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| RESEARCH ARTICLE

## Uptake of the Akwa-Ibom State Health Insurance Scheme among Low-Income Households in Uyo Local Government Area, Akwa-Ibom State: Levels and Determinants

Edikan Ackley Akpan-Idiok<sup>1</sup> ✉ Akaninyene Mark<sup>2</sup> and Igbemi Arthur Igbemi<sup>3</sup>

<sup>1</sup>School of Public Health, University of Port Harcourt, Nigeria

<sup>2</sup>Health Planning Research and Statistics, Ministry of Health Akwa Ibom State, Nigeria

<sup>3</sup>Akwa Ibom State Health Insurance Agency, Nigeria

**Corresponding Author:** Edikan Ackley Akpan-Idiok, **E-mail:** [ogewillmakeit@gmail.com](mailto:ogewillmakeit@gmail.com)

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| ABSTRACT

Achieving Universal Health Coverage in Nigeria depends on the ability of state-level health insurance schemes to reach low-income and informal-sector households, who remain the most exposed to catastrophic out-of-pocket health expenditure. The Akwa-Ibom State Health Insurance Scheme (AKSHIS) was established to extend affordable coverage to state residents, yet enrolment among low-income households in Uyo Local Government Area (LGA) continues to fall short of target. This study examined the current level of uptake of AKSHIS and the socio-economic, cultural, and informational factors that determine enrolment among low-income households in Uyo LGA. A cross-sectional survey was conducted among 406 low-income households in Uyo LGA, selected through a multi-stage sampling technique. A structured, interviewer-administered questionnaire captured enrolment status, reasons for non-enrolment, and socio-economic, cultural, and informational factors influencing uptake. Data were analyzed using descriptive statistics, chi-square tests, Pearson correlation, binary logistic regression, and structural equation modeling (SEM) to identify significant predictors of enrolment. Overall, 67% of respondents were currently enrolled in AKSHIS. Among the 33% not enrolled, the leading reasons cited were insufficient information (50.24%) and the cost of premiums (32.50%). Logistic regression identified awareness ( $\beta = 1.65$ ,  $p < 0.001$ ), income level ( $\beta = 1.35$ ,  $p < 0.001$ ), education level ( $\beta = 0.75$ ,  $p = 0.001$ ), importance placed on quality care ( $\beta = 0.60$ ,  $p < 0.001$ ), and accessibility of health facilities ( $\beta = 0.50$ ,  $p < 0.001$ ) as significant positive predictors of enrolment. Income and education were significantly correlated with enrolment ( $r = 0.65$  and  $r = 0.58$ , respectively,  $p < 0.01$ ), confirming that socio-economic status significantly influences uptake ( $\chi^2(1, N=406) = 25.34$ ,  $p < 0.001$ ). Negative cultural beliefs about the reliability of health insurance ( $OR = 0.426$ ,  $p = 0.005$ ) and negative perceptions of it as a financial burden ( $OR = 0.522$ ,  $p = 0.020$ ) were significantly associated with reduced odds of enrolment, while higher income ( $OR = 1.27$ ,  $p = 0.015$ ) and education ( $OR = 1.46$ ,  $p = 0.010$ ) increased the odds of enrolment. Uptake of AKSHIS among low-income households in Uyo LGA is moderately high but constrained by informational gaps, affordability, and unfavorable cultural perceptions. A multifaceted strategy combining subsidized premiums, targeted community outreach, and trust-building initiatives is required to close the enrolment gap.

| KEYWORDS

Health insurance uptake; enrolment determinants; low-income households; socio-economic factors; Akwa-Ibom State; Nigeria

| ARTICLE INFORMATION

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### 1. Introduction

Nigeria's primary strategy for achieving Universal Health Coverage (UHC) is the National Health Insurance Scheme (NHIS), a contributory social health insurance programme launched in 2005. Nearly two decades on, coverage remains at only about 5% of the population, largely because the scheme has focused on the formal sector while the majority of Nigeria's workforce operates informally (Al-Suqri & Al-Kharusi, 2015; Aregbeshola, 2017). Out-of-pocket

payments continue to dominate healthcare financing in Nigeria, exposing low-income households in particular to catastrophic health expenditure and deepening poverty (Aregbeshola& Khan, 2021).

To close this gap at the sub-national level, the Akwa-Ibom State Health Insurance Scheme (AKSHIS) was launched in 2021 with the objective of extending affordable, quality healthcare to all state residents, including the poor, while reducing out-of-pocket health spending and advancing state-level progress toward UHC. Despite this intention, empirical evidence suggests that actual enrolment among low-income households in Uyo LGA, the state capital, remains below target, with challenges linked to low awareness, affordability constraints, and limited accessibility of insured healthcare facilities (Collins, 2015).

Uptake of health insurance among low-income households is shaped by an interrelated set of factors, including financial capability, accessibility of services, perceived benefits, and social and cultural norms. Even when premiums are subsidised, low-income households often prioritise immediate household needs over health insurance, viewing it as an optional or low-priority expense (Onwujekwe et al., 2010). Bureaucratic enrolment processes, unclear communication, and negative cultural perceptions of the reliability of health insurance further deter participation. Understanding which of these factors most strongly predict enrolment is essential for designing interventions capable of closing Uyo LGA's enrolment gap and, ultimately, for advancing UHC in Akwalbom State.

Access to healthcare remains a significant challenge for low-income households in Akwalbom State, where many individuals lack adequate health insurance coverage (Aregbeshola& Khan, 2021). AKSHIS was established specifically to improve access to essential healthcare services for this population, yet uptake among low-income households in Uyo LGA is notably below expectation (Collins, 2015). While prior research has examined health insurance schemes in various Nigerian contexts and identified limited awareness, negative attitudes, and socio-economic barriers as common obstacles to enrolment, evidence quantifying the specific socio-economic, cultural, and informational determinants of uptake of AKSHIS among low-income households in Uyo LGA remains scarce. Without this evidence, policymakers lack the basis for designing enrolment interventions that are proportionate to the barriers households actually face.

Uptake of health insurance among low-income households is influenced by multiple interrelated factors, including financial capability, accessibility, perceived benefits, and social norms. In Akwa-Ibom State, AKSHIS was designed to provide financial protection and improve access to quality healthcare for economically vulnerable populations; however, empirical evidence suggests that actual enrolment rates remain below target, particularly among rural and informal-sector households (Asanga, 2021). Low uptake is often linked to perceived unaffordability, even where premium contributions are subsidized, since many low-income households prioritise immediate needs over preventive financial planning for health (Onwujekwe et al., 2010). Bureaucratic enrolment processes and unclear communication about benefits further deter participation, while low service usage among those already enrolled has been linked to perceived poor quality of care, long waiting times, and distrust of providers (Odeyemi& Nixon, 2013).

Evidence from other Nigerian settings illustrates the scale of this challenge. Campbell (2014) found that although 97.5% of private healthcare providers surveyed in Lagos State were aware of the NHIS, only 60.6% of their patients had utilized services under the scheme, with over half expressing dissatisfaction with its operations. Inegbedion (2015) similarly found high awareness of the NHIS in Edo State (90%) alongside strong utilization of covered services (96.8%), identifying age, income, occupation, education, marital status, and religion as significant determinants of both awareness and uptake. In Kenya, Philip (2018), analyzing a national health accounts survey of nearly 36,000 respondents, found that income, marital status, education, health status, and awareness were significant determinants of insurance uptake, and recommended government-subsidized premiums for the poor alongside broader public sensitization.

Socio-economic and demographic factors play a critical moderating role in the uptake of health insurance schemes. These include income, education, occupation, household size, age, and gender, all of which shape both awareness and perceptions of health insurance (Odeyemi& Nixon, 2013). Low-income households often face financial

constraints that limit their ability to pay premiums even when they recognize the benefits of coverage, while households headed by individuals with limited educational attainment may lack the skills to navigate enrolment procedures (Onwujekwe et al., 2010). In Akwa-Ibom State specifically, studies indicate that households with higher income and education levels are more likely to enroll in the state scheme, while larger households or those dominated by informal-sector workers may find enrolment costs prohibitive (Asanga, 2021).

Kim and Johnson (2021) found that financial constraints were the primary barrier to uptake among low-income households, with 60% of respondents citing high premiums as a significant deterrent, and concluded that addressing affordability is central to increasing enrolment. Chen et al. (2020) similarly found that social support and community engagement significantly influenced insurance uptake, with half of respondents reporting that peer encouragement shaped their enrolment decisions, underscoring the role of social networks alongside individual socio-economic status. Patel and Thomas (2022) found that perceived quality of available healthcare discouraged over half of surveyed households from enrolling, indicating that socio-economic status interacts with perceptions of service quality to shape uptake decisions.

Perceived barriers refer to an individual's beliefs about the obstacles that may prevent them from taking a particular health action, and help explain why low-income households may remain reluctant to enrol in a health insurance scheme even when aware of its benefits. Common perceived barriers among low-income households include inadequate information, fear of hidden costs, mistrust of government programmes, difficulty with registration procedures, distance to accredited facilities, and concern about the quality of covered services; financial constraints persist as a barrier even where premiums are subsidized (Adebayo et al., 2015). The Health Belief Model suggests that when perceived barriers are high, individuals are less likely to adopt preventive health behaviours such as insurance enrolment, regardless of their level of knowledge or perceived risk (Rosenstock, 1974); households that view a scheme as complicated or unreliable may therefore continue to pay out-of-pocket for healthcare rather than enroll.

Cultural resistance rooted in a preference for traditional healthcare practices, together with lingering distrust arising from prior negative experiences with government-run programmes, can further entrench these perceived barriers (Odeyemi & Nixon, 2013). Fenny et al. (2018) observed more broadly that social health insurance schemes across Africa have tended to leave the poorest households out, in part because programme design has not adequately addressed the specific cultural and economic realities of this population, reinforcing the case for interventions that combine affordability measures with culturally sensitive trust-building.

This study draws on the Health Belief Model (HBM), which posits that health behaviour, including the decision to enroll in a health insurance scheme, is shaped by perceived susceptibility to and severity of a health threat, perceived benefits of the recommended action, and perceived barriers to taking that action (Rosenstock, 1974; Champion & Skinner, 2008). Within this framework, socio-economic status determines a household's capacity to overcome financial barriers, while cultural beliefs and perceptions determine the extent to which perceived barriers outweigh perceived benefits. The model therefore provides a coherent basis for examining how socio-economic and cultural-informational factors jointly determine uptake of AKSHIS among low-income households. The study will assess the current uptake (enrolment rate) of the Akwa-Ibom State Health Insurance Scheme among low-income households in Uyo LGA and identify the socio-economic, cultural, and informational factors that influence uptake of the scheme among the target population in Uyo LGA.

## **2. Methodology**

This study adopted a descriptive cross-sectional survey design, conducted in Uyo LGA, the capital of Akwa-Ibom State, Nigeria. AKSHIS, launched in 2021, aims to extend affordable healthcare coverage to state residents, including low-income households, but continues to face challenges related to awareness, accessibility, and affordability.

The study population comprised adult members (aged 18 years and above) of low-income households, defined as those earning below the state minimum wage of NGN 80,000 per month, resident in Uyo LGA. A multi-stage sampling technique was used: five of the ten wards in Uyo LGA were randomly selected, two communities were

then randomly selected from each ward (ten communities in total), and households were subsequently selected within each community using systematic sampling. The minimum sample size, calculated using Cochran's formula (95% confidence level, 5% margin of error), was 384, adjusted upward for an anticipated 10% non-response rate to 427; a total of 406 valid responses were analysed.

A structured, interviewer-administered questionnaire captured enrolment status, reasons for non-enrolment, and factors influencing uptake, including perceived affordability, accessibility of accredited facilities, and awareness of support programmes for low-income households, preferred information channels, and perceived barriers to enrolment. Trained research assistants administered the questionnaire face-to-face over a four-week period.

Enrolment status was scored dichotomously (enrolled = 1, not enrolled = 0). Descriptive statistics (frequencies and percentages) summarized current uptake and reasons for non-enrolment. Pearson correlation and chi-square tests examined bivariate associations between socio-economic factors (income, education) and enrolment. Binary logistic regression was used to identify significant independent predictors of enrolment from among awareness, income, education, perceived importance of quality care, and accessibility of facilities. Structural equation modelling (SEM) was additionally used to examine hypothesized causal pathways linking income, education, awareness, perceived importance of care, and accessibility to enrolment. Ethical approval was obtained from the University of Port Harcourt Ethical Board, and written informed consent was obtained from all participants.

### **3. Results**

#### **3.1 Sample Characteristics**

A total of 406 low-income households were surveyed. The majority of respondents were female (74.3%) and married (64.1%). Regarding socio-economic status, 73.0% of households earned less than NGN 80,000 per month, 34.5% had attained secondary education and 28.6% tertiary education, and self-employment was the most common occupation (50.2%).

#### **3.2 Current Level of Uptake**

Overall, 67% of respondents (272 households) were currently enrolled in AKSHIS, while 33% (134 households) were not. Among those who had attempted to enrol (n=299), 76.7% described the experience as easy and straightforward, 17.0% reported manageable challenges, and 6.4% found it very difficult. Looking ahead, 59.5% of respondents indicated they were very likely to enrol in the future, and a further 32.5% indicated they were likely to do so, suggesting substantial latent demand among the currently unenrolled.

**Table 1: Current enrolment status and future enrolment intention (N = 406)**

| <b>Item</b>                  | <b>Category</b>                    | <b>Frequency</b> | <b>Percentage (%)</b> |
|------------------------------|------------------------------------|------------------|-----------------------|
| Currently enrolled in AKSHIS | Yes                                | 272              | 67.0                  |
|                              | No                                 | 134              | 33.0                  |
| Reasons for not enrolling    | Not enough information             | 204              | 50.24                 |
|                              | Cost of premiums                   | 132              | 32.50                 |
|                              | Lack of trust in the system        | 54               | 13.30                 |
|                              | Healthcare services not accessible | 16               | 3.90                  |

| Item                                    | Category                       | Frequency | Percentage (%) |
|-----------------------------------------|--------------------------------|-----------|----------------|
| Experience of enrolment process (n=299) | Easy and straightforward       | 311*      | 76.7           |
|                                         | Some challenges but manageable | 69        | 17.0           |
|                                         | Very difficult                 | 26        | 6.4            |
| Likelihood of future enrolment          | Very likely                    | 241       | 59.5           |
|                                         | Likely                         | 132       | 32.5           |
|                                         | Unsure                         | 25        | 6.2            |
|                                         | Unlikely                       | 8         | 2.0            |

### 3.3 Socio-Economic, Cultural, and Informational Factors Influencing Uptake

Better information and outreach was the most frequently cited factor that would encourage enrolment (40.4%), followed by lower premiums (28.1%) and recommendations from family and friends (23.6%). An overwhelming majority (92.6%) believed community awareness programmes would effectively increase enrolment, and 54.7% rated access to quality healthcare as very important to their enrolment decision. Comprehensive coverage options were the single most valued scheme feature (61.6%), and online resources were the most preferred channel for receiving information about health insurance (58.6%). The leading perceived barriers to enrolment were lack of understanding about the benefits (44.6%) and high costs (43.8%).

**Table 2: Socio-economic, cultural, and informational factors influencing uptake (N = 406)**

| Item                                      | Category                        | Frequency | Percentage (%) |
|-------------------------------------------|---------------------------------|-----------|----------------|
| Factors encouraging enrolment             | Lower premiums                  | 114       | 28.1           |
|                                           | Better information and outreach | 164       | 40.4           |
|                                           | Family/friend recommendations   | 96        | 23.6           |
|                                           | Improved service quality        | 32        | 7.9            |
| Community awareness programmes would help | Yes                             | 376       | 92.6           |
| Importance of quality healthcare access   | Very important                  | 222       | 54.7           |

| Item                                                  | Category                          | Frequency | Percentage (%) |
|-------------------------------------------------------|-----------------------------------|-----------|----------------|
|                                                       | Important                         | 108       | 26.6           |
| Aware of support programmes for low-income households | Yes                               | 228       | 56.1           |
| Accessibility of insured health facilities            | Very accessible                   | 220       | 54.2           |
|                                                       | Accessible                        | 122       | 30.0           |
| Barriers to enrolment                                 | High costs                        | 178       | 43.8           |
|                                                       | Lack of understanding of benefits | 181       | 44.6           |
|                                                       | Limited availability of services  | 25        | 6.2            |
|                                                       | Trust issues with providers       | 22        | 5.4            |

### **3.4 Predictors of Enrolment: Logistic Regression and Structural Equation Modelling**

Binary logistic regression identified awareness, income, education, importance placed on quality care, and accessibility of facilities as significant, independent, positive predictors of enrolment (Table 3). Awareness had the largest standardised effect ( $\beta = 1.65$ ,  $p < 0.001$ ), followed by income ( $\beta = 1.35$ ,  $p < 0.001$ ).

**Table 3: Logistic regression predicting enrolment in AKSHIS**

| Variable           | Coefficient ( $\beta$ ) | Std. Error | Z-value | p-value |
|--------------------|-------------------------|------------|---------|---------|
| Income level       | 1.35                    | 0.25       | 5.40    | <0.001  |
| Education level    | 0.75                    | 0.22       | 3.41    | 0.001   |
| Awareness          | 1.65                    | 0.18       | 9.17    | <0.001  |
| Importance of care | 0.60                    | 0.14       | 4.29    | <0.001  |
| Accessibility      | 0.50                    | 0.11       | 4.54    | <0.001  |
| Constant           | -4.00                   | 0.40       | -10.00  | <0.001  |

Structural equation modeling further clarified the pathways linking these variables to enrolment (Table 4). Income and education each exerted a direct, significant effect on enrolment, while awareness exerted its effect indirectly;

first shaping the perceived importance of care, which in turn increased the likelihood of enrolment. Accessibility of facilities also had a direct, significant effect on enrolment.

**Table 4: Structural equation model path coefficients**

| Path                           | Coefficient | Std. Error | p-value |
|--------------------------------|-------------|------------|---------|
| Income → Enrolment             | 0.40        | 0.10       | 0.002   |
| Education → Enrolment          | 0.35        | 0.11       | 0.015   |
| Awareness → Importance of care | 0.60        | 0.20       | <0.001  |
| Importance of care → Enrolment | 0.25        | 0.10       | 0.020   |
| Accessibility → Enrolment      | 0.30        | 0.09       | 0.030   |

### 3.5 Hypothesis Testing

H3 (Socio-economic factors significantly influence uptake): Income was significantly and positively correlated with enrolment ( $r = 0.65$ ,  $p < 0.01$ ), as was education ( $r = 0.58$ ,  $p < 0.01$ ). A chi-square test confirmed a significant association between socio-economic status and enrolment decisions ( $\chi^2(1, N=406) = 25.34$ ,  $p < 0.001$ ), and logistic regression confirmed both income ( $OR = 1.22$ ,  $p < 0.01$ ) and education ( $OR = 1.75$ ,  $p < 0.01$ ) as significant predictors. H3 was therefore supported.

H4 (Cultural beliefs and perceptions negatively impact enrolment): Cultural beliefs that health insurance is “unreliable” were significantly associated with reduced odds of enrolment ( $\beta = -0.85$ ,  $OR = 0.426$ ,  $p = 0.005$ ), as was a general negative perception of health insurance as a financial burden ( $\beta = -0.65$ ,  $OR = 0.522$ ,  $p = 0.020$ ). In the same model, income ( $OR = 1.27$ ,  $p = 0.015$ ) and education ( $OR = 1.46$ ,  $p = 0.010$ ) remained significant positive predictors. H4 was therefore also supported.

**Table 5: Logistic regression testing the influence of cultural beliefs and perceptions on enrolment**

| Variable                               | Coefficient ( $\beta$ ) | Odds Ratio (OR) | p-value |
|----------------------------------------|-------------------------|-----------------|---------|
| Intercept                              | -1.76                   | —               | 0.002   |
| Cultural beliefs (unreliable)          | -0.85                   | 0.426           | 0.005   |
| Negative perception (financial burden) | -0.65                   | 0.522           | 0.020   |
| Income level                           | 0.24                    | 1.27            | 0.015   |
| Education level                        | 0.38                    | 1.46            | 0.010   |

## 4. Discussion

This study found that 67% of low-income households in Uyo LGA are currently enrolled in AKSHIS, a relatively encouraging figure suggesting that outreach efforts by health authorities have achieved meaningful, if incomplete, success. This exceeds enrolment rates reported by Lee et al. (2019) and Alvarez and Reyes (2020), who found enrolment rates of 25% and 30% respectively among low-income and underserved populations elsewhere, but is more consistent with the substantially higher enrolment observed by Sanusi and Awe (2009) and Inegbedion (2015).

in earlier Nigerian NHIS studies. Nevertheless, the fact that a third of households remain unenrolled, combined with high stated intention to enrol among this group (92% indicating they are likely or very likely to do so), points to substantial latent demand that current outreach has not yet converted into actual registration.

Consistent with hypothesis H3, income and education emerged as significant, independent predictors of enrolment in both the logistic regression and SEM analyses. This mirrors findings from Kim and Johnson (2021), who identified affordability as the primary barrier to uptake among low-income households, and from Philip (2018), whose analysis of Kenyan national data similarly identified income and education as significant determinants of insurance uptake. The direct effect of income on enrolment observed in the SEM analysis reinforces the conclusion that, even where households are aware of AKSHIS and hold favourable views of it, financial capacity remains a binding constraint on actual registration, a pattern consistent with Onwujekwe et al.'s (2010) observation that low-income households often treat insurance as a lower-priority expense relative to immediate needs.

Awareness had the strongest effect of any variable in the logistic regression model, and the SEM results indicate that this effect operates in part indirectly, by shaping the perceived importance of quality care, which in turn drives enrolment. This is consistent with Campbell's (2014) finding that awareness and knowledge of the NHIS were significantly correlated with uptake among patients in Lagos, and reinforces the case, established in this study's companion analysis of knowledge and attitude, that informational interventions have effects that extend beyond simple awareness into how households evaluate the practical value of coverage.

Consistent with hypothesis H4, negative cultural beliefs about the reliability of health insurance and a perception of insurance as a financial burden were both significantly associated with reduced odds of enrolment, independent of income and education. This finding is consistent with the broader literature on perceived barriers within the Health Belief Model (Rosenstock, 1974) and with evidence that social health insurance schemes across Africa have often struggled to reach the poorest households in part because programme design does not adequately address such cultural and trust-related barriers (Fenny et al., 2018). It also corroborates Odeyemi and Nixon's (2013) observation that scepticism about scheme reliability, even where cost is not the primary concern, independently suppresses enrolment. Notably, accessibility of accredited health facilities also emerged as a significant, direct predictor of enrolment, aligning with reports from Akwalbom State residents of concerns over delayed reimbursement and limited service accessibility (Asanga, 2021), and underscoring that improving the practical delivery of care is as important to enrolment as addressing cost and belief-based barriers.

Taken together, these findings indicate that no single intervention is likely to close Uyo LGA's enrolment gap. Affordability measures address the income-related barrier identified in H3, but are unlikely, on their own, to overcome the trust and belief-related barriers identified in H4, or to substitute for the informational and accessibility improvements shown to have independent effects on uptake.

## **5. Conclusion**

Uptake of the Akwa-Ibom State Health Insurance Scheme among low-income households in Uyo LGA stands at a moderately encouraging 67%, but remains significantly constrained by income, education, informational gaps, accessibility of insured facilities, and negative cultural beliefs about the scheme's reliability. Both hypotheses tested were supported: socio-economic status significantly influences uptake, and negative cultural beliefs and perceptions significantly and independently reduce the odds of enrolment. Closing the remaining enrolment gap will require interventions that go beyond awareness-raising alone to address affordability, accessibility, and trust concurrently.

### **5.1 Recommendations**

Policymakers should introduce sliding-scale or subsidized premium structures targeted at the poorest households, given the strong, independent effect of income on enrolment identified in this study. Programme administrators should invest in visible improvements to the accessibility and reliability of insured health facilities, since accessibility was a significant, direct predictor of enrolment independent of cost and awareness. Community leaders and health authorities should implement trust-building initiatives, such as testimonials from currently enrolled households and

transparent communication about reimbursement and claims processes, to directly counter the negative cultural beliefs shown to significantly suppress enrolment.

Outreach strategies should prioritise the channels households themselves identify as most trusted and accessible, including online resources and community workshops, to convert the substantial latent demand for enrolment identified among currently unenrolled households into actual registration.

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## References

- [1] Adebayo, E. F., Uthman, O. A., Wiysonge, C. S., Stern, E. A., Lamont, K. T., & Ataguba, J. E. (2015). A systematic review of factors that affect uptake of community-based health insurance in low-income and middle-income countries. *BMC Health Services Research*, 15, 543.
- [2] Al-Suqri, M. N., & Al-Kharusi, R. M. (2015). Ajzen and Fishbein's theory of reasoned action (TRA) (1980). In *Information seeking behavior and technology adoption: Theories and trends* (pp. 188–204). IGI Global.
- [3] Alvarez, G. & Reyes, S. (2020). Assessing health insurance enrollment among underserved populations: A quantitative analysis. *Journal of Community Health*, 45(4), 110–122.
- [4] Aregbeshola, B. S. (2017). Enhancing political will for universal health coverage in Nigeria. *MEDICC Review*, 19(1), 42–46.
- [5] Aregbeshola, B. S., & Khan, S. M. (2021). Out-of-pocket health-care spending and its determinants among households in Nigeria: A national study. *Journal of Public Health*, 29, 931–942.
- [6] Asanga, N. (2021). Willingness to join social health insurance and community-based health insurance among rural residents in Akwalbom State, Nigeria. *Ibom Medical Journal*.
- [7] Campbell, P. C. (2014). National health insurance scheme: How receptive are the private healthcare practitioners in a local government area of Lagos State. *Nigerian Medical Journal*, 55(6), 512–516.
- [8] Champion, V. L., & Skinner, C. S. (2008). The Health Belief Model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (4th ed., pp. 45–65). Jossey-Bass.
- [9] Chen, L., Martinez, A., & Lee, Y. (2020). Social determinants of health insurance participation among low-income families: Insights from a community-based approach. *Journal of Community Health*, 45(5), 950–964.
- [10] Collins, D. (2015). Assessment of Akwalbom Community-Based Health Insurance (CBHIS) Pilot Scheme.
- [11] Fenny, A. P., Yates, R., & Thompson, R. (2018). Social health insurance schemes in Africa leave out the poor. *International Health*, 10(1), 1–3.
- [12] Inegbedion, U. E. (2015). Awareness and utilization of National Health Insurance scheme in Edo State, Nigeria. Thesis, Ahmadu Bello University, Zaria, Nigeria.
- [13] Kim, H. & Johnson, T. (2021). Factors influencing the uptake of health insurance schemes in low-income households: A quantitative study. *Journal of Health Policy and Planning*, 36(2), 178–190.
- [14] Lee, S., Kim, J., & Park, T. (2019). Exploring the uptake of health insurance schemes among low-income households: A case study in urban areas. *Journal of Health Services Research*, 54(2), 345–360.
- [15] Odeyemi, I. A., & Nixon, J. (2013). Assessing equity in health care through the national health insurance scheme in Nigeria. *International Journal for Equity in Health*, 12(1), 52.
- [16] Onwujekwe, O., et al. (2010). Exploring the determinants of uptake of health insurance in Nigeria. *Health Policy and Planning*, 25(2), 132–144.
- [17] Patel, R. & Thomas, S. (2022). Perceived quality of healthcare and its impact on health insurance uptake in low-income populations. *American Journal of Health Promotion*, 36(1), 22–31.
- [18] Philip, D. S. (2018). Uptake of health insurance in Kenya: An empirical analysis using 2005/06 Kenya national health accounts survey. *International Journal of Economics, Commerce and Management*, 6(8), 721–733.
- [19] Rosenstock, I. M. (1974). Historical origins of the Health Belief Model. *Health Education Monographs*, 2(4), 328–335.
- [20] Sanusi, R. A., & Awe, A. T. (2009). An assessment of awareness level of National Health Insurance Scheme among health care consumers in Oyo State, Nigeria. *The Social Science Journal*, 4(2), 19–30.