



Effect of Enrollment Procedure on Enrollee Satisfaction in Nigeria. Evidence from Kaduna State Contributory Health Scheme

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Abstract

This study was undertaken to assess the effect of enrollment procedure of Kaduna State Contributory Health Scheme (KSCHS) on enrollee satisfaction in Kaduna State. Improving the health indices of citizens have been a major issue of concern in Kaduna state and the country at large. Kaduna State Contributory Health Scheme aims at achieving universal health coverage in the State. Objective of the study was to examine the enrollment procedure of KSCHS and how it affects enrollee satisfaction in Kaduna State. The study adopted evaluation theory, which helped in explaining the influence of enrollment procedure on enrollee satisfaction in Kaduna State. The study adopted the survey research design. Primary and secondary methods were used in generating data for the study. The primary data were sourced through questionnaire, while secondary data were sourced from academic journals and Kaduna State Contributory Health Management Authority annual report document. The study adopted regression statistical tool for the test of hypothesis. The findings of the study revealed that enrolment procedure of KSCHS have no significant effect on enrollee satisfaction. The study suggests a shift in policy focus and financial resources away from administrative front-end enrollment automation and directly into point-of-care healthcare delivery, and taking into account enrollee feedback such as their needs and concerns in the redesign process for an effective enrollment procedure that will enhance enrollee satisfaction.

Keywords: Contributory, Health Scheme, Enrollment, Procedure, Enrollee Satisfaction



1. Introduction

The cost of healthcare is a challenge to most individuals in the world. The goal of social health insurance is to lower financial constraints and lower the cost of medical services. If medical care is expensive, people may choose alternative therapies and underuse healthcare services, which could lower their quality of life. Social Health Insurance (SHI) is perceived as assisting in the pooling of health risks, preventing health-related impoverishments, improving the effectiveness and quality of health care services, resolving the issue of public health expenditures being paid out of pocket, and offering coverage against expensive healthcare services.

Germany is widely regarded as the first country to have introduced a national system of social and health insurance in 1883 during the chancellorship of Otto von Bismarck and was expanded over the following century to the areas of occupational accidents and disease in 1884, old age and disability in 1889, unemployment in 1927 and long-term in 1994. The origin of SHI in Germany can be traced back to the mutual-aid societies that emerged from the guilds of the late Middle Ages. During the nineteenth century, the rising class of industrial workers continued the tradition of these societies by setting up voluntary mutual-aid organizations specific to their various occupations. Individual companies and local communities also established mutual aid schemes, which complemented assistance provided by municipalities and charitable institutions (Busse and Blumel, 2014). Bismarck's health insurance (BHI) was the first move toward democratized access to health care. Subsequently, it acted as a blueprint for Germany's current health system and served as a model for many social insurance systems across the world.

Many African countries, including Nigeria, decided to implement the Social Health Insurance to complement funding for the health sector, with a view to improve equity in health (NHIS



© *Journal of Political Science and Policy Studies* Vol. 2 No 3 (July, 2026) Handbook, 2023). Social Health insurance is a system in which a prospective consumer of healthcare makes payments to a third party on the understanding that in the event of a future illness this third party will pay for some or all of the expenses incurred. The World Health Organization reports that over 930 million people spend 10% or more of their household income on healthcare services, pushing about 100 million people into extreme poverty (WHO, 2019). One of the WHO's 2030 Sustainable Development Goals is universal health coverage (UHC), which was added due to the tremendous burden associated with healthcare costs. In order to lower direct payments and user fees for health services, the WHO recommended that member nations pursue mandatory health insurance, more fair tax systems, or a combination of the two (Sanogo et al., 2019). These kinds of changes were started by several African countries towards the end of 20th century. A few countries implemented National Health Insurance Schemes (NHIS) that are financed by taxes and insurance premiums.

Social health insurance is meant to improve health conditions of citizens. In Nigeria, SHI was launched through the National Health Insurance Scheme and became operational in 2007. The coverage of National Health Insurance Scheme is federal government workers which leaves many citizens uninsured. Meanwhile, several States in Nigeria have established and are implementing State Health Insurance Schemes to bridge the coverage gap and improve the health indices of their populace. In Kaduna State, the Health insurance scheme was launched in 2018, after the Health Account Survey by the State Ministry of Health (SMOH) in collaboration with Health Strategy Delivery Foundation (HSDF) in 2016 which revealed high cost of health care (Chukwuemeka et al., 2016). The Scheme aims at achieving universal health coverage in the State.

In order to achieve the objectives of the Scheme, Kaduna state government prioritized healthcare revitalization as one of its agenda. It involves the upgrading of healthcare facilities,



a plan to ensure that all electoral wards have at least two primary healthcare centers (PHCs), and equipping three general hospitals, one in each senatorial district. The Kaduna State Government also commenced the renovation of 255 health centers in 2016, and by 2019, a total of 191 PHCs were completed to boost healthcare service delivery. In 2023, the State government announced plan to further rehabilitate 200 health centers across the 23 Local Government Areas as part of the government's determination to enhance access to affordable and efficient healthcare services at the rural and urban areas (vanguard, 2023). The upgrade of the health centers in addition to the already existing ones is to increase accessibility, decrease travel time to health facilities as well as reduce overcrowding in densely populated centres. In addition to the aforementioned efforts of the State government to achieve the objectives of the Scheme, the health budget of the state in 2022, 2023 and the 2024 budget met the Abuja 15 per cent declaration on health aimed at improving the health sector.

Since the introduction of KSCHS in 2018, there has been an increase in utilization of health services as 949,132 enrollees of the Kaduna State Contributory Health Insurance Scheme accessed health services between 2020 and first quarter of 2023. Out of the 949,132 enrollees, 68,013 accessed health services under the scheme in 2020; 379,450 in 2022, while 404,835 accessed the services in 2022. In the first quarter of 2023, a total of 96,834 enrollees accessed the scheme and by January 2024, the total number of enrollees under the scheme stood at 688,950 (KADCHMA, 2023). However, poor referral systems in contributory health scheme, episodic coverage, delays in processing authorization codes, poor attitude/unprofessional conduct by healthcare providers, have been noted as challenges facing health insurance scheme in Nigeria (Mosadeghrad, 2012; Abba-Aji, et al., 2021; & Adeniran, et al., 2022). Therefore, it is imperative to ask to what extent has the enrolment procedure of KSCHS affected enrollee satisfaction in Kaduna State? Thus, the objective of this paper was to examine the enrolment procedure of KSCHS and how it affects enrollee satisfaction in Kaduna State. The hypothesis



of the study is formulated thus; Enrolment procedure of KSCHS has no significant effect on enrollee satisfaction in Kaduna State.

2 Literature Review

Conceptual literature on enrollment procedure enrollee satisfaction were reviewed in this study

Concept of Enrollee Satisfaction

The concept of enrollee satisfaction is multifaceted; hence, there has not been a uniform definition for this construct. Farley et al., (2013) referred to enrollee satisfaction as emotions, feelings and their perception of delivered healthcare services. Al-Abri and Al-Balushi (2014) explained enrollee satisfaction as a degree of congruency between patient expectations of ideal care and their perceptions of real care received. From their view, enrollee satisfaction is a critical indicator of quality and efficient healthcare services.

Enrollee satisfaction is defined as the extent to which patients perceive their healthcare experiences meet their expectations regarding quality, accessibility, and interpersonal relationships (Alharbi et al., 2023). This definition emphasizes the subjective nature of satisfaction, highlighting that it is influenced not only by the actual quality of care received but also by patients' expectations and perceptions of their interactions with healthcare providers. Factors such as wait times, communication, and emotional support play critical roles in shaping these perceptions.

Concept of Enrollment Procedure

Enrollment procedures in healthcare facilities refer to the systematic processes for registering patients, verifying their eligibility for services, and managing their access to care. These procedures are crucial for ensuring that patients receive appropriate treatment while maintaining compliance with regulations and optimizing operational efficiency (Harris et al.,



2021). Key Components of Enrollment Procedures include; Patient registration which entails collecting essential patient information such as demographics, insurance details, and medical history; eligibility verification an instance when Healthcare providers must confirm patient eligibility for coverage under various insurance plans or government programs, which is critical to reducing claim denials; consent and authorization and data management (Smith & Jones, 2019; Harrison, 2020; Thompson, 2021).

Empirical Literature

Johnson, and Lee. (2023) in a study titled ‘Improving Patient Satisfaction Through Effective Enrollment Strategies’ explored various enrollment strategies and their effectiveness in improving patient satisfaction. The research design adopted in the study was experimental. Data collection was on pre- and post-enrollment satisfaction surveys. Findings from the study revealed that implementing online enrollment systems and pre-appointment information sessions significantly improved patient satisfaction. It was also revealed that patients appreciated the convenience and time-saving aspects of these strategies. The study recommended adoption of online enrollment systems to facilitate easier access and reduce waiting times. The study further recommended for the provision of pre-enrollment information to patients to prepare them for the process and reduce confusion.

Smith, and Jones. (2022) in a study titled ‘The Impact of Enrollment Procedures on Patient Satisfaction in Healthcare Systems examined how the efficiency and clarity of enrollment procedures affect patient satisfaction in various healthcare systems. The research design adopted was the cross-sectional survey using structured questionnaire focusing on enrollment procedures and patient satisfaction. Statistical tool of regression analysis was used to test the hypotheses. Findings from the study revealed that patients who experienced streamlined and clear enrollment procedures reported higher satisfaction levels. It was also discovered that key



factors affecting satisfaction included the ease of form completion, wait times, and the clarity of communication from staff. In line with the findings of the study, it recommended that there should be simplified enrollment forms and procedures to reduce complexity; staff should be trained to communicate effectively and provide clear instructions, and implementation of electronic enrollment systems to minimize wait times and errors.

Brown and Davis (2021) in a study titled ‘Assessing the Relationship Between Enrollment Process Complexity and Patient Experience’ investigated the link between the complexity of the enrollment process and overall patient experience in healthcare settings. The research design adopted was the mixed-methods approach drawing 300 patients and 20 healthcare administrators. Data collection was through survey method and the instrument of in-depth interviews. Qualitative content analysis and quantitative statistical methods was adopted to test the hypotheses of the study. Findings from the study revealed complexity in enrollment processes was associated with lower patient satisfaction. It also revealed that patients expressed frustration with lengthy and unclear procedures, which impacted their overall experience negatively. In line with the findings of the study, it recommended that there should be redesigned enrollment procedures to enhance simplicity and user-friendliness. The study also advocated for an Involved patient feedback in the redesign process to ensure that their needs and concerns are addressed.

Theoretical Framework

Evaluation Theory as propounded by Edward A. Suchman (1967) was considered as the underpinning theory for this study. The evaluation theory as propounded by Suchman is in a cyclical form with the end of one process constituting the beginning of another. Suchman proposed five categories of criteria according to which the success or failure of a program can be evaluated. They include; effort, performance, adequacy of performance, efficiency, and



process. This research paper titled ‘Enrolment procedure and enrollee satisfaction in Kaduna State’ could best be explained by this theory given its clear distinctive criteria for evaluating the success or failure of a programme like this.

The evaluation theory as propounded by Suchman is in a cyclical form with the end of one process constituting the beginning of another. The evaluation process is shown in the figure 1 below:

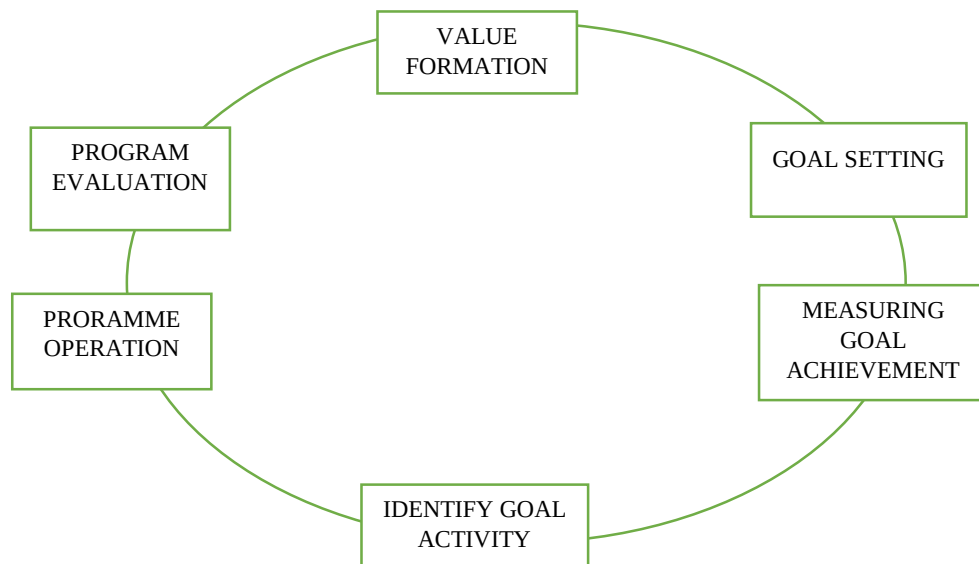


Fig 1: Suchman’s Evaluation Process

In this nexus, the efforts can be seen as all the inputs, energies, policy statement and thrust regarding health insurance through the State government, resources committed and dedicated for the execution of its function and the results the State wish to achieve at the end of the policy. The efforts include fundamental philosophy behind the initiation of Kaduna state health contributory health scheme which is an integral part of the Kaduna State human capital development and social protection strategy aimed at providing sustainable, quality and affordable healthcare services with financial risk protection to the residents of the State. Effort encompasses the structure of the policy itself, the institutional machinery put in place for its



implementation, the key strategies mapped out for the implementation of the policy like KADCHMA administrative push to optimize registration forms, capture biometrics, and register enrollees. as the resources committed to achieve these objective.

The second criterion is performance criterion which has to do with what is being done or performed in response to the efforts being made in achieving effective enrolment procedure in the Scheme. This criterion is concerned with series of interrelated and interconnected activities performed or executed by stakeholders involved in enrollment procedure to enrollees for the actualization of KSCHS objectives.

The third criterion which is concerned with determining the quality and quantity of what has been performed from the preceding criterion. Here, there is need to determine whether the resources (in terms of human and material) committed for the scheme is sufficient to enhance the achievement of goals of the scheme. Statistics shows that various stakeholders are involved promoting the goal of universal health coverage in Kaduna State. The aim of this element is to assess and determine how well the performance actually solves the total existing community need. This is where the chain breaks. While the enrollment performance s high, it is completely inadequate at solving the broader healthcare need if healthcare facilities still lack drugs and staff.

Efficiency is the fourth element of the Suchman's evaluation theory. This criterion has to do with the state or quality of being efficient in accomplishing certain specified activity with minimum use of resources. In this perspective we make a critical examination of input-output relationship comparing all the inputs vis-à-vis the impacts, what has been done and what has been achieved. What has been committed in relation to predetermined goals of KSCHS in order to determine its significance in the state? Is spending money optimizing digital registration



portals efficient if it yields a 0% real increase in enrollee satisfaction? This criterion also provides an important yardstick for assessing the success of enrollment procedure.

Process is one of the most defining elements of evaluation theory espoused by Edward Suchman, in evaluating the success of KSCHS. This criterion helps us to carefully examine the objectives, processes and methodologies adopted by the executors of the scheme and the manner they were executed in order to determine whether these objectives are viable and relevant in achieving universal health coverage aimed at providing sustainable, quality and affordable healthcare services to the residents of the State. The initiators of KSCHS sets down modus operandi, a blueprint or a roadmap upon which the scheme should be executed and its anticipated outcomes evaluated after a period of time. The ultimate goal here is to identify areas of weakness if any with a view to improving them so that the scheme could achieve greater results in the future.

3 Methodology

This study employed the survey research design. The target population for the study stood at 42,142 enrollees from both formal and informal sector in Kaduna State. This comprise of 18,257 enrollees from Ashmed Healthcare Facility, 8756 enrollees from Comprehensive healthcare facility Saminaka, 2941 enrollees from Kaduna State University Medical Facility, 9959 enrollees from First Care Medical Facility, 1950 enrollees from Kaduna State College Sick Bay, and 253 enrollees from General Hospital Kwoi, (KADCHMA, 2024). Justification for the selection of enrollees in both formal and informal sector is based on the fact that the Scheme covers enrollees and their dependents in the formal and informal sector. Also, the selection of enrollees is justified on the ground that, they are the focal point of the scheme and assessing their satisfaction with services accessed is of importance. The sample size of the study was determined using Krejcie and Morgan Statistical table 1970 and questionnaire were



proportionately distributed among the six (6) selected healthcare facility in the study. This is represented in table 1 below.

Table 1. Distribution of the study

Healthcare Facility	Number of Enrollees	Sample Size
Ashmed Facility	18257	181
Comprehensive Healthcare Facility	8756	87
Kaduna State University Medical Facility	2941	29
First Care Multi Specialist Hospital	9959	99
Kaduna State College Sick Bay	1950	19
General Hospital Kwoi	253	3
Total	42,116	418

Source: Researcher's Survey, 2026

4 Results and Discussion

Table 2: Model Summary

Model	R	R square	Adjusted square	R	Std. Error of the Estimate
1	.588 ^a	.346	.335		.30104

a. Predictors: (Constant), Enrollment Procedure

b. Dependent Variable: Enrollee Satisfaction

Source: Researchers' Survey, 2026 via SPSS 25

Table 2 above shows the summary of regression analysis result of Enrollee Satisfaction in Kaduna State, Nigeria. The empirical results show that, R which is concerned with how well the independent variable correlates with the dependent variable is represented by .588 (58%). That is to say that the independent variable correlate with the dependent variable by 58%. The



R^2 which is often referred to as the coefficient of determination of the variables was 0.346. The R-Squared which is also a measure of the overall fitness of the model indicates that the model is capable of explaining about 34.6% of the variability of Enrollee Satisfaction. This means that the model explains about 34.6% of the systematic variation in the dependent variable. That is, about 65.4% of the variations in Enrollee Satisfaction in Kaduna State, Nigeria are accounted for by other factors not captured by the model. This result is complimented by the adjusted R^2 (adjusted R-squared) of about 33.5%, which is in essence the proportion of total variance that is explained by the model.

Table 3 **Coefficients (a)**

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
(CONSTANT)	1.454	.133		10.933	.000
ENP	.066	.035	.117	1.866	.063

a. Dependent Variable: ES

Source: *Researchers' Survey, 2026*

Table 3 above present the results of regression test applied to dependent variable ES (Enrollee Satisfaction) and independent variable i.e. ENP (Enrollment Procedure). Upon the fulfilment of the assumptions of regression analysis, multiple regression analysis is considered in testing the research hypothesis.

Test of Hypothesis

In order to decide whether to reject or accept the null hypothesis at 0.05 (5%) level of significance, the rejection point is used which states that: (1) If the p value is equal to or less than 5%, the null hypotheses is rejected and the alternate hypotheses is accepted; (2) If the p value is greater than 5%, the null hypotheses is accepted and the alternate hypotheses is rejected.



H₀: Enrollment procedure of accredited facilities has no significant effect on enrollee satisfaction in Kaduna state. The t-value of enrollment procedure of KSCHS is 1.866 with p value of 0.063 which is greater than 0.05. Therefore; the null hypothesis is accepted which states that enrolment procedure of KSCHS has no significant effect on enrollee satisfaction in Kaduna state.

Data from Kaduna State Contributory Health Management Authority reveals that the total health insurance enrolment grew by 21.3%, rising from 527,303 enrollees in 2023 to 639,432 enrollees. Brown and Davis (2021) further revealed that complexity in an enrollment processes is associated with lower enrollee satisfaction. The study maintained that enrollees expressed frustration with lengthy and unclear procedures, which impacted their overall experience negatively.

Summary and Discussion of Findings

Enrollment Procedure and Enrollee Satisfaction

The effect of enrollment procedure of KSCHS on enrollee satisfaction is positively insignificant with coefficient value of 0.066, meaning that a unit increase in the enrollment procedure of KSCHS while other variable remains constant will not lead to an increase in enrollee satisfaction by 6.6%. The outcome is consistent with the study of Brown and Davis (2021). Also the result is not consistent with the study of Johnson and Lee (2023); Smith and Jones (2022); Thompson, (2021); Harrison, (2020). This positive insignificant effect indicated that as enrollment procedure of KSCHS in terms of (i.e. systematic processes for registering patients, verifying their eligibility for services, and managing their access to care) increases, the enrollee satisfaction in Kaduna state will not increase and vice-versa. This means no matter how government increase the systematic processes for registering patients, verifying their eligibility for services, and managing their access to care, these will not increase the overall evaluation and acceptance of state contributory health scheme and enrollee satisfaction in



Kaduna state. The theoretical framework adopted in the study buttress the statistical finding by maintaining that a unit increase in enrollment procedure (effort/Performance) holds an insignificant effect on overall satisfaction. Suchman explains this by highlighting that effort is a misleading proxy for programmatic success. KADCHMA can expend 100 units of energy automating enrollment (Effort), but because that effort does not feed into the structural adequacy of care (e.g., medical supplies, shorter queues), the enrollee's final satisfaction remains stagnant.

5 Conclusion and Recommendation

The Kaduna State Contributory Health Insurance Scheme was established by law No 7 of 2018, as an integral part of the Kaduna State human capital development and social protection strategy aimed at providing sustainable, quality and affordable healthcare services with financial risk protection to the residents of the State. The study concluded that enrollment procedure has no significant effect on enrollee satisfaction in Kaduna state. The study demonstrated that automation of enrollees yields no structural dividend in public perception if other factors are not present. Therefore, the study suggests a shift in policy focus and financial resources away from administrative front-end enrollment automation and directly into point-of-care healthcare delivery, and taking into account enrollee feedback such as their needs and concerns in the redesign process for an effective enrollment procedure that will enhance enrollee satisfaction.



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