

NATIONAL HEALTH INSURANCE POLICY AND PROGRAMME AND ACCESS TO HEALTH CARE SERVICE AMONG FEDERAL GOVERNMENT WORKERS IN NIGERIA

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ABSTRACT

The study examined the effect of National Health Insurance on health care service delivery Among Federal Workers in Nigeria. This mixed research design study investigates the relationships between primary and secondary health care service providers and the provision of essential healthcare services to enrollees in Nigeria. The population of the study encompasses federal government workers with primary and secondary health care facilities across various regions in Nigeria. A sample size of 400 enrollees and 50 health care providers was selected using stratified random sampling techniques. Data were collected through structured interviews and surveys, focusing on the perceptions and experiences of both health care providers and enrollees regarding the provision of affordable health care, testing and diagnostic services, and referral services. The collected data were analyzed using both qualitative and quantitative methods, including thematic analysis and correlation analysis. The findings reveal significant relationships between primary health care service providers and the provision of affordable health care and testing and diagnostic services to enrollees in Nigeria. Moreover, the study identifies a significant relationship between secondary health care service providers and the provision of referral services to enrollees, highlighting the importance of collaboration between primary and secondary healthcare sectors to ensure comprehensive healthcare delivery in Nigeria. These results underscore the need for policy interventions and resource allocation strategies aimed at strengthening primary and secondary healthcare systems to improve access to essential healthcare services for all enrollees in Nigeria. The study recommends that Federal Government through the NHIA should implement policies that aim to increase the affordability of healthcare services for all citizens, especially those in lower socioeconomic strata. This may involve subsidizing healthcare costs, expanding insurance coverage, or introducing targeted assistance programs for vulnerable populations. Additionally, encourage healthcare providers to offer transparent pricing structures and explore innovative payment models, such as sliding-scale fees or income-based discounts, to improve access for individuals with varying financial capacities.

KEYWORD: National Health, National Health Insurance Policy, National Health Programme, Access to

Health Care Service, Among Federal Government Workers In Nigeria

INTRODUCTION

National Health Insurance Scheme Act 35 of May 1999 (CAP N 42, LFN 2004) is to promote, regulate and administer the implementation of National Health Insurance among Federal Workers in Nigeria. It is also to drive the processes that will facilitate access to affordable and most cost effective health care services. The scheme is equally to facilitate the achievement of Sustainable Development Goals (SDGs) aimed at reducing child mortality, improve maternal health and help in tackling other diseases Among Federal Workers in Nigeria (NHIS, 2004). The scheme developed various programmes targeted at covering different segments of the Nigerian population. The aggregate goals are to ensure that every Nigerian is being covered by one programme or another in order to achieve Universal Health Coverage Among Federal Workers in Nigeria (NHIS, 2004). The mode of operation of the formal sector social health insurance programme is such that the health care services of employees in the formal sector are financed from the funds pooled by the employer and the employees. In the formal sector social health insurance programme, specific responsibilities are expected from the healthcare facility, Health Maintenance Organization and the National Health Insurance Scheme. However, establishment of the National Health Insurance Scheme (NHIS) was informed by the general poor state of the nation's healthcare services, the excessive dependence and pressure on government provided health facilities, dwindling funding of healthcare in the face of rising cost, poor integration of private health facilities in the nation's healthcare delivery system, dependence on out of pocket expenses to purchase health (Adesina, 2009).

Among Federal Workers in Nigeria the National Health Insurance Scheme was launched formally as a public health policy in 1999. But the Formal Sector programme, one of the programmes under the scheme was designed to cover employees in both public and private sectors, and was flagged off in 2005 (NHIS, 2006). This marked the commencement of access to the health care by enrolees including FGN workers Among Federal Workers in Nigeria. Prior to the introduction of National Health Insurance Programme, Federal Government Workers and their dependants Among Federal Workers in Nigeria were accessing health care service using "Out of Pocket Expenses. Impliedly, federal government workers and their families Among Federal Workers in Nigeria had insufficient funds to access healthcare services on private bases; they are overburden by medical illnesses, which in turn lead to low morale and productivity in places of work.

The NHIS, which is a public Health Insurance Scheme, it operates on 15% basic salary as premium, 5% contribution from patient, 10% by Government. The contribution level for all employees registered in the scheme is 50% of basic salary for the health care of the employee, a spouse and four (4) biological children below the age of 18 years old. But where an over age person is included the employee will contribute higher sum to that effect. In view of the above reasons for the introduction of National Health Insurance Programme, this study therefore examine whether National Health Insurance Scheme has provided quality Health Care service Among Federal Government Workers among Federal Workers in Nigeria.

Statement of the Problem

Currently, National Health Insurance Scheme Among Federal Workers in Nigeria has over 452,127 enrolees from the various Federal Ministries, Departments, Agencies, Armed forces and Tertiary Institutions and has partnered with over 2,168 NHIS-accredited clinics and hospitals to provide best and most affordable healthcare to Federal government workers Among Federal Workers in Nigeria using primary health care clinics, hospitals, specialists and ancillary services, such as laboratories, x-ray centres, and pharmacies (NHIS, 2019). But what remains to be seen about the NHIS programme is the extent to which it has

effectively met the demands of Federal government workers Among Federal Workers in Nigeria. There is no clear evidence to show that the Federal government workers Among Federal Workers in Nigeria have enjoyed access to qualitative healthcare services. The Nigeria health system was initially publicly financed with it attendant problems. The National Health Financing Policy and Strategy of Nigeria recommend that there should be a split between funding and purchasing and the powers for both should not reside in the same agency.

In order to fill the research gap, few available literatures were reviewed on national Health Insurance and health care service delivery. It was discovered that, since the introduction of the NHIS, studies have focused on assessing challenges and prospect of NHIS rather than assessing the role of National Health Insurance Scheme on health care service delivery in Kaduna State. For Instance; Christmal and Kizito (2020) assessed the implementation of the National Health Insurance Scheme (NHIS) in Ghana: Lessons for South Africa and Low- and Middle-Income Countries. It was found that; implementation of the NHIS has provided access to healthcare for the Ghanaian population, especially to poor and vulnerable. Dalinjong, & Laar, (2012) examined the national health insurance scheme: perceptions and experiences of health care providers and clients in two districts of Ghana. It was found that; NHIS promoted access for insured and mobilized revenue for health care providers. Abdi, Salgado, Nebel (2015) examined the Magnitude and determinants of self-referral of patients at a general hospital Western Ethiopia. It was found that, the lack of confidence in getting the right healthcare provider, lack of drugs and laboratory services at the primary level of care influenced patients' decision to self-refer. The statement of the problem therefore, is to ascertain whether National Health Insurance Scheme has enhanced health care service delivery?

The main objective of the study is to examine the effect of National Health Insurance on health care service delivery Among Federal Workers in Nigeria. While the specific objectives are to;

- i. Examine the effect of primary health care service providers in providing affordable health to the enrollees Among Federal Workers in Nigeria.
- ii. Ascertain the effectiveness of primary health care service providers in providing testing and diagnostic services to enrollees Among Federal Workers in Nigeria.
- iii. Determine the effectiveness of secondary health care service providers in providing referral services to enrollees Among Federal Workers in Nigeria.

Against the backdrop of the research problem, the study seeks to answer the following research questions:

- i. How effective is the primary health care service providers in providing affordable health to the enrollees Among Federal Workers in Nigeria?
- ii. How effect is primary health care service providers in providing testing and diagnostic services to enrollees Among Federal Workers in Nigeria?
- iii. How effect is secondary health care service providers in providing referral services to enrollees Among Federal Workers in Nigeria?

The following hypotheses were formulated to guide the study;

- i. There is no significance relationship between primary health care service providers and the provision of affordable health to the enrollees Among Federal Workers in Nigeria.
- ii. There is no significance relationship between primary health care service providers and the provision of testing and diagnostic services to enrollees Among Federal Workers in Nigeria.
- iii. There is no significance relationship between secondary health care service providers and the provision referral services to enrollees Among Federal Workers in Nigeria.

Literature Review

Concept of National Health Insurance Programme

Primary health care services, as defined by the World Health Organization (WHO) in 1978 and widely acknowledged across global health systems, encompass a comprehensive range of essential medical interventions and services that are meticulously designed to be accessible, cohesive, and flexibly tailored to cater to the unique health requirements of individuals and diverse communities. Encompassing a holistic approach that emphasizes prevention, early detection, treatment, and ongoing management of prevalent health conditions, primary health care represents a fundamental pillar of public health systems worldwide (Emanuel et al., 2021)..

Moreover, primary health care services are fundamentally rooted in principles of universality, ensuring that essential health care is universally accessible without discriminating against individuals based on social or economic standings. By fostering a participatory and inclusive environment, primary health care strives to promote equity, social justice, and community resilience, advocating for a healthcare system that is affordable, sustainable, and responsive to the evolving health needs of diverse populations (Hussein, and Said, 2020).

Primary health care services encompass a broad range of essential health services that are universally accessible to individuals and communities. These services are designed to address the majority of personal health care needs, foster sustained partnerships with patients, and operate within the context of family and community (Emanuel et al., 2021). Furthermore, primary health care services play a pivotal role in promoting health literacy and raising awareness about health issues across different age groups (Akpınar et al., 2021).

Therefore, primary health care services are integral to the overall health system and are essential for promoting the well-being of individuals and communities. Primary health care represents a cornerstone of comprehensive health service delivery, embodying the core principles of accessibility, comprehensiveness, and community-centered care that are essential for promoting health equity, fostering well-being, and advancing the overall health outcomes of individuals and communities worldwide.

Affordable health care services

Affordable health care services refer to the system that ensures individuals access necessary medical care without facing significant financial burdens. This includes the ability to leverage economic resources, such as income, savings, or loans, to afford healthcare services without being pushed into excessive financial strain that could jeopardize essential needs (Lévesque, et al, 2013). The Affordable Care Act has been pivotal in enhancing the accessibility of a wide array of healthcare services, striving to render them more cost-effective and within reach of a broader segment of the population (Vujicic et al., 2016).

The concept of affordability in healthcare is intricate and multifaceted, as it is influenced by diverse economic, organizational, social, and cultural factors. Various stakeholders hold differing perspectives on what constitutes affordable health care, necessitating the consideration of multiple measures for evaluating affordability among different groups (Rosenberg et al., 2010). Affordable health care is a system that ensures that individuals and families have access to necessary medical services at a cost that is reasonable and within their financial means. It aims to reduce the financial burden of obtaining healthcare services and medications. Affordable health care can be achieved through various means, such as subsidies, insurance programs, government-funded healthcare initiatives, and price controls on medical services and pharmaceuticals. Affordable health care is a crucial component of a well-functioning healthcare system that ensures everyone has access to necessary medical services without facing excessive financial hardship.

Medical testing and diagnostic services

Medical testing and diagnostic services refer to a range of procedures and tests conducted by healthcare professionals to determine a patient's health status, identify potential health issues, or confirm a

diagnosis. These services play a crucial role in the healthcare system by assisting in the early detection, treatment, and management of various medical conditions. Medical testing can involve a variety of methods, including blood tests, imaging scans (such as X-rays, MRIs, and ultrasounds), biopsies, genetic testing, and other specialized tests. Diagnostic services encompass the interpretation of test results by trained healthcare providers, who use their expertise to make accurate diagnoses and recommend appropriate treatments.

Medical testing and diagnosis in healthcare services are crucial components of patient care. Medical testing involves the use of various tests and procedures to detect, diagnose, or monitor diseases and health conditions. It is a complex process that requires clinical reasoning, selection of relevant tests, and accurate interpretation of test results (Czeskleba et al., 2020; Kunina-Habenicht et al., 2015).

Medical referral Service

Medical referral in healthcare is a crucial process that involves the transfer of a patient's care from one healthcare provider to another, often for specialized treatment or additional diagnostic procedures. Referrals play a significant role in ensuring that patients receive comprehensive and coordinated care across different healthcare settings. The process of medical referral can have a substantial impact on patient outcomes, healthcare costs, and resource utilization within the healthcare system (Jalalabadi et al., 2018). It is essential to understand the various aspects of medical referral, including the benefits, challenges, and strategies for optimizing the referral process.

Medical referral is therefore a crucial process in healthcare, involving the transfer of a patient's care from one physician to another upon request. It plays a pivotal role in ensuring the continuity and quality of patient care, particularly when specialized care is needed. Referral services are conducted between hospitals at different levels, such as specialty hospitals and comprehensive hospitals, or among specialty hospitals.

EMPIRICAL REVIEW

Christmal and Kizito (2020) assessed the implementation of the National Health Insurance Scheme (NHIS) in Ghana: Lessons for South Africa and Low- and Middle-Income Countries. The study relied on secondary method with a scoping review conducted using the Joanna Briggs Institute's System for the Unified Management, Assessment and Review of Information (SUMARI) and Mendeley reference manager to manage the review process. Journal articles published on the NHIS in Ghana from January 2003 to December 2018 were searched from Science Direct, Pub Med, Scopus, CINAHL, and Medline using the keywords: Ghana, Health, and Insurance. The result from the study revealed that, the implementation of the NHIS has provided access to healthcare for the Ghanaian population, especially to poor and vulnerable . Dalinjong & Laar (2012) examined the national health insurance scheme: perceptions and experiences of health care providers and clients in two districts of Ghana. The study took place in Data was collected through exit survey with 200 insured and uninsured clients, 15 in-depth interviews with health care providers and health insurance managers, and 8 focus group discussions with insured and uninsured community members. The result of the study shows that, the NHIS promoted access for insured and mobilized revenue for health care providers. Both insured and uninsured were satisfied with care (survey finding). The study concludes that, the perceived opportunistic behavior of the insured by providers was responsible for the difference in the behavior of providers favoring the uninsured. Besides, the delay in reimbursement also accounted for providers' negative attitude towards the insured. There is urgent need to address these issues in order to promote confidence in the NHIS, as well as its sustainability for the achievement of universal coverage.

Onoka, Hanson, and Hanefeld (2015) examined towards universal coverage: a policy analysis of the

development of the National Health Insurance Scheme Among Federal Workers in Nigeria. The study relied on secondary method using document reviews, in-depth interviews, and use of a stakeholder analysis approach. The study revealed that, the inclusion of Health Maintenance Organizations (HMOs) as financing organizations for national health insurance at the expense of sub-national (state) government mechanisms increased credibility of policy implementation but resulted in loss of support from states.

A study conducted by Inyang & Bassey (2018) on National Health Insurance Scheme Among Federal Workers in Nigeria: Impact on healthcare delivery system Among Federal Workers in Nigeria. The study investigated and examines the impact of National Health Insurance Scheme (NHIS) on the health care delivery system Among Federal Workers in Nigeria. The study further examines the main objectives of the NHIS to find out the proportion of Nigerians covered by the scheme Among Federal Workers in Nigeria. In addition, the study examines the level of people's awareness of the scheme. The study also investigates and examines the level of funding and contribution to the scheme, through government fiscal policy. Finding from the study reveals that, the impact of the scheme was slow and low due to inadequate funding, poor awareness creation. The therefore concludes by calling for the attention of stakeholders for a review of health policy to address the inadequacies if Nigeria intends to keep pace with Universal Health Coverage (UHC) of the world Health Organization (WHO).

Gap in Existing literature

Existing literature on the NHIS Among Federal Workers in Nigeria primarily focuses on its general impact on healthcare access, financial protection, and health outcomes at the population level. While some studies have examined the perceptions and experiences of enrollees in the NHIS, few have specifically investigated its effects NHIS on healthcare service delivery among federal workers. Empirical studies that explore issues such as the health care accessibility, patient referral service, health care medical testing and diagnosis among NHIS beneficiaries within the federal workforce are limited.

RESEARCH METHODOLOGY

The study employed a mixed research design consist of survey and explanatory resign was used. A mixed research design combining survey and explanatory designs is strategic for providing a comprehensive understanding of a research. The survey design allows for the collection of quantitative data from a large sample, providing statistical generalizability and broad insights into attitudes or behaviours of research participants. The explanatory design on the other hand complements this by delving deeper into the mechanisms and relationships at play, using qualitative methods to explore and explain the survey findings in more detail. By combining both approaches, researchers gained a richer and more nuanced understanding of the research problem as well as enhancing the overall validity and reliability of their study results. The data generated were more or less unbiased because this was expressed in numerical terms for easy understanding. It is also relevant to this study because, it assist the researcher to explore the relationship between independent (Implementation of National Health Insurance Scheme) and dependent variable (Health Care Service Delivery).

The target population of the study is composed of the following Federal government Workers (Enrolees) Among Federal Workers in Nigeria, Desk officers in Health Care facilities (Nurses and Doctors) Among Federal Workers in Nigeria and Managers of Health Maintenance Organizations (HMO) Among Federal Workers in Nigeria. The total populations of the study consist of 10,269,996 million enrollees according the National Health Insurance Agency (2023)

The choice of Federal government Workers (Enrolees) as target Population is because, they are the main beneficiaries of this programme and the aim is to assess the effect of the National Health Insurance

Scheme implementation on the accessibility, affordability and quality of health care service Among Federal Workers in Nigeria. Desk officers attached to Primary Health Facilities were chosen as target population because, they are the first point of contact at the health care facilities and they provided the researcher with unbiased responses in respect of service rendered by the health care facilities, while the choice of the Quality Assurance/Medical Managers of Health Maintenance Organizations (HMO) was because, they are the health care purchasers, in charge of referral authorizations/issuance of referral codes, conduct of quality assurance/on the spot visits to Health care Facilities. On the other hand NHIS head of quality assurance/medical is in charge of quality assurance compliance and medical coordination.

Purposive random sampling technique was used to select two states each from the six geo-political zones Among Federal Workers in Nigeria. The reason for the choice of Purposive sampling technique is to ensure that every zone is represented in the sample.

The following States will be purposively covered in the study. They are;

Ekiti and Lagos States in South West,
Kwara and Niger states in North Central,
Kaduna and Kano states in North West,
Enugu and Abia states in South East,
Edo and Cross River states in South-South, and
Adamawa and Taraba states in North East.

These states were selected in order to ensure representatives from all geo-political zones in the country.

Smith (2008), simplified formula for calculating sample size from a large population used for Federal government Workers (Enrollees) questionnaire respondents as given below:

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

Where n = Sample Size

Where:

N is the total population size

1 is constant

ME is the Margin of Error

$$n = \frac{10,269,996}{1 + 0,269,996(0.05)^2}$$

$$\frac{10,269,996}{1 + 10,269,996(0.0025)}$$

$$\frac{10,269,996}{25,676.99}$$

n = 400

For this Study, systematic sampling technique was used to locate the respondents (Principal enrolees) for the distribution of questionnaire using population list. This sampling method allow member from the larger population been select according to a random starting point with fixed and periodic interval (sample interval). This technique is to be use because it allows the element to be selected from an ordered sampling frame i.e from the list of all those within a population (The Enrolees).

Cluster Sampling Technique was used to locate the respondents for questionnaire. This sample was adopted heterogeneous of the populations. The population for the interview comprises; Desk officers attach to Primary Health care Providers and Quality Assurance Managers of Health Maintenance Organizations (HMO). Two methods of data collection were use in this study; i.e. primary and secondary methods. Primary method generates quantitative and qualitative data. Quantitative Primary data were

numerically generated through the instrument of questionnaire. Questionnaire were structure in close and open-ended questions with options ranging from Strongly Agree; Agree; Disagree; Strongly Disagree; Undecided using five (5) point likert scale. The respondents have the opportunities to air their views where necessary. In order to achieve the objectives of the study, copies of the questionnaire were given to the two supervisors and a discussant. The essence of this is to ensure that the questions were clear, simple and appropriate for the study. On the basis of their suggestions and modifications, some of the items have been modify to suit the objectives of the study. The final copies of the questionnaire were distributed to the respondents with the aid of three research assistants. The questionnaire was in two Sections: Section A: This section contains Background information of the respondent. Section B: This Section contained issues on National Health Insurance Programme implementation. The Questionnaire were distributed to Principal enrolees i.e. the Federal Workers Among Federal Workers in Nigeria

Secondary data were obtained from documented materials from these sources: Text books on Health care financing, Health Economics, Health care Intervention Policy Documents from faculties' library and E-library. Academic Journals, articles on Health financing, Journal of National Health Insurance Scheme; Journal of National Health Policy; Journal of Public Policy Implementation were sourced from Nasarawa State University library, department of political science, public administration library, faculty of administration library and internet. Official documents like the quarterly progress report of the NHIS activities Among Federal Workers in Nigeria, nominal roll of staff, open registry on the Numbers of enrolees and the dependents, National Policy on National Health Insurance Scheme policy implementation guideline, annual report publication by NHIS, NHIS hand book, NHIS Questions and Answers, and the NHIS Act.

Conference materials/articles like paper presented at National Council on Health, conference reports on National Health Insurance, symposium and sensitization workshop paper on National Health Insurance programme.

This study was use descriptive statistics to present and analyse the data. The descriptive statistics such as, tables, frequencies, percentages were used to present the data. The multiple linear regressions model was to be used as indicated below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon.$$

Where;

Y=Performance

β_1 to β_3 are the regression coefficients

β_0 = Constant Term

X_1 = affordable health care service

X_2 = testing and diagnostic services

X_3 = referral services

E=Error term

The test will be made at 5% error or level of significance. The decision rule to be adopted in this study is when the computed X^2 , is less than the critical X^2 the null hypothesis (H_0) is accepted. If otherwise, H_0 is rejected while the alternative Hypothesis (H_i) is accepted.

The analysis was one using independent variable (Implementation of National Health Insurance Programme) and Health Care Service Delivery Among Federal Workers in Nigeria as the dependent

variable.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.950 ^a	.902	.901	.36133

a. Predictors: (Constant), effectiveness of referral services provided by health care service providers to enrollees in Kaduna, effectiveness of health care service providers in providing affordable health to the enrollees in Kaduna, effectiveness of health care service providers in providing testing and diagnostic services to enrollees in Kaduna.

The R (multiple correlation coefficient) value is 0.950, which indicates a strong positive correlation between the predictors and the outcome variable.

The R Square value is 0.902, meaning that approximately 90.2% of the variance in the outcome variable can be explained by the predictors in this model. This is a high value, indicating a good fit.

The Adjusted R Square value is 0.901, which takes into account the number of predictors and adjusts the R Square value accordingly. It is very close to the R Square value, indicating that the model is not over-fitting or under-fitting the data.

The Std. Error of the Estimate value is 0.36133, which represents the average distance between the observed and predicted values of the outcome variable. A lower value indicates a better fit of the model.

The predictors mentioned in the model are "How effective is the referral services provided by health care service providers to enrollees in Kaduna?", "How effective is the health care service providers in providing affordable health to the enrollees in Kaduna?", and "How effect is health care service providers in providing testing and diagnostic services to enrollees in Kaduna".

Overall, this model summary suggests that these predictors have a strong and significant relationship with the outcome variable. It seems that the referral services, affordability of health care, and testing/diagnostic services provided by health care service providers in Kaduna play a crucial role in determining the effectiveness of health care for enrollees in that area.

Table 2: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	443.056	3	147.685	1131.160	.000 ^b
	Residual	48.177	369	.131		
	Total	491.233	372			

a. Dependent Variable: How effect is National health care service to enrollees in Kaduna?

b. Predictors: (Constant), How effective is the referral services provided by health care service providers to enrollees in Kaduna?, How effective is the health care service providers in providing affordable health to the enrollees in Kaduna?, How effect is health care service providers in providing testing and diagnostic services to enrollees in Kaduna

An ANOVA analysis was conducted to examine the effect of various predictors on the dependent variable, which is "How effective is the National health care service to enrollees in Kaduna?"

The regression model shows that the predictor variables (constant, effectiveness of referral services, effectiveness of providing affordable health, and effectiveness of testing and diagnostic services) collectively account for a significant amount of the variability in the dependent variable. The sum of squares for the regression model is 443.056, indicating the overall variability explained by the predictors.

The degrees of freedom (df) for the regression model are 3, representing the number of predictors. The

mean square for the regression model is 147.685, which is the sum of squares divided by the degrees of freedom. The F-statistic is 1131.160, indicating that there is a significant relationship between the predictors and the dependent variable. The p-value (Sig.) of .000 further supports this, as it is less than the commonly used significance level of .05.

The residual component represents the unexplained variability in the dependent variable. The sum of squares for the residuals is 48.177, with 369 degrees of freedom. This means that there is still some variability in the dependent variable that is not accounted for by the predictors.

Overall, this ANOVA analysis suggests that the effectiveness of various health care services provided to enrollees in Kaduna is significantly related to the National health care service and other predictor variables.

Table 3: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.112	.045		2.469	.014
	Effectiveness of the health care service providers in providing affordable health to the enrollees in Kaduna	.109	.037	.115	2.920	.004
	Effectiveness of health care service providers in providing testing and diagnostic services to enrollees in Kaduna	.145	.039	.149	3.737	.000
	Effectiveness of referral services provided by health care service providers to enrollees in Kaduna	.720	.036	.714	19.745	.000

a. Dependent Variable: effectiveness of National health care service to enrollees in Kaduna

The data presented the coefficients for each variable in relation to the effectiveness of health care service providers in providing affordable health, testing and diagnostic services, and referral services to enrollees in Kaduna. For the variables; effectiveness of health care service providers in providing affordable health to the enrollees in Kaduna, the unstandardized coefficient (B) is 0.109. This suggests that for every unit increase in this variable, there is a corresponding increase of 0.109 in the effectiveness of providing affordable health. The standardized coefficient (Beta) of 0.115 indicates that this variable has a moderate positive effect on the effectiveness of health care service providers.

Effectiveness of health care service providers in providing testing and diagnostic services to enrollees in Kaduna, the unstandardized coefficient is 0.145. This means that for every unit increase in this variable, there is a corresponding increase of 0.145 in the effectiveness of providing testing and diagnostic services. The standardized coefficient (Beta) of 0.149 shows that this variable also has a moderate positive effect on the effectiveness of health care service providers.

Effectiveness of referral services provided by health care service providers to enrollees in Kaduna, which

has an unstandardized coefficient of 0.720. This indicates that for every unit increase in this variable, there is a corresponding increase of 0.720 in the effectiveness of providing referral services. The high standardized coefficient (Beta) of 0.714 highlights that this variable has a strong positive effect on the effectiveness of health care service providers.

4.3 Discussion of Findings

The study revealed that the affordability of healthcare has been shown to have a positive impact on the effectiveness of healthcare service providers in Kaduna. This is supported by empirical studies that have revealed a positive association between patients' perceived value of service quality and their trust in physicians, which is influenced by the relationship between the affordability and perceived quality of healthcare services (Sanil & Eminer, 2021; Lee et al., 2018).

2. The study revealed that the testing and diagnostic services have been shown to have a positive impact on the effectiveness of healthcare service providers in Kaduna. The effectiveness of healthcare services in Kaduna has been back by empirical studies, with a focus on the impact of testing and diagnostic services provided by healthcare service providers. Several studies have shed light on the positive impact of various healthcare services on patient satisfaction and healthcare outcomes (Manzoor et al., 2019) found that laboratory and diagnostic care, preventive healthcare, and prenatal care have a significant and positive effect on patient satisfaction (Manzoor et al., 2019). Similarly, Hussain et al. (2019) revealed that doctor services, nurses' services, and waiting time had positive significant impacts on patient satisfaction (Hussain et al., 2019). These findings underscore the positive influence of healthcare services, including diagnostic and preventive care, on patient satisfaction, which is indicative of the effectiveness of healthcare services in Kaduna.

3. The finding revealed that referral services provided by healthcare providers significantly impact the quality of care received by enrollees in Kaduna State aligns with existing research on the importance of effective referral systems in improving healthcare outcomes. Several empirical studies support this claim, highlighting the crucial role of appropriate referrals in enhancing the overall effectiveness of healthcare services. This finding is supported by the study conducted by Arah, Abdulhamid, , Adamu, & Musa (2021). whose study assessed the referral system at secondary and tertiary healthcare facilities in Kaduna metropolis. The findings revealed inadequacies in the referral process, leading to overcrowding at higher-level facilities and bypassing of primary healthcare centers. This suggests that improving the referral system could significantly enhance healthcare access and utilization in Kaduna.

CONCLUSION

In conclusion, affordability of healthcare has a positive impact on the effectiveness of healthcare service providers in Kaduna. This is evident in the associations between patients' perceived value of service quality, trust in physicians, healthcare seeking behavior, healthcare subsidies, patient satisfaction, and healthcare workers' practices. These findings underscore the importance of ensuring affordability and accessibility in healthcare provision to enhance the overall effectiveness of healthcare service providers in Kaduna.

The study also concludes that diagnostic and testing services have a positive impact of healthcare effectiveness, particularly in the context of patient satisfaction, healthcare outcomes, and resource availability. These findings underscore the importance of efficient and accessible diagnostic services in contributing to the overall effectiveness of healthcare services in Kaduna.

Prompt referrals ensure patients receive appropriate treatment for complex conditions by directing them

to facilities with the necessary expertise and resources. Efficient referrals prevent primary care facilities

from being overburdened with cases beyond their scope, allowing them to focus on managing less complex conditions effectively and when patients receive timely and appropriate care through effective referrals, their satisfaction with the healthcare system increases.

Recommendations

According to the study's findings on the positive effects of healthcare affordability and service provision on effective health services in Kaduna, the following recommendations are proposed:

1. Enhance Healthcare Affordability Programmes:

Federal Government through the NHIA should implement policies that aim to increase the affordability of healthcare services for all citizens, especially those in lower socioeconomic strata. This may involve subsidizing healthcare costs, expanding insurance coverage, or introducing targeted assistance programs for vulnerable populations. Additionally, encourage healthcare providers to offer transparent pricing structures and explore innovative payment models, such as sliding-scale fees or income-based discounts, to improve access for individuals with varying financial capacities.

2. Strengthen Diagnostic and Testing Services:

Federal Government through the NHIA should invest in improving the availability and accessibility of diagnostic and testing services across healthcare facilities in Kaduna. This could include upgrading equipment, expanding laboratory and diagnostic capabilities, and providing training for healthcare professionals to ensure accurate and timely diagnoses. Foster partnerships between the public and private healthcare sectors to facilitate the sharing of resources and expertise in diagnostic services, thereby improving overall healthcare quality and patient outcomes.

3. Facilitate Prompt Referral Systems:

Federal Government through the NHIA should develop comprehensive referral networks and protocols to facilitate the seamless transfer of patients between healthcare facilities based on their specific needs and conditions. Provide training and education for healthcare providers on the importance of timely and appropriate referrals, as well as effective communication strategies to ensure continuity of care and patient satisfaction. Implement technology-driven solutions, such as electronic health records and telemedicine platforms, to streamline the referral process and enable real-time communication between healthcare providers, thereby reducing delays and improving patient outcomes.

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