

Impact of Health Care Expenditure on Maternal Mortality Rate among Rural Women in Benue South Senatorial District-Nigeria

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ABSTRACT

The challenges of maternal mortality rate in Nigeria is overwhelming and may due to funding from government and stakeholders. The main objective of this study is to examine the impact of health care expenditure on maternal mortality rate among women in Nigeria using the sample of women from the study area. This study will employ qualitative research technique using primary survey approach. The study will use snow ball sampling technique of refereeing other women as potential respondents. The instrument of collecting data will be structured questionnaire from the samples of government approved hospitals and primary health care centers across each of the Nine Council Areas in Benue State, further more ten hospitals will have been selected for the study Area council for reaching an average of 43 respondents per each Area council in Benue South- Nigeria. The method proposed in this study will be Ordinal Regression Model (ORM). The outcome show that funding is statistically significant in impacting the outcome of health care services in Nigeria. Finding also show that Monitoring and Evaluation of health care project and services is statistically significant in facilitating the reduction of maternal mortality rate in Nigeria. Thirdly, professional know-how is significant in reducing the prevalence of maternal mortality rate among women in Benue south Nigeria. Hence more funding of health care services is highly desirable from government and stakeholders to reduce the prevalence of mortality among women in Benue State-Nigeria

Keywords: Maternal Mortality Rate, Health Care Expenditure, Ordinal Regression, Rural Women, Benue South Senatorial District

INTRODUCTION

Health care expenditure in Nigeria over the years has not been sufficient enough to promote access to medical services. These challenges have rendered most communities in Nigeria not having access to quality health care services and if at all they have the opportunity to have one, the quality of the facilities and the health care givers are not good enough to provide the needed services among the people (Aigbedion,2023). These anomalies were confirmed by World Health Organization (WHO) report as at 2018 on the rising case of maternal mortality rate and other sundry health challenges. According to Bill Gate foundation. Out of every ten pregnant women in Nigeria, two out of them end up having mortality issues, hence making Nigeria having the highest rate of Maternal Mortality Rate in the world during the period (Bill and Melinda. Foundation Report, 2018). Maternal Mortality rate in Nigeria is caused by several factors such as lack of political will by the successive administration in tackling health care challenges over the years, paucity of funds from fiscal allocation, macroeconomic crisis, corruption among other things. Most importantly health care expenditure in Nigeria is below global fiscal allocation standard. It's the administration of President Bola Ahmed Tinubu has recently reacted towards the short fall by increasing health budget above the threshold of one Trillion Naira (Federal Ministry of Finance). The implication of this development will help increase health care expenditure

but the impact will not be able to sustain health care challenges in Nigeria. The challenges of health care expenditure is often seen and felt at the local government and the scope of this study is limited to Nine Local Government Area of Benue South. Most of the communities do not have access to primary health care services, this can only be provided at the local government headquarters. The Federal government established one its tertiary institution in a community that do not have a state-of-the-art primary health care Centre, this may pose health threat to both student, staff and the community members (Ann,2023).

Maternal mortality has been increasing indecent time, with negative effects on the socioeconomic development of the nation. According to the World Health Organization fact sheet (2018), approximately 830 women die every day from preventable causes related to pregnancy and childbirth. More worrisome is the fact that 99% of all maternal Deaths occur in developing countries. Maternal mortality refers to deaths due to complications from pregnancy or childbirth. Maternal and child health outcomes remains fundamental basis of sustainable development and healthy environment in any nation, particularly in developing countries like Nigeria, where the rates of morbidity and mortality remain excessively high (Elemuwa et al., 2024). Despite consistent national efforts, global partnerships, and the existence of strategic frameworks set, the Maternal and health outcomes in Nigeria have been largely unsatisfactory and unevenly distributed across the country's six geopolitical zones (FMoHSW, NPC, & ICF, 2024). These disparities reflect deep-rooted systemic challenges, including inequitable access to health services, socio-cultural barriers, poor. (FMoHSW, NPC, & ICF, 2024). These disparities reflect deep-rooted systemic challenges, including inequitable access to health services, socio-cultural barriers, poor funding, and inadequate infrastructure (Okeke et al., 2023). Private out-of-pocket expenditure dominates at 70% of aggregate health spending in Nigeria, placing huge burden on households, especially the urban-poor and vulnerable poor rural dwellers. This implies that households pay greater amount for basic healthcare services directly and this makes them more vulnerable to poverty and other social challenges, which call for an improved healthcare investment and increased health insurance coverage to mitigate these household challenges. The systemic challenges undermining health outcomes in Nigeria are severe and inimical to the growth of the health sector and economic growth. For instance, only 35% of births occur in certified and standard health facilities while 56% of nursing mothers receive no postnatal care within six weeks of birth. Doctor-to-patient ratio is about 1:4000 to 5000, which is far below the WHO's recommendation of 1:600 while global average physician density stands at 17 doctors for every 10,000 people.. The Nigerian Federal Ministry of Health (FMH) spent below its budget by 47% in 2021. This constrained quality healthcare services and deteriorated public health outcomes, such as high malaria, infant and maternal mortality, lower life expectancy at birth, increased out-of-pocket spending, worsening health inequality and general adverse effects on economic growth. Furthermore, the volatile oil revenues have cause fluctuations in healthcare funding, negatively influencing capital and recurrent expenditures in Nigeria. Nigeria has recorded one of the world's highest infant mortalities in recent years, ranging from 55 to 60 infant deaths per 1000. Studies have established that high infant mortality have negative impact on a nation's economic growth process because it deteriorates its potential for human capital accumulation, future working population, and strains public health resources. While economic growth can reduce infant mortality rates, reducing child deaths through investments in maternal care and primary healthcare are crucial for ensuring a healthy and stable population, efficient workforce and sustainable economic growth and development, especially in lower-income nations like Nigeria. One of the factors influencing infant mortality is socioeconomic status which includes children from poor homes facing higher risk of dying before their first birthday. Others are maternal education of which mothers and children under the age of five lack basic formal education and studies have established a strong relationship with higher infant mortality. Furthermore, the rural areas where necessary and basic healthcare facilities are lacking are more prone to infant mortality, when compared to urban regions with better healthcare facilities Maternal mortality is more severe in lower-income countries like Nigeria as it records the death of a woman or girl child within an average of 42 days during pregnancy, after childbirth or pregnancy termination and other causes. For instance, the global maternal mortality ratio in 2023 was 197 maternal deaths per 100,000 live births. Though, this rate varies significantly by region, with countries like Nigeria having much higher rates due to factors like moribund and insufficient healthcare infrastructure, limited access to quality healthcare facilities, high cost of healthcare services and common preventable causes such as unsafe abortions, infections, postpartum hemorrhage (severe bleeding), complications from delivery and high blood pressure (pre-eclampsia and eclampsia) Studies have shown that

maternal mortality has significant negative economic effects as it worsen household's socio-economic and financial burdens through healthcare spending and funeral costs;. This reduces household's workforce and, hence productivity. Furthermore, maternal mortality strains future economic potential by negatively influencing children's

Statement of Problem

The prevalence of maternal mortality rate in Nigeria in recent time is overwhelming; the study is motivated by lack of result-based Monitoring and Evaluation(M&E) framework for implementation of health care funding allocations by government and development partners for promoting health care system in Nigeria. The study having reviewed other articles, therefore seek to examine health care expenditure and maternal mortality rate in the context of employing the instrument of M&E framework in ascertaining the state of health care facilities, funds utilization and the level of trainings and skills of health care givers(Professionals) in the industry.

Research Questions

This study is aimed at assessing the quality of health healthcare facilities in Benue South, Nigeria. The research aim shall be achieved by asking the following questions;

1. How does the state of the health facilities use result-based M&E framework in the nine local government areas of Benue South, Nigeria?
2. To what extent is the level and capacity of medical equipment in these areas?
3. What is the capacity and level of competence of health professionals?

Research Objectives

This study is aimed at assessing the quality of health healthcare facilities in Benue South, Nigeria. The research aim shall be achieved by the following objectives;

1. Identify the state of the health facilities using result-based M&E framework in the nine local government areas of Benue South, Nigeria.
2. Established the need for more funding for identified remote areas where health facilities do not exist/and it exist with obsolete/moribund facilities
3. Ascertain the capacity and level of competence of health professional

LITERATURE REVIEW

2.1 Conceptual Review

Health Care Expenditure, Maternal and Child Health and NDHS

Healthcare expenditure is a crucial factor in enhancing the overall health status of a nation's populace. The healthcare investment made by the government has positive outcomes not just in terms of saving lives but also in terms of economic benefits, (Alhassan et al. 2021) Eventually, the country becomes better equipped to deal with any health-related catastrophe with strong and powerful health systems. Healthcare spending is even more significant for developing nations, given their vulnerable healthcare systems, (Tripathi et. al. 2020). There are so many suggestions that government should raise its expenditure in the development of the health sector since it enhances productivity and economic growth.

Aranda (2010) noted that the major reason for health expenditure is the expectation of improved health status, and that health status is governed by health investment. The demand for health care is derived from the demand for health itself. Both health care expenditure and improved health status are means to an end; the end is increased productivity and national development. Similarly, Berger and Messer (2002) explained that one of

the basic ways by which governments can alter their healthcare delivery systems is to increase public funding of healthcare infrastructure.

There are so many factors contributing to the increase in health spending levels in all developed countries. Those determinants of health expenditures include GDP growth, life expectancy, infant mortality, medical progress, technological improvement, public financing, population aging, alcohol consumption, tobacco consumption, and so on. Determinants of healthcare expenditure in Nigeria are shaped by a mix of economic, demographic, institutional, and systemic factors. These determinants influence both public and private health spending and are often intertwined with challenges such as weak governance, high out-of-pocket costs, and inadequate infrastructure.

Maternal and child health (MCH) refers to the health of women during pregnancy, childbirth, and

THEORETICAL LITERATURE

The Grossman's health capital model (1972): This model diverges from traditional economic views by conceptualizing health not merely as a consumption good but as a durable capital stock that yields an output of "healthy time". This stock depreciates with age, and individuals can invest in it to maintain or increase it. The model employs a household production function to account for the fact that health is not purchased directly but is produced by combining various inputs, including medical care, nutrition, exercise, and education. This theoretical lens provides a strong justification for why health expenditure should be viewed as an investment in human capital that directly influences health outcomes and productivity, and why control variables like education must be included in the analytical model.

Rosenzweig and Schultz Theory

As a build on the Grossman's theory, Rosenzweig and Schultz developed the Child Health Production Function in 1983, which proposed health as an outcome of various inputs like education, income and access to public services such as healthcare. In order to address the endogeneity of health inputs and assess the determinants of infant health, particularly birth weight, Rosenzweig and Schultz created a groundbreaking home production function model. Using two-stage least squares (2SLS) to examine how prenatal care and maternal behaviour impact outcomes, their paradigm takes unobserved health endowments into consideration. They discover that mothers frequently modify inputs based on these latent characteristics.

In summary, the theory established that endogeneity can be addressed in the health production function. For instance, a mother with a high-risk pregnancy (low endowment) might seek more prenatal care, which could make prenatal care look ineffective in a simple regression. Their analysis indicated that each month of delay in prenatal care reduces birth weight significantly. They also showed that the "endowment" or genetic predisposition of the fetus influences the intensity of care received. Their research provided a foundational approach for empirical health economics, specifically in analyzing the relationship between maternal behaviour, medical input utilization, and child health outcomes.

Wiseman-Peacock Hypothesis

According to the Wiseman-Peacock hypothesis, public expenditure grows in irregular "jumps" or increases rather than at a constant and continuous rate. This is usually the result of economic crises like the ravaging COVID-19 of 2000, wars or economic depressions. During these economic shocks, the "displacement process" or "concentration process" occurs when the government increases taxes and spending to absorb and stabilize the economy. This new level of spending typically persists even after the crisis has passed. In other words, after the economic shocks, government expenditure does not usually return to its pre-crisis level, rather, new demands and expectations have been established, leading to a permanent increase in the size of the government sector and its spending.

Wagner's Hypothesis

Wagner's Law also known as the law of increasing state activity, states that public spending increases at a faster rate than aggregate output as a country's economy and income develop, leading to sustainable growth of the government's role in the economy. This theory was first propounded by a German economist called Adolph Wagner, who suggests the existence of a causal and positive relationship between economic growth and the growth of the public sector. Wagner asserted that an industrializing and developing economy will naturally cause government activities and services to increase which in turn requires increased public spending. The law suggests that public sector growth is an endogenous characteristic of developing and industrializing nations and not just a gradual growth process.

In summary, Wagner's law reflects the structural shift in an economy where the provision of and demand for public goods and services increase with economic growth. Wiseman and Peacock's hypothesis of 1961 establishes a dynamic step-like insight for the growth of public spending that contrasts with the long-term, a steady growth pattern predicted by Wagner's Law. While Wagner establishes that rising national income triggers a continuous and smooth increase in government spending, Wiseman and Peacock established that crisis (banditry, insurgency, herdsmen and farmers clashes, religious clashes, kidnapping and other social and political unrest, currently ravaging Nigeria) cause "jumps" in spending that create a permanent displacement effect: a situation where people accept higher taxes during crisis, causing government spending to rise and may not decline even after end of the crisis.

Empirical Literature

George, A.C.C.,(2024). examined the nexus between public health care expenditure and maternal mortality in Nigeria. The study sourced their data from UNICEF, WHO, United Nations Population Division. The method employed by the study was ARDL econometrics. The findings from the result shows that government expenditure has a negative and significant relationship with maternal mortality rate in Nigeria. Also migration of trained medical professionals have a significant relationship with maternal mortality rate in Nigeria. Similarly other scholars such as; Akintunde, T.S, Ibrahim, T.R, Aribase, A., Ibrahim, K.A., (2023) examined the effect of health expenditure in Nigeria. The study sourced their data from world development indicators of the world bank and Central Bank of Nigeria (CBN) from 1991 to 2021. The method of analysis was ARDL, the result from the estimation shows that health care expenditure plays an important role in reducing maternal mortality rate in Nigeria. According to the studies of; Razakamananan K, (2023) examined relationship between health expenditures and health outcomes is more significant among the poor than the non-poor. However, public spending alone does not improve health status. Quality of governance is considered not only as an important determinant of health outcomes but also of the efficiency of public expenditure on health. In low-income countries, barriers to quality service provision can be observed, which may explain the effects of health expenditures. Therefore, this paper aims to identify the relationship between health expenditures and maternal and child mortality in Madagascar and the potential bottlenecks in the flow of funds for maternal and child health. Also, Olawole, O., Olawole, T., Alabi, O.J., Imopphonopi, D., (2019) examined the nexus between maternal health and health care in Nigeria. The study collected data from World Health Organization (WHO), United Nations Children Education Funds (UNICEF). The method employed by the study was the use of contemporary literature. Findings shows that sociopolitical factors affected the outcome of maternal care in Nigeria, also poor health care system affected the outcome of maternal care in Nigeria. According to the works of; Awoyemi and Makanju (2023) who employed an autoregressive distributed lag (ARDL) model to analyze the long-run relationship between government health expenditure and health outcomes in Nigeria. Their findings indicated a significant negative relationship between public health spending and maternal and infant mortality rates, suggesting that increased expenditure enhances population health outcomes in the long run. Similarly, Boundioa and Thiombiano (2024) analyzed data from the West African Economic and Monetary Union (WAEMU) using a two-stage least squares (2SLS) estimation technique and found that higher public health expenditure significantly reduces maternal mortality ratios. Also, In another study, Mao et al. (2023) conducted an extended cost-effectiveness analysis of public financing for maternal and child health interventions in Nigeria. Their results shows that targeted public investments in essential maternal and child health services yield substantial health gains across income groups, reducing inequities in access and

outcomes. These findings reveals that effective allocation of public resources to the health sector can improve maternal and child survival, particularly among vulnerable populations. According to he works of;Esan et al. (2023), examined the association between health insurance coverage and access to maternal health services among Nigerian women of reproductive age using NDHS 2018 data. Their results show that women covered by health insurance were significantly more likely to attend antenatal care (ANC) visits and deliver in health facilities compared to uninsured women. they found the importance of financial protection and reduced out-of-pocket expenditure in improving maternal healthcare utilization. Oyedele et al. (2023) employed multilevel modelling of NDHS data to investigate predictors of the maternity continuum of care (ANC, skilled birth attendance, and postnatal care) across subnational regions in Nigeria. The study found substantial regional disparities in maternal healthcare coverage, emphasizing the role of community and state-level factors that are often shaped by public health expenditure and the availability of healthcare infrastructure. Rana, Alam and Gow (2018) carried out a global analysis on health expenditure and its impact on child and maternal mortality among 161 countries within the period of 1995 to 2014 using IPS unit root, panel autoregressive lag and Granger causality tests. Results showed that health expenditure and health outcomes in terms of maternal and child health is stronger for low-income countries as opposed high-income countries. However, there was insignificant relationship between health expenditure and maternal mortality across all income levels of the world. Maruthappu et al (2014) conducted a wide retrospective study on the relationship between government healthcare spending in 24 European Union countries and maternal mortality between 1981 and 2010. The study utilized a multivariate regression analysis and revealed that after accounting for other co-founding variables, a 1% reduction in government health spending will cause a significant increase in maternal mortality rate (10.6% annually), that is, 89 maternal deaths in the European Union. Similarly; Furthermore, Aziz et al (2021) explored the role of health expenditures on maternal mortality in eight South Asian countries between 2000 and 2017 using fully modified ordinary least squares and dynamic ordinary least squares. The results revealed that that a 1% rise in health expenditure increased the maternal mortality rate by 1.95% in the case of FMOLS estimator and 0.16% in the case of DOLS estimator; showing that increase in current expenditure also causes in maternal mortality. Also, in a related study using ARDL technique, Akintunde (2023) examined poverty-income inequality-maternal health nexus in Nigeria. The findings showed that public spending on health and GDP per capita had negative relationships with maternal mortality rate, while poverty, inequality, unemployment and carbon emissions had positive significant relationship with maternal mortality rate in the short run while all the variables significantly reduced mortality rate in the long run. According to the works of;Bokhari, Gai, and Gottret (2007), using the instrumental variable approach, implied that economic growth and government health expenditure are important factors for boosting public health such as reduction in maternal mortality rate. Alves (2007), examined changes in levels and patterns of maternal mortality in Pernambuco, Brazil between 1994 and 2003. It was revealed that approximately 94% of the maternal deaths were judged to be avoidable with an improvement in health care expenditure. Also from the works of;Modelling the relationship of one of the government initiative of spending on health; the Janani Suraksha Yojana (JSY; a form of conditional cash transfer) between 2005 and 2010 in India against maternal mortality ratio using a Bayesian spatio-temporal model, Ng et al (2014) showed that despite the increase and wide support of the JSY programme, there is no association between the JSY and maternal mortality reduction in the study area. In the same vein, Gorter, Ir and Meessen (2013) conducted a wide review on the Results-Based Financing (incentives by government) of Maternal and Newborn Health Care in Low- and Lower-Middleincome countries. Most of the reviewed studies showed a positive effect of results-based financing on the utilization, satisfaction and subsequently outcome of maternal health care. In Nigeria, Onwujekwe et al (2020) conducted a study on the impact and sustainability of maternal health cash transfer on maternal health care indices. Result showed that introduction of conditional cash transfer was associated with increased utilization of public facilities for maternal health care and subsequent positive maternal health outcome. Similarly, the studies of;Betran et al., (2005) conducted a WHO systematic review study on the national estimates for maternal mortality and morbidity using regression model to ascertain relationship between variables. It was shown that part of the all country-specific variables that have relationship with maternal mortality rate is health expenditure per capita. Aldogan, Austill, and Kocakülâh (2014), observed prominent health outcomes such as infant, under-five, and maternal mortality rates due to government spending in the MENA region in Turkey from 1990 to 2010, by using pooled ordinary least regression, random effects, and

Hausman–Taylor instrumental variable models. And the result clearly established a negative relationship for maternal mortality.

METHODOLOGY

Study Area

The study shall conduct a survey across the nine local government areas of Benue South Senatorial zone of Nigeria to ascertain the state of the health facilities and to identify areas/communities where there are no presence of health care system. Benue south senatorial district is bounded with Kogi- East, Enugu –North, is Nasarawa-South and Cross River-North. The Area is pre dominantly occupied by the Idoma and Igede speaking tribes. Igede people occupied two major LGAs (Oju and Obi respectively). The six remaining LGAs are occupied by the Idoma speaking tribe. The occupation of the people is majorly farming, Lumbering, Trading and Mining.

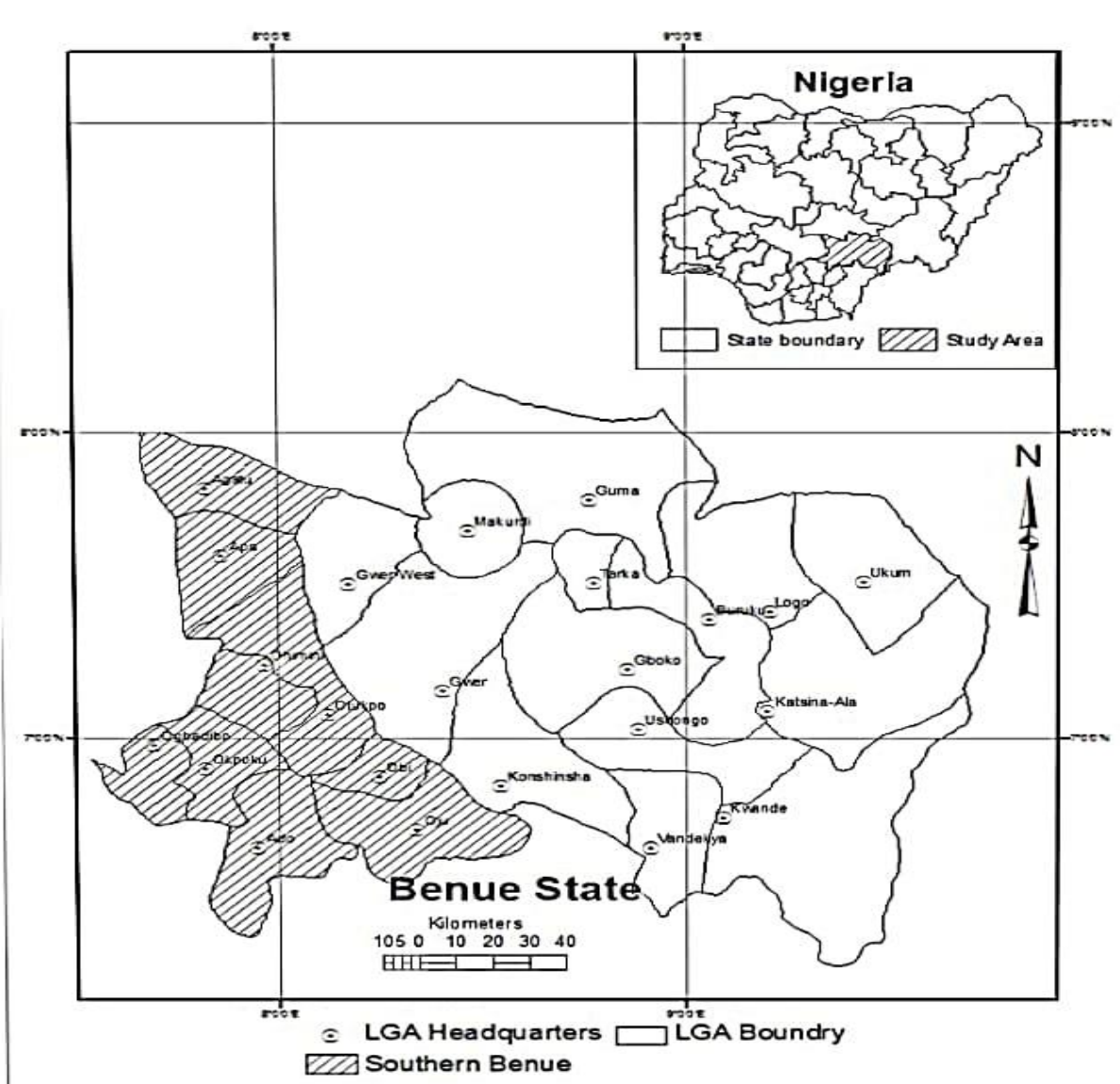


Figure 1: Showing the Map of Benue South Senatorial District of Nigeria

Study Design and Data Collection

The study is a primary research technique using baseline survey method, data will be collected using a structured questionnaire. The questionnaire shall be designed with recourse to structuring it in five sections

such as Section A, B, C, D and E, section A shall be looking at the bio-data of the participants while section B, C, D and E shall be addressing the specific objectives of the study. Data will be collected from the ten (Ten) hospitals for each Area Council in Benue-South Senatorial district, the targeted respondents shall be hospital Core professionals, auxiliary health personnel, and Nurses

Instrument of Data Collection

The questionnaire shall be used to obtain information about the state of the existing facilities. The questionnaire will be administered in each community/area whether medical facilities by data enumerators whose capacities would be built on baseline survey

Population and Sample size

The study focuses on Women mortality cases in Benue South Senatorial district. The sample size is aimed at allowing for meaningful generalizations following Corbetta's (2003) recommendation for standard deviation, 95 percent confidence interval, and a 5 percent sampling error, therefore the sample size has been determined using the Topman formula. A total of 389 was distributed across the Nine Local Governments Areas but 300 was returned from the concerned respondents

$$n = \frac{Z^2 pq}{e^2}$$

N = required sample size

z = degree of confidence (i.e., 1.96)

p = probability of positive response (0.5) e = tolerable error (0.05)

$$\text{Therefore, } n = \frac{1.96^2 * 0.5 * 0.5}{0.05^2}$$

$$n = 384$$

Method of Analysis

The method employed by the paper is an Ordinal Regression Model (ORM), this is an econometric technique is synonymous with qualitative research technique cause and effect of variables are investigated using parametric estimates for generalization.

Model Specification

The model employed in the study is stated as follows:

$$\text{MMR} = f(\text{ME}, \text{FHF}, \text{CHP},) \dots\dots\dots 3.1$$

$$\text{MMR} = \beta_0 + \beta_1 \text{ME} + \beta_2 \text{FHF} + \beta_3 \text{CHP} + \dots\dots\dots 3.2$$

Where MMR, is Maternal Matrilocality Rate of rural women in Benue South, FHF, is Funding for Health Facilities and CHP, s the competence of Health professionals

Data Presentation and Result

Ordinal Regression Result for ME, FHF & CHP

Variables	Coef.	Std error	t-statistic	prob.
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ME	-0.216901	0.107789	-28.16995	0.0002	
FHF	-2.006815	0.003399	-2.01227	0.0028	
CHP	-2.002256	0.161514	-12.3967	0.0070	
R-squared	0.719354	Mean dependent var		0.715696	
Adjusted R-squared	0.614534	S.D. dependent var		0.020857	
S.E. of regression	0.021499	Sum squared resid		0.003622	
Long-run variance	0.000641				

Source: Researcher's Computation using E-View 12 version,202...6

Table 2 above shows the result from model estimation where Women Entrepreneurs performance is explained by Cassava Value chain proxies (ME, FHF & CHP) whose outcome shows positive and statistical significance in explaining the variation in WEP in Benue South- Nigeria.

Test of Research Hypotheses

H₁: Monitoring and Evaluation framework is significant in reducing the incidence of maternal mortality rate in Benue South , the result from table2 indicated that M&E was statistically significant in explaining the change in maternal mortality rate in Benue South-Nigeria and this was evident from the probability value of 0.0 which was more than 5% hence the study therefore we reject the null hypothesis indicating that M & E was statistically significant in explaining the changes mortality rate among rural women.. Apparently, the policy implication of this outcome suggests that a one percent increase/decrease in M&E , all things being equal; will cause 21 percent increase/reduction in maternal mortality rate in Benue South -Nigeria.

H₂: Funding of Health Facilities (FHF) is significant in reducing the incidence of women mortality rate in Benue South, also empirical evidence has shown that FHF was significant in determining the variation in maternal mortality rate in Benue South-Nigeria. Hence based on the aforesaid, the study rejects the null hypothesis that FHF is not statistically significant in reducing maternal mortality rate in Nigeria. Also based on the probability value which was less than 5 percent level of significance. This implies that a one percent increase/decrease in FHF will eventually lead to 200 percent decrease/ increase in maternal mortality rate in Benue South-Nigeria.

H₃: Competence of Health Professionals (CHP) is significant in reducing the incidence of women mortality rate in Benue South, also empirical evidence has shown that FHF was significant in determining the variation in maternal mortality rate in Benue South-Nigeria. Hence based on the aforesaid, the study rejects the null hypothesis that FHF is not statistically significant in reducing maternal mortality rate in Nigeria. Also based on the probability value which was less than 5 percent level of significance. This implies that a one percent increase/decrease in FHF will eventually lead to 200 percent decrease/ increase in maternal mortality rate in Benue South-Nigeria.

DISCUSSION OF FINDINGS

Table one above shows the regression result of Health Expenditure on Women Mortality Rate on rural women in Benue South. The study made use of Monitoring and Evaluation(M&E), Funding of Health Facilities (FHF)

and Competence of Health Professionals (CHP) as independent variables while Maternal Mortality Rate (MMR) is the dependent variable. Monitoring and Evaluation framework was found to be significant in reducing the incidence of maternal mortality rate in Benue South, the result from table one indicated that M&E was statistically significant in explaining the change in maternal mortality rate in Benue South-Nigeria and this was evident from the probability value of 0.0 which was more than 5% hence the study therefore we reject the null hypothesis indicating that M & E was statistically significant in explaining the changes mortality rate among rural women.. Apparently, the policy implication of this outcome suggests that a one percent increase/decrease in M&E, all things being equal; will cause 21 percent increase/reduction in maternal mortality rate in Benue South -Nigeria. This empirical evidence justifies the studies of; Akintunde,T.S, et al(2023, Ann B.,2023).

Consequently, Funding of Health Facilities (FHF) is significant in reducing the incidence of women mortality rate in Benue South, also empirical evidence has shown that FHF was significant in determining the variation in maternal mortality rate in Benue South-Nigeria. Hence based on the aforesaid, the study rejects the null hypothesis that FHF is not statistically significant in reducing maternal mortality rate in Nigeria. Also based on the probability value which was less than 5 percent level of significance. This implies that a one percent increase/decrease in FHF will eventually lead to 200 percent decrease/ increase in maternal mortality rate in Benue South-Nigeria.

Furthermore, this outcome corroborates the works of Akintunde,T.S, et al (2023, Ann B.,2023). Finally, Competence of Health Professionals (CHP) is significant in reducing the incidence of women mortality rate in Benue South, also empirical evidence has shown that FHF was significant in determining the variation in maternal mortality rate in Benue South-Nigeria. Hence based on the aforesaid, the study rejects the null hypothesis that FHF is not statistically significant in reducing maternal mortality rate in Nigeria. Also based on the probability value which was less than 5 percent level of significance. This implies that a one percent increase/decrease in FHF will eventually lead to 200 percent decrease/ increase in maternal mortality rate in Benue South-Nigeria. This empirical evidence corroborates the works of;Akintunde,T.S, et al (2023, Ann B.,2023)

CONCLUSION & POLICY RECOMMENDATIONS

Conclusions

The study examined the impact of health expenditure on maternal mortality rate by using survey research technique in Benue South-Nigeria, instrument of data collection was structured questionnaire with Likert scale. The Benue South consist of Nine Local Government Area (LGA) where the study was carried out. The study employed Ordinal Regression techniques as a method of statistical analysis. The outcome of the result shows that health care expenditure proxies (M&E, FHF & CHP) was negatively significant in reducing the incidence of maternal mortality rate of rural women from the selected study area.

Policy Recommendations

- I. From the findings was found to be a significant in reducing the incidence of maternal mortality rate among women. Given this outcome, the government of Benue State in collaboration with other stakeholders should build the capacities of health professional on evidence-based M&E framework so as to track the progress of health expenditure among the selected areas of study.
- II. Government should invest more funds in procuring modern medical equipment to aid health care professionals in carrying their services so to reduce the incidence of women having complications during child delivery
- III. Government should employ and build the capacities of primary health care professionals in handling the activities of health care services.

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