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Implementation of Health Service Delivery Component of the National Strategic Health Development Plan in Kogi State, Nigeria (2018-2022)

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Abstract

This study appraises the implementation of the health service delivery component of the National Strategic Health Development Plan (NSHDP) in Kogi State, Nigeria. The NSHDP (2010) highlights the significant human development challenges faced by Nigeria, primarily due to the lack of a robust healthcare delivery system. The study underscores the need for a pragmatic and sustainable risk-pooling mechanism to remove physical and financial barriers to healthcare access for the poor, along with financial protection policies. It also emphasizes using socio-economic characteristics of households to provide evidence for policy focus, examining how these align with realities in Kogi State. Guided by four research questions, objectives, and hypotheses, the study adopts the Systems theory as its theoretical framework and employs a descriptive survey research design. The study's population is 1,020,288, with data collected from both primary and secondary sources. A total of 400 questionnaires were distributed, with 376 completed and returned. Data presentation and analysis were conducted using simple percentages, tables, and ANOVA via SPSS. Findings reveal that inequity in the distribution of healthcare facilities significantly limits access to healthcare services in Kogi State. Additionally, essential medicines and technologies are found to be significantly inadequate in the state's health centers. The study recommends that the Kogi State Government, NGOs, and donor agencies implement a fairer redistribution strategy for healthcare facilities to minimize regional disparities and ensure equitable access to services. Furthermore, it advises that the Kogi State Government, through the Ministry of Health, continuously monitor inventory levels of essential medicines and modern equipment in health centers across the state.

Keywords: *Health Service Delivery, NSHDP Implementation, Kogi State Healthcare, Equity in Healthcare*

Introduction

The global quest to attain development in the 21st century, had become an issue of struggle to virtually every country. This struggle had manifested itself through various means, most especially the pursuance of development through the means of science and technology, economic development and diplomacy etc. However, the key element identified by the United Nations (UN) as a determinant for development is health care service delivery which is aimed at promoting the general physical and mental health and well-being of the people all over the world. The health care delivery parameter presents the gauge for measuring human capability and productive capacity around the globe without which development can barely be attained (UN, 2022).

However, global health burden is at an alarming rate and the risk stands a deterrent to attaining development. For instance, as argued by risk factors collaborators (Health Care Patterns and Planning

in Developing Countries,2013) the global health care burden and diseases have affected the production capacity of many economies in a form of attributable risk, disability, life lost and deaths. It presented that all death risks combined together globally account for 57·2%, and 41·6% of disability (Global Health Statistics Report, 2013). In the African continent for instance where life expectancy is low, it has been reduced further to an average of 52 years as a result of epidemic and leading disease risk factors such as AIDS, tuberculosis, malaria, diarrhoea, pneumonia, and measles in children. Other diseases include, Dracunculiasis (Guinea Worm), Onchocerciasis, Schistosomiasis, Trypanosomiasis, Filariasis and pandemic like Cholera, Meningitis. Injuries and trauma, child and maternal malnutrition, risky sexual behavior that spreads STDs, unhygienic water and sanitation practices, improper handwashing techniques, and negative social effects that negatively impacted the region's development are all examples of the extensive health care burden. It is also indicated that women and children bear the majority of the disease burden. Although Africa has made significant strides in certain areas of social and economic developments, it is faced with a huge burden in regard to health care delivery (World Health Organization, 2019). Therefore, for rapid development to ensue, there is need for sound health services delivery programmed and policies in line with Africa Health Strategy (2015) which aim to drop the rate of maternal mortality from between 500 and 1500 to 228 per 100 000 women, and the Under 5 mortality from 171 to 61 per 1000 children.

Nigeria which is one of the largest African countries, also share from the peculiarities of the African health care burden, and more worrisome is the overall low performance of its health care delivery system when compared with other poor African countries. This is attributed to some factors like poverty and unemployment, poor living conditions, ignorance and poor health behaviors, scarce health resources, infrastructure and low government expenditure on health (Eneji, Juliana, & Onabe, 2013). For instance, Nigeria, despite having a higher Gross Domestic Product (income per head) than Ghana, yet Ghana spends considerably more on publicly funded healthcare of $27 per person compared to a probable $18.70 in Nigeria, and South Africa $497 per person (Burke,

Sridhar, 2013). This scenario showcases that, healthcare delivery system in Nigeria is in a poor state. Evidenced by World Health Organization's ranking of Nigeria at 187th among the 191 member nations, based on overall health system performance (The Patient Factor 2017). This is due to the range of infant mortality rate and maternal mortality ratio of 339 deaths per 100,000 live births to 1,716 deaths per 100,000 live births. This health status indicator is one of the highest in the world, and is worse than the average for sub-Saharan Africa put together (Federal Ministry of Health, 2010).

The Federal Ministry of Health (FMOH) published the NSHDP in 2018, which outlines the country's strategy for improving the health sector and achieving Universal Health Coverage (UHC) by 2030. The plan includes measures to strengthen health systems, improve service delivery, and increase access to essential medicines and technologies. It also sets specific targets for reducing the burden of communicable diseases, such as malaria, tuberculosis, and HIV/AIDS, which remain major public health concerns in Nigeria. It is also to reverse the increasing prevalence of non-communicable diseases in order to meet global targets on the elimination and eradication of diseases, and significantly increase the life expectancy and quality of life of Nigerians.

As observed earlier, the bulk of the populace in Kogi State is poor, as such there is a need for adequate financial coverage for the vulnerable in the health service delivery. Specifically, the pregnant women, under-fives, orphans and the aged fall in the categories of vulnerable groups, therefore these categories of people provide benchmark for measuring financial access for vulnerable groups. This is because they cannot cope with out-of-pocket medical payments which are the dominant mode of financing health care in Nigeria. The implication of a very high level of out-of-pocket expenses is

that a significant proportion of the poor may be driven into destitution after paying for health care services. It is against this background that this study appraises the implementation of the Health Service Delivery Component of the National Strategic Health Development plan in Kogi State.

Statement of the Problem

The daunting human development challenges faced by Nigeria, as indicated by the National Strategic Health Development Plan (NSHDP) (2010) is centered upon lack of provision for a solid health care delivery system. It specifically highlighted the failure of the government to ensure equity in health care delivery. Geographical equity in the distribution and access to health care facilities is one of the indicators of health service delivery. This has been attested to by studies conducted by Ademiluyi and Aluko-Arowolo (2009), Awoyemi, Obayelu and Opaluwa (2011), Zaka and Muhammad (2012), Jaro and Ibrahim (2012), Adesiji, Dada and Komolafe (2012), Omololu, Okunola and Salami (2012), and Ayoade (2014) which showed a lopsided distribution of health facilities between urban and rural areas in Nigeria. All these studies indicate that WHO requirements have not been met by government in its health care delivery. However, these studies concentrated mostly on the western part of Nigeria, and none of them covered Kogi State in particular, making it difficult to ascertain if the level of health care facilities distribution in Kogi State is in line with the national standard hence this study covers Kogi State to determine the extent of health care facilities distribution.

Empirical evidence generated from selected hospitals in Nigeria by Erhun, Babalola, Erhun, (2001) Tumwine, Kutyabami, Odoi, Kalyango, (2010) and Schopperle, (2013) revealed that in Nigeria, there are acute shortages of drugs and medical supplies in the public hospitals. Moreover, some of the available drugs in public health facilities are fake and expired, which undermined efforts to improve health care delivery. This partly suggests that National Drug Policy has not been well implemented to reduce the problem of shortages of drugs in the health care system. As a result of the shortages in drugs provision based on this literature this study ascertained the availability and accessibility of drugs in the health care centres. Therefore, it is against the backdrop that this study assesses the implementation of Health service delivery component of National Strategic Health Development Plan (NSHDP) in Kogi State.

Research Questions

The following research questions are formulated to guide the study.

To what extent does inequity in the distribution of health care facilities limits access to health care services in Kogi State?

Objectives of the Study

The main objective of the study is to appraise the implementation of Health Service Delivery of National Strategic Health Development Plan for the period 2018-2022 in Kogi State. The specific objective is to:

Assess the extent to which inequity in the distribution of health care facilities limits access to health care services in Kogi State

The Concept of Health Services Delivery

Health as it is known comes from the old English word hale, meaning “wholeness, a state of being whole, sound or well”. Hale comes from the proto-in do-European root kailo, meaning “whole,

uninjured, of good omen". There are three definitions of health to be considered; the first being "the state of organism when it functions optimally without evidence of disease or abnormality; second, a state of dynamic balance in which an individual or a group capacity to cope with all the circumstances of living is at an optimal level; thirdly, a state characterized by anatomic physiological and psychological integrity, ability to perform personally valued family work and community roles; ability to deal with physical, biologic, psychological and social stress; a feeling of wellbeing and freedom from the risk of disease and untimely death (William & Wilkins, 2006; in Balami, 2014). This definition stresses that the overall productivity of human capacity that would bring about developmental circumstances in the society is dependent on the status of health and wellbeing of the entire people.

The definition of health was coined by the World Health Organisation (WHO) in New York on 19th-22nd June, 1946 and signed on 22nd July, 1946 which was adopted by the international health conference, and endorsed by the representatives of 61 states and entered into force on 7th April, 1948. The World Health Organisation (WHO) adapted the definition of health as a state of physical, mental and social well-being and not merely the absence of disease or infirmity (WHO 1948). This definition positioned health care not to only be disease related, but also other psychological traumas' like poverty, frustration and other social factors (family problems). All these factors influence the overall performance of the people in the society. This is why Mbaya (2009) reiterate on the definition of health by WHO, that the economic prosperity of an individual or nation alike, is a function of public health and other factors. The WHO made the world aware of the value of man by declaring health as inalienable right of man and also by recognizing the close relationship which exist between and among human activities and level of health, and also the considerable increase in the scope of activities that would have to be ensured in order to meet, in the first instance, the essential needs of individuals for protection against diseases and consequently to fulfill as effectively as possible, their desire for a better standard of living (Mbaya 2009). This shows that putting other necessities of life are panacea to ensuring good health and productivity of human being in attaining desired state other than medicine.

Goals and Objectives:

The overall goal of the NSHDP is to improve the health and well-being of all Nigerians, particularly women, children, and vulnerable populations. The plan sets out several objectives to achieve this goal, including:

i. Improve maternal, newborn, and child health outcomes.
ii. Reduce the burden of infectious diseases.
iii. Improve access to essential medicines and health technologies.
iv. Strengthen health systems and increase efficiency.
v. Promote universal health coverage and financial protection.
vi. Enhance the prevention and control of non-communicable diseases.
vii. Develop and implement a comprehensive mental health policy.
viii. Strengthen health emergency preparedness and response.
ix. Promote health promotion and disease prevention activities.
x. Foster partnership and coordination among stakeholders.

Strategies for Implementing the Plan

To achieve the objectives of the NSHDP, several strategies were identified, including:

i. increasing domestic financing for health and allocating more resources to priority areas.

ii. Strengthening health systems through improved governance, leadership, and management.
iii. Expanding access to essential medicines and health technologies.
iv. Improving the quality of care through training and capacity building.
v. Promoting community participation and ownership of health programs.

Challenges of the Plan

Despite the laudable goals and objectives of the NSHDP, several challenges remain, including.

1. The plan requires significant increases in domestic financing for health, which may be difficult to achieve given competing demands on government resources.
2. Nigeria's health system faces numerous challenges, including inadequate infrastructure, equipment, and human resources, which can hinder effective implementation of the plan.
3. Political instability and changes in government can impact the continuity and consistency of health policies and programs, threatening the long-term success of the plan.
4. Corruption remains a pervasive issue in Nigeria's health sector, and tackling it will require strong political will, robust institutions, and transparent processes.
5. The plan acknowledges the importance of addressing the social determinants of health, and sanitation, but may not adequately address these issues given resource constraints.

The National Strategic Health Development Plan (NSHDP) is the first of its kind in the history of the development of the Nigerian Health Care Delivery System which serves as the overarching, all encompassing, reference document for actions in health by all stakeholders to ensure transparency, mutual accountability for results in the health sector (NSHDP 2010). The document further reiterated that the National Health Plan (or NSHDP) - reflects shared aspiration to strengthen the national health system and to vastly improve the health status of Nigerians.

Osotimehin (2009) affirms that the health sector is characterized by lack of effective stewardship role of government, fragmented health service delivery, inadequate and inefficient financing, weak health infrastructure, mal-distribution of health work force and poor coordination amongst key Players, and to address these, he further reveals that the federal government implemented the Health Sector Reform Program (HSRP) from 2004-2007, which addressed seven strategic thrusts revolving around government's stewardship role; management of the national health system; the burden of disease; mobilization and utilization of health resources; health service delivery; consumer awareness and community involvement; partnership, collaboration and coordination.

Similarly, to set a foundation for health development plan, the Federal Ministry of Health has articulated this framework, as an overarching guide for the development of the National Strategic Health Development Plan (NSHDP). This framework is an all-encompassing one as all stake holders and tiers of government are involved as proved by Osotimehin (2009) where he narrates that the NSHDP would result from the harmonization of Federal, States' and local governments' health plans, thereafter serving as the basis for national ownership, resource mobilization/allocation and mutual accountability by all stakeholders – government, development partners, civil society, private sector and communities. As contained in the policy document, Osotimehin (2009) asserts that based on a multidimensional assessment of the health sector, the framework identifies eight priority areas for improving the national health systems with specific goals and strategic objectives. They are; leadership and governance for health; health service delivery; human resources for health; health financing; health information systems; community ownership and participation; partnerships for health development; and research for health.

Funding of Health Care /Financial Protection for Vulnerable Group

The most pressing people that need to have easy access to health care provision are the vulnerable group, who constitute the larger percentage of the population. However, one hindrance remains crucial that is finance. This is because the continued stagnating healthcare system in Nigeria is of great social and economic consequence, as the deregulation of healthcare financing and supply in Nigeria has further shifted the healthcare system towards competitive market ideal (World Development Report, 2005). Arkin-Tenkorang (2001) says that, health care financing refers to the collection of funds from various sources, pooling of funds and distribution of risk across larger groups of people, as well as the allocation or use of funds for purchase of services among public and private health care.

Bukola (2013) points out that majority of Nigerians cannot afford and access health care services because it is beyond their reach. Statistics puts 70.2% of Nigerians as living below the poverty line of USD 1.00 per day which encourages the vicious cycle of poverty, ignorance and disease. There is high dependence and pressure on government for funding of health services. At the same time, government has the bulk of healthcare expenditure in Nigeria, which comprises budgetary allocations from government at all levels (Federal, States and Local Government), (Eneji et'al 2013). Which is why financing health care cannot be left to the government alone as other sources must be found, such as one that insists on Community Based Health care financing, as an alternative for financing health care. The objective is to enable low –income people to work together and contribute resources to meet their health care needs and fair access to health care needs (Bukola 2013). Adinma, (2010), expresses that community health care financing may be defined as voluntary contributions made by individuals, families, or community groups to support the cost of health care services, with particular emphasis on primary health care. This is why Eneji et'al (2013) reiterates that, funding healthcare expenditure in Nigeria is from a variety of sources which include government, private sector, international donor agencies and NGOs. Access to adequate healthcare remains a challenge for many people living in Kogi State, Nigeria, especially among vulnerable populations such as those living in poverty, persons with disabilities, women and children. Despite progress towards increasing healthcare coverage, out-of-pocket payments remain a substantial barrier to access, resulting in financial hardship for households and contributing to persistent disparities in health outcomes.

According to a study by Okoli et al., (2017), out-of-pocket expenditure for healthcare is common practice in Kogi State, accounting for over 60% of total health expenditures. This finding aligns with data reported by the Nigerian National Bureau of Statistics (2019), indicating that 56.5% of household expenditure goes toward paying for healthcare services. High levels of out-of-pocket spending limit access to needed healthcare services for vulnerable populations who often cannot afford to pay for treatment (Uzochukwu et al., 2018).

In addition to direct costs associated with seeking healthcare, transportation expenses represent another significant financial barrier for many residents of Kogi State. A study conducted by Ogunbode et al., (2019) found that approximately half of respondents cited transport costs as a reason for delaying or foregoing healthcare services. Moreover, lack of awareness regarding available subsidies exacerbates financial difficulties experienced by vulnerable communities. For example, Uzochukwu et al. (2018) revealed that only 44.4% of pregnant women were aware of free antenatal care services offered by the federal government.

To address these barriers, several initiatives aimed at improving financial protection and expanding healthcare coverage have been implemented in Kogi State. One notable effort is the Basic Health Care Provision Fund (BHCPF), established under the National Health Act (2014) to provide funding

for basic healthcare services in underserved areas (Onyeonoro et al., 2020). However, despite initial implementation, ongoing operationalization issues persist. For example, only two local government areas had fully functional BHCPF structures as of December 2019, limiting its potential reach (Onyeonoro et al., 2020).

Another approach being pursued is the use of public-private partnership models to increase access to affordable healthcare services (Ezeome et al., 2018). By leveraging private sector investments and expertise, these collaborations aim to expand healthcare provision and reduce reliance on out-of-pocket payments. While promising, evidence suggests mixed results thus far, highlighting the need for continued evaluation and refinement of these strategies (Ezeome et al., 2018).

Statistical table for built hospitals, medical equipment, and staff strength in Lokoja West, Ajaokuta Central, and Bassa East local governments in Kogi State from 2018 to 2022:

Year	Local Government	Built Hospitals	Medical Equipment	Staff Strength (Doctors &Nurses)
2018	Lokoja local government Kogi West	2	Moderate	40 doctors, 150 nurses
2018	Ajaokuta Local government Kogi Central	1	Limited	20 doctors, 80 nurses
2018	Bassa Local government Kogi East	1	Basic	10 doctors, 50 nurses
2019	Lokoja local government Kogi West	1	Moderate	45 doctors, 160 nurses
2019	Ajaokuta Local government Kogi Central	2	Limited	25 doctors, 90 nurses
2019	Bassa Local government Kogi East	1	Basic	12 doctors, 55 nurses
2020	Lokoja local government Kogi West	3	Advanced	50 doctors, 180 nurses
2020	Ajaokuta Local government Kogi Central	1	Limited	30 doctors, 100 nurses
2020	Bassa Local government Kogi East	2	Basic	15 doctors, 60 nurses
2021	Lokoja local government Kogi West	1	Advanced	55 doctors, 200 nurses
2021	Ajaokuta Local government Kogi Central	3	Moderate	35 doctors, 120 nurses
2021	Bassa Local government Kogi East	1	Basic	18 doctors, 70 nurses
2022	Lokoja local government Kogi West	2	Advanced	60 doctors, 220 nurses
2022	Ajaokuta Local government Kogi Central	2	Moderate	40 doctors, 140 nurses
2022	Bassa Local government Kogi East	2	Basic	20 doctors, 80 nurses

Gap in Literature

The Uniqueness of this study is that while other studies on insecurity are made to interrogate its effect on single dependent variable for example Tumwine, Kutyabami, Odoi and Kalyango (2010) examined "Availability and

Expiry of Essential Medicines and Supplies during the 'Pull' and 'Push' Drug Acquisition Systems in a Rural Ugandan Hospital". The study employed a cross-sectional study with quantitative and qualitative methods of data collection. At Kilembe Hospital in Kasese district in the south western part of Uganda, various records were reviewed over a 2-year period during the Push system (2000 - 2001) and another 2-year period during the Pull system (2004 - 2005). Quantitative data were collected using data extraction forms, while qualitative data were collected using key informant interviews which were directed by a topic guide. Availability of essential drugs was assessed as the number of out-of-stock drugs and the number of days over which selected essential drugs were out of stock over a two-year period (counted at 365 days per year). A total of 27 essential drugs from the Essential drug list of Uganda and 11 medical supplies were used as indicator drugs and supplies. The study concludes that the Pull system showed improved drug supply and reduced expiries of drugs.

Amakom, and Ezenekwe (2021), conducted a study on implications of households catastrophic out of pocket (OOP) healthcare spending in Nigeria. The survey data for the study was drawn from the Nigerian Living Standard Survey (NLSS) 2003/2004, a welfare monitoring survey collected by the

National Bureau for Statistics (NBS) in collaboration with the European Union and the World Bank. The data contained about 19,158 households with complete information out of the 22,000 households in the sample. These households comprised of both rural and urban households. The data contained information on households' total expenditure and households' expenditure on and healthcare. The study found two important facts; First, the availability of health services is compounded with low capacity to pay, lack of prepayment or health insurance are leading to higher percentage of households with catastrophic expenditures. Second, is at the household level where socioeconomic characteristics have some serious impact on catastrophic expenditure when the poor households are excluded from the system. With catastrophic healthcare spending, households are at higher risk and when that happens, they become less healthy.

This study made an appraisal of the implementation of health service delivery component of national strategic health development plan in Kogi State interrogating multiple components of health service delivery such as distribution of health facilities, essential medicines and technologies, maternal and child health care services and financial protection and health coverage to the vulnerable groups in Kogi State. Also, of all the studies reviewed in Kogi State none was carried out or had a spread of the three senatorial districts represented by Bassa, Ajaokuta and Lokoja local governments areas of Kogi State but this study has attempted to fill this identifiable gap.

METHODOLOGY

Research Design

Once a problem identified in any research effort, the researcher's next tasks is to determine the type of research design that would be used to enable him to analyze and interpret his data to solve the problem at hand. Osuola (2005), define research design as the plan, structure and strategy of investigating conceived so as to the obtained answer to the research question and to control variance. In this research work, a survey design was used, which relate to collecting data from a population for intensive study and analysis. Questionnaire was used as the instrument employed to collect the data. They are a special form of correspondence developed to procure authoritative information from a number of respondents.

Population of the Study

The population of the study will consist of the total population of health care providers and beneficiaries. The health care providers consist of staff of health care facilities and non-governmental agencies (SFFH, UNICEF, and WHO) in the Three selected local government areas in the state. There are 1,416 health staff of both governmental and non-governmental health agencies, and the total number of health care beneficiaries (those who access medical services in the society) numbering 1,018,872 beneficiaries in the Three selected local government areas. Thereby, making the total of the study population 1,020,288 respondents which represented the population of the study. (Source: KSSHDP, 2024).

Sample Size and Sampling Technique

The Sample Size for the study is determined using the Taro Yamane Formular.

However, the formula used for calculating the Sample size for the study is thus:

$$n = \frac{N}{1 + Ne^2}$$

Where; n = Sample size

N= Population size

e = Sampling error (0.05).

The Sample Size of health care providers;

$$n = \frac{1{,}020{,}288}{1 + 1020288\ (0.05)^2}$$

$$n = \frac{1020288}{1+1020288X\ 0.0025} = n = 399.84\ n$$

The Sample Size of health care beneficiaries;

$$n = \frac{4466800}{1 + 4466800(0.05)^2} = n = 399.84\ n \approx 400$$

The sample size for this study is 400. In determining the sample percentage to be distributed to the three local governments; the formula is as follows:

$$\text{For Bassa LGA} = \frac{population\ of\ respondents}{Total\ Population} \times 100$$

i.e $\frac{306086}{1020288} \times 100$

= 29.9 approximately 30%

Sample percentage for Bassa = 30%

$$\text{For Ajaokuta LGA} = \frac{population\ of\ respondents}{Total\ Population} \times 100$$

i.e $\frac{255073}{1020288} \times 100$

= 25%

Sample percentage for Ajaokuta = 25%

For Lokoja LGA= $\frac{population\ of\ respondents}{Total\ Population} \times 100$

i.e $\frac{459129}{1020288} \times 100$

= 44.9 approximately 45%

Sample percentage for Lokoja = 45%

Furthermore, in order to obtain the number of questionnaire to be distributed in each local government area, the following formula is used;

$\frac{n}{1} \times sample\ percentage$

Where n = sample size

For senior Bassa LGA: $\frac{400}{1} \times \frac{30}{100}$ =120

That is, 120 questionnaire were distributed in Bassa LGA

For Ajaokuta LGA: $\frac{400}{1} \times \frac{25}{100}$ =100

That is, 100 questionnaires were distributed in Ajaokuta LGA
For Lokoja LGA: $\frac{400}{1} \times \frac{45}{100}$ =180

That is, 180 questionnaires were distributed in Lokoja LGA

Sample frame depicting the target population and Sample Size

Senatorial districts	Selected LGA,s	Rate (%)	Population		
			HCP	HCB	HCP+HCB
Kogi East	Bassa	30	424	305,662	306086
Kogi Central	Ajaokuta	25	355	254718	255073
Kogi West	Lokoja	45	637	458492	459129
Total	3 LGA's	100	1416	1,018,872.	1020288

Source: KSSHDP, 2024

KEY: LGAs (Local Government Areas), HCP (Health Care Providers), HCB (Health Care Beneficiaries). Table 3.3 shows the sample frame for the study, the senatorial district and the local governments selected for the study. The column for rate, gives the number for each local government

in percentage based on the proportion of the population of each local government. The total number of the population was retrieved from KSSHDP document while the population for each local government was calculated using simple percentage and the total population. The total of the sample for both HCP and HCB were retrieved from the calculation of the sample size, while the sample for each local government area was calculated using simple percentage.

Sampling Techniques

The sampling method chosen to draw the sample was the stratified random sampling procedure to select the respondents. Thus, the researcher undertook the stratification of Kogi state into three senatorial districts and one local government was picked from each senatorial district which are; Bassa, Ajaokuta and Lokoja LGAs from the Eastern, Central and Western Senatorial Districts respectively.

Sources of Data Collection

Data were collected from both primary and secondary sources. The researcher adopted the use of questionnaire as primary source to elicit responses from the respondents. The secondary sources used by the researches included text books, journals, and the staff register of health care providers in the three LGAs of Bassa, Ajaokuta and Lokoja, KSSHDP periodicals, staff checks list, internet, published and unpublished theses.

Statistical Method of Data Analysis

The data gathered from the questionnaire were analyzed using two types of statistical methods;

a. The percentage method denoted by $\frac{N}{N} \times \frac{X}{1} \quad 100$

(This was used to determine the percentage of responses from the respondents)

Where: X = frequency of respondents

N = total number of respondents

b. Analysis of Variance (ANOVA): This is the appropriate statistical tool that was used for easy computation and interpretation of the hypotheses of this research work. This statistical tool was used in order to enable the researcher determine or know the relationship between the variables tested. The formula for the computation of (ANOVA) is given below:

The ANOVA statistical method denoted by $F = \frac{MST}{MSE}$

Where:

F = ANOVA coefficient

MST = Mean Sum of Squares due to treatment

MSE = Mean sum of squares due to error

The (ANOVA) computation was done using the SPSS software programme. All statement of hypotheses (one to four) were tested using the (ANOVA) method at 0.05 level of significance.

3.9 Decision Rule:

A null hypothesis (Ho) will be accepted if the calculated (ANOVA) value is less than or equal to the table value and it is rejected if the calculated (ANOVA) value is more than the table value (t-critical).

Opinions on unequal/ Inadequate distribution of Health Care Facilities to the Localities

Local Government Area	Response (SA, AG, U, DA, SD)	Number of Respondents	Percentage of Respondents
Bassa LG	SA: 110, AG: 0, U: 0, DA: 0, SD: 0	110	100.0%
Ajaokuta LG	SA: 54, AG: 21, U: 12, DA: 5, SD: 4	96	100.0%
Lokoja LG	SA: 102, AG: 35, U: 12, DA: 11, SD: 10	170	100.0%

Source: Field Survey, 2024

The statistical calculation shows a result of 4.881 while the critical (table) value is 3.739. Therefore, null hypothesis is rejected because the calculated value is more than the table value. The study concludes therefore, that Inequity in the distribution of health care facilities significantly limits access to health care services in Kogi State

Findings of the Study
The result of the hypothesis one tested shows that the null hypothesis which stated that inequity in the distribution of health care facilities does not significantly limit access to health care services in Kogi State was rejected and the alternate hypothesis which stated that inequity in the distribution of health care facilities significantly limits access to health care services in Kogi State was accepted.

Discussion of Findings
The result of the hypothesis one tested shows that inequity in the distribution of health care facilities significantly limits access to health care services in Kogi State. This was confirmed by the fact that the calculated value of ANOVA of 4.881 is greater than the critical value of3.739. This suggest that the null hypothesis which stated that; inequity in the distribution of health care facilities does not significantly limit access to health care services in Kogi State was rejected and the alternate hypothesis which stated that inequity in the distribution of health care facilities significantly limits access to health care services in Kogi State was accepted.

This conforms to the assertion that Equitable distribution of healthcare facilities plays a critical role in ensuring accessible and quality healthcare services for all members of society, regardless of their

geographic location. Investigating the geographical equity in the distribution of healthcare facilities in Kogi State is imperative to identify potential disparities and devise strategies to rectify them. Studies focusing on the geographical distribution of healthcare facilities in Kogi State reveal striking inequalities. For instance, researchers examining the concentration of healthcare facilities in urban versus rural settings found marked disparities, favoring urban centers (Olatunji et al., 2017).

Additionally, variations in the number and types of healthcare facilities exist amongst the three senatorial districts within Kogi State. Analyses comparing the eastern, western, and central districts demonstrate conspicuous differences in the density and diversity of healthcare establishments (Salami et al., 2019). Disparities arise not only from uneven concentrations of healthcare providers but also from variations in specialized services offered across districts (Amodu et al., 2017). Specialized facilities catering to complex health needs tend to cluster predominantly in urban centers, leaving peripheral regions underserviced (Aluwong et al., 2016).

Based on the systems theory equity in the distribution of health care facilities takes the form of inputs. Inputs are the resources and contributions that a programmer and others in the field make. These include time, people (staff, volunteers), money, materials, equipment, partnerships, research base, and technology among other things. These inputs allow for the creation of outputs.

Conclusion:

Based on the result of the test of hypotheses, the study concludes therefore that, inequitable distribution of healthcare facilities significantly restricts access to healthcare services within the state. Addressing disparities in facility allocation is imperative to enhancing healthcare access. Secondly, essential medicines and technologies are found to be markedly deficient in health centers throughout Kogi State. Efforts should focus on reinforcing medical supplies and technology upgrades to promote efficient healthcare delivery. Thirdly, maternal and child health care services have been deemed inadequate and inaccessible, emphasizing the necessity for improved health education, increased resource allocation, and enhanced healthcare infrastructures tailored specifically for mothers and children. Lastly, financial protection and healthcare coverage for vulnerable populations are critically inadequate, requiring strategic action to implement inclusive health policies and secure sustainable financing methods capable of safeguarding the welfare of susceptible individuals. To comprehensively tackle the prevailing healthcare predicament in Kogi State, concerted efforts must be made to rectify observed inequalities and effectively allocate resources, thus advancing the standard and reach of healthcare services for all residents.

Recommendations

Based on the findings of this study, the following recommendations are proposed to improve healthcare services in Kogi State:

1. Redistribution of Health Care Facilities: The Kogi State Government, Non-Governmental Organizations and Donnor Agencies should consider implementing a fairer redistribution strategy for allocating healthcare facilities to minimize regional disparities and provide equitable access to healthcare services. Establish criteria for determining priority areas and collaborate with relevant stakeholders to optimize the placement of healthcare facilities.
2. Essential Medicines & Technologies: The Kogi State Government through the Ministry of Health should ensure continuous monitoring of inventory levels of essential medicines and modern equipment in health centers across Kogi State. Develop partnerships with pharmaceutical companies, donors, and international organizations to facilitate regular procurement and timely replacement of

expired items. Train staff in proper storage, handling, and administration of medications and technologies to maintain optimal patient outcomes.

3. Maternal and Child Health Care Services: The Kogi State Government should invest in capacity building of healthcare professionals focusing on maternal and child health care services, including antenatal care, skilled birth attendance, postnatal care, immunizations, and family planning counseling. Implement mobile clinics and outreach programs targeting rural and hard-to-reach areas to boost service accessibility and coverage. Collaborate with traditional leaders and religious institutions to promote acceptance and uptake of maternal and child health care services.

By adopting these evidence-based recommendations, decision-makers can positively influence healthcare delivery in Kogi State, ultimately leading to improved health indicators, reduced vulnerabilities, and enhanced wellbeing for its inhabitants.

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