enrolment.

With respect to marital status, married respondents represented the majority (57.1%), followed by single respondents (37.6%), while divorced or separated respondents accounted for 5.3%. This indicates that a significant proportion of respondents had family responsibilities that may influence decisions regarding healthcare insurance participation. Concerning educational qualification, respondents with secondary

education constituted the highest proportion (34.7%), followed by those with primary education (25.8%), tertiary education (21.1%), and those without formal education (18.4%). The educational profile reflects the rural nature of the study area and suggests that variations in educational attainment may influence awareness, understanding, and participation in the National Health Insurance Scheme.

Table 3: Respondents' Assessment of Awareness of the National Health Insurance Scheme (NHIS)

S/N	Items	SD	D	U	A	SA	Mean	Std. Dev	Decision
1	I am aware of the existence of the National Health Insurance Scheme (NHIS).	28	42	35	158	117	3.77	1.12	Accepted
2	I have adequate knowledge of the benefits and services covered by NHIS.	45	68	32	142	93	3.45	1.25	Accepted
3	Lack of adequate information about NHIS discourages rural residents from enrolling in the scheme.	24	38	30	169	119	3.85	1.08	Accepted
4	NHIS awareness campaigns have effectively reached rural communities in Niger State.	126	114	36	62	42	2.42	1.29	Rejected

Source: Field Survey, 2026.

The results in Table 3 present respondents' assessment of awareness of the National Health Insurance Scheme (NHIS) among rural residents in the selected communities of Niger State based on 380 respondents. The findings show that respondents agreed that they were aware of the existence of NHIS (Mean = 3.77) and had knowledge of the benefits and services covered by the scheme (Mean = 3.45). Similarly, respondents agreed that inadequate information about NHIS discourages rural residents from enrolling in the scheme (Mean = 3.85). However, respondents disagreed that NHIS awareness campaigns had effectively reached rural communities in Niger State (Mean = 2.42). Since three items recorded mean scores above the benchmark mean of 3.0 while one item recorded a mean score below the benchmark, the findings indicate that although some level of NHIS awareness exists among rural residents, inadequate information dissemination and limited outreach activities remain important factors contributing to low enrolment and coverage gaps in the scheme

Table 4: Respondents' Assessment of Affordability of NHIS Contributions among Rural Residents in Niger State

S/N	Items	SD	D	U	A	SA	Mean	Std. Dev	Decision
1	The cost of NHIS contributions is affordable for most rural residents.	118	96	34	74	58	2.61	1.38	Rejected
2	High cost of NHIS contributions discourages rural residents from enrolling in the scheme.	24	36	28	172	120	3.92	1.06	Accepted
3	Irregular income among rural residents affects their ability to participate in NHIS.	21	42	31	165	121	3.85	1.09	Accepted
4	NHIS payment arrangements are flexible enough for rural residents.	126	110	39	65	40	2.43	1.28	Rejected

Source: Field Survey, 2026.

The results in Table 4 present respondents' assessment of the affordability of NHIS contributions among rural residents in the selected communities of Niger State based on 380 respondents. The findings indicate that respondents disagreed that the cost of NHIS contributions was affordable for most rural residents (Mean = 2.61). They also disagreed that NHIS payment arrangements were flexible enough to accommodate rural residents (Mean = 2.43). Conversely, respondents agreed that high cost of NHIS contributions discourages rural residents from enrolling in the scheme (Mean = 3.92) and that irregular income among rural residents affects their ability to participate in NHIS (Mean = 3.85). Since two items recorded mean scores above the benchmark mean of 3.0 and two recorded scores below 3.0, the findings suggest that affordability remains a significant barrier influencing NHIS enrolment among rural residents. The result implies that income constraints, contribution costs, and limited flexibility in payment arrangements contribute to persistent low enrolment and coverage gaps in rural communities in Niger State

Table 5: Respondents' Assessment of Accessibility of NHIS-Accredited Healthcare Facilities among Rural Residents in Niger State

S/N	Items	SD	D	U	A	SA	Mean	Std. Dev	Decision
1	NHIS-accredited healthcare facilities are easily accessible to rural residents in my community.	112	98	35	82	53	2.63	1.37	Rejected
2	The distance to NHIS-accredited healthcare facilities discourages rural residents from enrolling in the scheme.	23	37	29	170	121	3.93	1.07	Accepted

3	There are adequate NHIS-accredited healthcare facilities available within rural communities.	118	104	34	78	46	2.55	1.32	Rejected
4	Poor accessibility to healthcare facilities contributes to NHIS coverage gaps in rural areas.	20	35	31	172	122	3.95	1.05	Accepted

Source: Field Survey, 2026.

The results in Table 5 present respondents' assessment of the accessibility of NHIS-accredited healthcare facilities among rural residents in the selected communities of Niger State based on 380 respondents. The findings indicate that respondents disagreed that NHIS-accredited healthcare facilities were easily accessible within their communities (Mean = 2.63) and also disagreed that adequate NHIS-accredited facilities were available in rural areas (Mean = 2.55). Conversely, respondents agreed that distance to NHIS-accredited healthcare facilities discourages rural residents from enrolling in the scheme (Mean = 3.93) and that poor accessibility to healthcare facilities contributes to NHIS coverage gaps in rural areas (Mean = 3.95). Since two items recorded mean scores above the benchmark mean of 3.0 while two items recorded scores below 3.0, the findings suggest that limited availability and geographical distance from NHIS-accredited healthcare facilities remain major factors affecting enrolment and coverage of NHIS among rural communities in Niger State.

Table 6: Respondents' Assessment of Administrative and Operational Challenges Affecting NHIS Enrolment in Rural Communities in Niger State

S/N	Items	SD	D	U	A	SA	Mean	Std. Dev	Decision
1	Complex registration procedures discourage rural residents from enrolling in NHIS.	25	38	32	165	120	3.93	1.09	Accepted
2	Delays in NHIS registration and documentation processes affect participation in the scheme.	28	41	30	163	118	3.88	1.11	Accepted
3	NHIS services are efficiently managed and easily accessed by rural residents.	126	112	35	67	40	2.43	1.30	Rejected
4	Poor information on NHIS procedures contributes to low enrolment among rural residents.	21	36	29	170	124	3.96	1.06	Accepted

Source: Field Survey, 2026.

The results in Table 6 present respondents' assessment of administrative and operational challenges affecting NHIS enrolment among rural residents in the selected communities of Niger State based on 380 respondents. The findings show that respondents agreed that complex registration procedures discourage

rural residents from enrolling in NHIS (Mean = 3.93) and that delays in registration and documentation processes affect participation in the scheme (Mean = 3.88). Similarly, respondents agreed that inadequate information on NHIS procedures contributes to low enrolment among rural residents (Mean = 3.96). However, respondents disagreed that NHIS services were efficiently managed and easily accessed by rural residents (Mean = 2.43). Since three items recorded mean scores above the benchmark mean of 3.0 while one item recorded a score below 3.0, the findings indicate that administrative bottlenecks, delayed processes, and inadequate information dissemination constitute significant barriers contributing to low NHIS enrolment and coverage gaps in rural communities in Niger State.

Test of Hypothesis

Table 7: Simple Linear Regression Analysis on Factors Influencing NHIS Low Enrolment and Coverage Gaps among Rural Residents in Niger State

S/N	Predictor Variable	R	R^2	F	B	t	Sig. (p-value)	Decision
1	NHIS Awareness	0.621	0.386	237.65	0.621	15.416	0.000	Reject H_{01}
2	Affordability of NHIS Contributions	0.584	0.341	195.67	0.584	13.988	0.000	Reject H_{02}
3	Accessibility of NHIS-Accredited Healthcare Facilities	0.667	0.445	303.21	0.667	17.412	0.000	Reject H_{03}
4	Administrative and Operational Challenges	0.603	0.364	216.35	0.603	14.728	0.000	Reject H_{04}

Source: Field Survey, 2026.

The regression results presented in Table 7 indicate that all the predictor variables had statistically significant effects on NHIS low enrolment and coverage gaps among rural residents in Niger State. NHIS awareness had a significant relationship with low enrolment and coverage gaps ($R = 0.621$, $R^2 = 0.386$, $\beta = 0.621$, $t = 15.416$, $p < 0.05$), indicating that variations in awareness levels significantly influenced participation in the scheme. Similarly, affordability of NHIS contributions significantly affected enrolment and coverage gaps ($R = 0.584$, $R^2 = 0.341$, $\beta = 0.584$, $t = 13.988$, $p < 0.05$), suggesting that financial capacity remains an important determinant of participation.

Furthermore, accessibility of NHIS-accredited healthcare facilities recorded a significant effect on enrolment gaps ($R = 0.667$, $R^2 = 0.445$, $\beta = 0.667$, $t = 17.412$, $p < 0.05$), indicating that availability and proximity of healthcare facilities strongly influence residents' willingness to enrol. Administrative and operational challenges also showed a significant effect on low enrolment and coverage gaps ($R = 0.603$, $R^2 = 0.364$, $\beta = 0.603$, $t = 14.728$, $p < 0.05$), demonstrating that registration difficulties, inadequate information, and operational barriers limit participation in the NHIS.

Since all p-values were less than the 0.05 significance level, all null hypotheses were rejected. The findings therefore confirm that awareness of NHIS, affordability of contributions, accessibility of healthcare facilities, and administrative challenges significantly influence low enrolment and coverage gaps among rural communities in Niger State.

FINDINGS

The findings of the study revealed that NHIS awareness significantly influenced low enrolment and coverage gaps among rural residents in Niger State. The result indicates that although some level of awareness exists, inadequate understanding of NHIS benefits, enrolment procedures, and available services remains a major limitation to participation. This suggests that the coverage gap experienced in rural communities is partly associated with insufficient dissemination of information about the scheme. The finding supports the assumption of Rational Choice Theory that individuals make participation decisions based on the information available to them and the perceived benefits of such decisions. When individuals lack adequate information about NHIS, they may be unable to assess the advantages of enrolment effectively. The finding agrees with Aregbeshola and Khan (2023), who identified poor awareness as a major barrier to health insurance participation in Nigeria. The hypothesis test further validated this finding by showing that NHIS awareness had a significant effect on low enrolment and coverage gaps ($p < 0.05$), leading to the rejection of the null hypothesis.

The study established that affordability of NHIS contributions had a significant influence on low enrolment and coverage gaps among rural residents in Niger State. This implies that financial limitations and unstable income patterns constitute important barriers to participation in the scheme. The result suggests that rural residents may be willing to participate in NHIS but are constrained by their ability to meet the required financial obligations. This supports the Rational Choice Theory, which explains that individuals evaluate the costs and benefits associated with available choices before making decisions. When the cost of enrolment is considered high compared with the expected benefits, participation is likely to decline. The outcome corresponds with Erinoso, Inyang, and Rock (2023), who identified affordability challenges as a major factor limiting health insurance participation. The hypothesis test confirmed this relationship by showing that affordability of NHIS contributions significantly affected low enrolment and coverage gaps ($p < 0.05$), resulting in the rejection of the null hypothesis.

The analysis demonstrated that accessibility of NHIS-accredited healthcare facilities significantly affected low enrolment and coverage gaps among rural residents in Niger State. This means that limited availability of accredited facilities, distance to healthcare providers, and difficulties in obtaining NHIS-related healthcare services reduce the attractiveness of the scheme among rural populations. The outcome indicates that health insurance participation is closely linked to the practical ability of beneficiaries to access healthcare services when required. This finding reflects the position of Rational Choice Theory that individuals are more likely to make choices where they perceive tangible benefits and reduced barriers. It is also consistent with Eze, Iseolorunkanmi, and Adeloye (2024), who emphasized that inadequate healthcare infrastructure limits the effectiveness of NHIS implementation. The hypothesis result supported the outcome by revealing that accessibility of NHIS-accredited healthcare facilities had a significant effect on low enrolment and coverage gaps ($p < 0.05$), leading to the rejection of the null hypothesis.

The analysis revealed that administrative and operational challenges significantly influenced low enrolment and coverage gaps among rural residents in Niger State. This indicates that registration difficulties, complex procedures, inadequate information on operational processes, and institutional barriers affect residents' willingness to participate in the scheme. The result demonstrates that the effectiveness of NHIS depends not only on individual decisions but also on the efficiency of the structures responsible for implementing the programme. This aligns with Rational Choice Theory, which suggests that individuals may avoid options where the associated costs and difficulties outweigh the anticipated benefits. The outcome agrees with Okah, Onalu, and Okoye (2023), who identified administrative barriers and implementation challenges as factors limiting health insurance participation. The hypothesis test further confirmed the relationship by showing that administrative and operational challenges had a

significant effect on low enrolment and coverage gaps ($p < 0.05$), leading to the rejection of the null hypothesis.

CONCLUSION

The study examined the factors influencing low enrolment and coverage gaps in the National Health Insurance Scheme (NHIS) among rural communities in Niger State, focusing on NHIS awareness, affordability of contributions, accessibility of NHIS-accredited healthcare facilities, and administrative and operational challenges. The findings revealed that all the identified factors significantly influenced NHIS enrolment and coverage gaps, indicating that limited awareness, financial constraints, inadequate access to healthcare facilities, and institutional barriers remain major challenges affecting participation in the scheme. Hypothesis testing further confirmed that each of the factors had a statistically significant effect on low enrolment and coverage gaps, leading to the rejection of all null hypotheses. The study establishes that achieving wider NHIS coverage in rural communities requires more than the existence of the scheme; it depends on effective information dissemination, affordable contribution mechanisms, accessible healthcare facilities, and efficient administrative processes. The persistence of these barriers continues to limit the ability of NHIS to achieve its objective of expanding healthcare access and providing financial protection for rural populations in Niger State.

RECOMMENDATIONS

1. The National Health Insurance Authority (NHIA) should strengthen community-based awareness campaigns in rural communities through local leaders, healthcare workers, and media platforms to improve understanding of NHIS benefits, enrolment procedures, and utilization processes. This will enhance informed participation and reduce coverage gaps among rural residents.
2. The Federal Government and the National Health Insurance Authority should introduce flexible contribution arrangements, subsidies, and targeted financial support mechanisms for economically vulnerable rural residents to reduce the financial barriers associated with NHIS enrolment. This will encourage greater participation among low-income populations.
3. The Niger State Government and relevant health authorities should expand the distribution of NHIS-accredited healthcare facilities in rural communities and improve existing health infrastructure to ensure that beneficiaries can easily access quality healthcare services. This will increase the perceived value of NHIS participation and promote wider enrolment.
4. The National Health Insurance Authority and NHIS implementing agencies should simplify enrolment procedures, improve registration systems, and strengthen administrative efficiency to eliminate unnecessary barriers affecting participation. This will make the scheme more accessible and encourage continuous enrolment among rural residents.

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