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PUBLIC EXPENDITURES ON HEALTHCARE AND HEALTH OUTCOMES AMONG SELECTED RESIDENTS IN CALABAR, CROSS RIVER STATE, NIGERIA

Malau, Samuel Zakka, Mapis, Priscilla Istifanus and Gyang Martha kangyang, Msc, BSC

[1]MSc, PGDE, BNSc, RN, RM, RNE,
[1]MSc, BNSc, PGDPH, NE, RN, RM.
[3]Plateau State College of Nursing and Midwifery Vom

ABSTRACT

This study investigated the influence of public expenditures on healthcare and health outcomes among selected residents in Calabar, Cross River State, Nigeria. Four specific objectives and four hypotheses were developed for the study. Survey research design was adopted and a 24-item validated questionnaire was used for data collection. It has two sections: Section A and B. Section A elicited responses on the demographic characteristics of respondents while Section B focused on public expenditures on healthcare and health outcome variables. Each sub-independent variable of the study was measured by six items. Each of the subscales constituted a 4-point Likert scale. Cronbach Alpha statistics was used to establish the reliability at .79. The study covered some selected residence in Cross River State. A multi-stage sampling technique was employed to select the sample of five hundred (500) respondents drawn from both health workers, in-patients and out-patients as well as residents of the study area. In order to make a good randomization in the study, the study area was divided into eighteen basic clusters to represent each Local Government Area. Two trained research assistants who were health workers from the eighteen Local Government Areas were used to administer the questionnaires and also conduct the interviews. One–Way Analysis of Variance (ANOVA) statistical tool was used for data analysis. Findings revealed that that public expenditures in healthcare in terms of provision of health services, family planning activities, nutritional activities and emergency aids did not significantly influence health outcome in the study area. It was concluded that there is no significant influence of public expenditures on healthcare and health outcomes among selected residents in Calabar, Cross River State, Nigeria. It is therefore recommended among others that sanctions and strict disciplinary measures should be administered by State government on culprits who are caught in misappropriating public expenditures in healthcare

services as this would serve as a deterrent to other intending wrongdoers.

Keywords: Public expenditures, healthcare, heath outcome, residents

INTRODUCTION

The issue of implementing effective healthcare service delivery to promote quality health outcome in developing countries has become a herculean task (World Health Organisation, 2018). In Nigeria, the trend is the same because there is lack of funding to build and maintain modern health facilities. It has also been observed that healthcare is too expensive for most Nigerians. There is lack of properly trained and competent staff in the health sector. It is quite surprising to observe that most of the patients and 85 percent of the health personnel are uninformed, hence the inability to make healthcare a national priority (Thanh, 2013). This results in high mortality rate in both private and public health sectors which has further endangered the lives of patients, many already are in critical condition. This problem has also nurtured negative attitude in all cadres of healthcare providers even at the slightest provocation. Unfortunately, Cross Riverians seeking for medicare in any of the hospitals, daily do have their fair shares of the worrisome trend even in the face of the most life-threatening emergencies (Elias, 2022). The purpose of this study therefore is to examine the influence of public expenditures on healthcare and health outcomes of selected residents in Cross River State, particularly and Nigeria in general.

Health is a broad concept, defined by the World Health Organization as a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity (WHO, 1946). Accordingly, health outcomes encompass a wide range of health-related consequences of healthcare interventions and healthcare programmes. The New South Wales Health Department in Australia defined health outcomes as a change in the health of an individual, group of people or population which is attributable to an intervention or series of interventions (Frommer, Rubin, & Lyle, 2022). Health outcomes is geared towards change in health status as the focus of analysis. It is however the change in the health status of an individual, group, or population which is attributable to a planned intervention or series of interventions, regardless of whether such an intervention was intended to change health status (World Health Organisation, 2018). Health outcome measures include mortality, readmission and patient experience among others. Simply put, they are symptoms or result of health-related activities. They are measured on a continuum from morbidity (illness) to mortality (death).

Unfortunately, the researcher has observed the high rate of poor health outcomes orchestrated by mortality rate, readmission and patients' experience among most of the residents in various Local Government Areas in Cross River State. Some patients are constantly dying due to strange illnesses, malaria, typhoid, stroke, head trauma, or Alzheimer's disease and other disease-specific deaths. Most people in the study area are reported as either having died or are suffering clinical cardiovascular disease, depression, cognitive disorder, diabetic and hypertensive and lots more in schools, enterprises, commercial establishments, transportation, and public services. Buttressing this fact, Thanh (2013) alluded that poor

health can make households property exhausted, indebted, and reduce their essential consumption because people with poor health are not only having productivity and income losses, but also out-of-pocket (OOP) expenses for needed healthcare services both at individual and public level.

Over the years, most people have realized that good health is vital to socio-economic growth given that it enables people to participate in economic, social and political development. It is also an important indicator of quality of life and a major contributor to human capital. Improved health leads to improvement in life expectancy and reduces production time wasted, thus resulting in economic development. The linkages of health to poverty reduction and to long-term economic growth is powerful, it can be seen as a vicious cycle. Jeugmans (2021) describes poverty and health as forming a vicious cycle. He asserts that ill health creates and increases poverty while poverty exposes the poor to malnutrition, overcrowding and other health risk as well as affect accessibility and affordability of production hours thus perpetuating the poverty status. Health is a priority in its own right, the most important asset a human being has as well as a central input in development and poverty reduction. This fact explains the dedication of three of the Eight Millennium Development Goals to Health-related interventions. The National Economic Empowerment and Development Strategy (NEEDS) states that the goal of the Needs health component is to improve the health status of Nigerians in order to reduce poverty (NPC2014). This would be achieved by enhancing accessibility and affordability of health services by the rural poor who form the bulk or majority of Nigeria population. It is also indisputable that one's health status determines future income, wealth and consumption.

The researcher has observed that most of the Cross Riverian rural poor attribute their poverty to poor health, unemployment, lack of assets, inaccessible markets, illiteracy, insecurity and economic shocks. This is particularly a serious concern in the rural areas where the number of the rural poor is roughly twice that of the urban poor. Here the depth of poverty has more than doubled. Of the extremely poor, about 85 percent are in rural areas and two thirds of them live on farms. Income inequality is worse with attendant implications for health care demand, access to health care and proportion of income dedicated to health care. The most valuable asset of the poor is their labour, and the productivity of this poor is dependent on their health status. According to the World Bank (2021), the rural poor are often exposed to ill-treatment by social welfare institutions of the state and society and are powerless to influence key decisions affecting their lives. This calls for a stronger integration of the health concerns into the efforts of fighting poverty. Therefore, this study was designed to find out whether poverty reduction has to do with health care capital. The specific health care capital variables considered included; health care demand, access to health care and household income dedicated to health care services.

Public expenditures on healthcare can directly or indirectly affect the health outcome of people living in an area (Jeugmans, 2021). It includes all expenditures for the provision of health services, family planning activities, nutrition activities and emergency aid designated for health, but it excludes the provision of drinking water and sanitation. In recent years, some studies have shown that health care expenditure significantly influences health status through improving life expectancy at birth, reducing death and infant

mortality rates. Both public and private health care spending showed strong positive association with health status even though public health care spending had relatively higher impact.

LITERATURE REVIEW

Empirical literature on the influence of public healthcare expenditure and health outcome are limited, especially in relation to Nigeria. The most important fact is that, studies that summarize the discussion on the effects of health expenditures as well as chain of causality often advocate conflicting views. Some studies find a positive relationship between public healthcare expenditure and health outcome (Anand & Ravallion, 2023), while others found no relationship between the public health expenditures and the health outcome (Filmer & Pritchett, 2017). Yet several other empirical studies have shown that quality of institutions is an important factor in explaining health outcomes. Elias (2022) investigated the effect of healthcare services and delivery on health outcomes in Central Nigeria. The empirical analysis further showed that healthcare services and delivery also have no significant effect on life expectancy at birth in Central Nigeria; and it was also revealed from the study that healthcare services and delivery have no significant effect on maternal mortality rates in the region.

Another aspect of public expenditure on health is family planning activities. An increase in contraceptive use leads to a reduction in the number of births which, all other things being equal, means fewer maternal deaths, fewer stillbirths, and fewer children exposed to the risk of mortality.

Hutchison (2022) evaluated family planning and health outcomes in Northwestern Nigeria. Findings indicated that the knowledge, approval of family planning, and social influences, particularly from husbands, were all associated with poor family planning outcomes in using modern contraception. Okon (2018) worked on family planning and reproductive health in urban Nigeria: levels, trends and differentials. Findings revealed that the most commonly used contraceptive methods were implants and IUD in 29.4 and 28.4% of the participants respectively while the least used was condoms in 8.3% of the participants. Contraceptive used are highest among those 21–40 years (83.1%) and least among adolescents less than 20 years (6.7%). Riman and Akpan (2012) explored healthcare financing and health outcomes in Nigeria: A State level study using multivariate analysis. The study demonstrated that the high levels of infant mortality and morbidity rate was associated with the high incidence of out-of-pocket payment, and the wide disparity and inequality in income distribution. The study further observed a disproportionate disparity in the spatial distribution of health facilities, with concentration of health facilities at the urban areas rather than the rural areas, which of course contributed to the poor service demand.

In the same vein, another aspect of public expenditure on health outcome is nutritional activities. It means the consumption, purchase or receipt of food for a better health outcome. Ehinomen, Ugwu and Nwosa (2021) examined food intake and health status among households in South-Western Nigeria African Journal of Development Studies (AJDS). The study results showed that the household food expenditures Foodexp, increases the probability of the health status of the household being improved by

1.723 times. Timothy and Uchechi (2022) worked on the effect of public health expenditure on health outcomes in Nigeria and Ghana. The findings disclosed a low public health expenditure in both countries, the Ghanaian case revealed a negative relationship, which was primarily insignificant, whilst Nigeria indicated a negative one. Beyene (2023) evaluated the impact of food insecurity on health outcomes: empirical evidence from sub-Saharan African countries. It was found that a 1% increment in people's prevalence for undernourishment reduces their life expectancy by 0.00348 percentage points (PPs). Festus, Bassey and Uyang (2014) examined health capital and poverty reduction in rural Cross River State, Nigeria. The generated data revealed that the health capital variables of health care demand, accessibility and affordability of health care services and the proportion of household income dedicated to health care significantly relate with rural poverty reduction. It was concluded that the reduction of rural poverty independent of improvements in physical and financial access to health would have only a negligible effect on rural health care choices.

Similarly, Boachie, Ramu and Tatjana (2018) examined public health expenditures and health outcomes: new evidence from Ghana. They found that, overall, increasing public health expenditure by 10% averts 0.102–4.4 infant and under-five deaths in every 1000 live births while increasing life expectancy at birth by 0.77–47 days in a year. In the same vein, Oladosu, Uchechi and Anaduaka (2022) assessed the effect of public health expenditure on health outcomes in Nigeria and Ghana. Findings disclosed a low public health expenditure in both countries, the Ghanaian case revealed a negative relationship, which was primarily insignificant, whilst Nigeria indicated a positive one. It was concluded that an increment in public health expenditure in both countries is necessary to improve health outcomes whilst bringing to light that GDP, school enrolment and residing in urban areas enhance health outcomes. Jameelah, Taiwo and Ojapinwa (2012) examined public health expenditure and health outcome in Nigeria: The impact of governance. It was found that their public health expenditure did not significantly influence health outcome in Nigeria.

Akanni and Olarenwaju (2013) worked on health expenditure and health status in northern and southern Nigeria: A comparative analysis using national health account framework. Findings indicated that healthcare financing in the North is relatively lower, accompanied by significant poor health status, with heavy dependence on the households in both regions. The share of households in the north was proportionally disproportionate, because of the high poverty incidence vis-a-vis public providers. This raises equity concerns as those least able to pay were made to bear more burden. Mathew (2022) evaluated public health expenditure and health outcomes in Nigeria. This study made use of the Johansen Co-integration and the Vector Error Correction Model (VECM) econometric technique to determine the long-run relationship between public spending on health and health outcomes in Nigeria. The study found out that public spending on health has a significant relationship with health outcomes in Nigeria. It was also discovered that environmental factors such as carbon dioxide emissions which was used in this study affects individuals' health.

Okeke (2014) worked on the impact of emergency aids on health and education outcomes in Nigeria. The

study used vector error correction mechanism (VECM) to investigate the impact of government expenditure on total school enrolment and under-5 mortality rate in Nigeria in the period 1980- 2010. The results suggest that government health expenditure significantly reduces under-5 mortality rate while government expenditure on education did not significantly affects total school enrolment. Furthermore, female education was found to have a negative relationship with under-5 mortality (health outcome) though its effect was not significant. The study also shows that additional increase in percapita GDP will increase total school enrolment significantly.

Ogunjimi and Adebayo (2018) examined emergency aids, health outcomes and economic growth in Nigeria. The results of the Toda-Yamamoto causality tests showed a unidirectional causality running from health expenditure to infant mortality while there is no causality between real GDP and infant mortality; a unidirectional causal relationship running from health expenditure and real GDP to life expectancy and maternal mortality; and a unidirectional causal relationship running from real GDP to health expenditure. Romanus (2020) evaluated emergency aids and under-five mortality in Nigeria: An overview for policy intervention. Results from the study showed that though public health expenditure is statistically significant, it showed a positive relationship with the under-five mortality. From the review of literature, it is observed that there is no empirically tested research on the public expenditures on healthcare and health outcomes of selected residents in Cross River State, Nigeria, hence the relevance of the present study. The current study therefore focuses on the perspective of selected residents in Cross River State in order to equip them with the knowledge, skills and attitude for improved health outcome in tandem with public expenditure in healthcare service delivery.

STATEMENT OF THE PROBLEM

The poor state of health outcome amongst most residents of Cross River in recent years has become an issue of major concern. This is evident in the low life expectancy and pitiable physical functioning, role malfunctioning, social underperformance, pain and mental ill-health of some persons in the study area. There are allergies, colds and flu, conjunctivitis (pink eye), diarrhea, headaches, mononucleosis and stomach aches amongst some residents in Cross River State. These health phenomena did not start just in a day because from 1996 to 2019, there was an impulsive influx of meningococcal meningitis and cholera in Northern Cross River (Federal Ministry of Health, 2020). There is cerebrospinal meningitis, haemorrhagic fever, lassa fever, influenza and malaria in different parts of Cross River State (World Health Organisation, 2020). Poor healthcare outcome tends to affect the residents educationally, economically, psychologically, socially and even physically (Ukpong & Uzoigwe, 2020). However, in an attempt to address the issue of public expenditures on healthcare and health outcomes of selected residents in Cross River State, the State government decided to crackdown fake medical practitioners and illegal health facilities. Cross River State government also reactivated the Health Insurance Scheme named, Ayadecare, which is compulsory for residents. Similarly, many Non-Governmental Organisations (NGO) embarked on sensitization programmes in order to enable the residents to access information and services needed to promote their health status and protect themselves. Yet, the residents are not satisfied with the poor health services provided for them in line with public expenditures on healthcare. It is against this

backdrop that this study is situated to ask thus: To what extent does public expenditures on healthcare influence health outcomes of selected residents in Calabar, Cross River State, Nigeria?

Objectives of the study

The objective of this study was to examine the influence of public expenditures on healthcare and health outcomes of selected residents in Cross River State, Nigeria. Specifically, the study sought to determine:

1. The influence of provision of health services on health outcome in Cross River State, Nigeria
2. The influence of family planning activities on health outcome of selected residents in Cross River State, Nigeria
3. The influence of nutritional activities on health outcome of selected residents in Cross River State, Nigeria
4. The influence of emergency aid on health outcome of selected residents in Cross River State, Nigeria

Research hypotheses

1. Provision of health services does not significantly influence health outcome in terms of mortality rate, readmission and patients experience among selected residents in Cross River State, Nigeria.
2. There is no significant influence of family planning activities on health outcome of selected residents in Cross River State, Nigeria
3. Nutritional activities does not significantly influence health outcome of selected residents in Cross River State, Nigeria
4. There is no significant influence of emergency aid on health outcome of selected residents in Cross River State, Nigeria

Research methodology

This study was designed to examine the influence of public expenditures on healthcare and health outcomes of selected residents in Cross River State, Nigeria. Four specific objectives and hypotheses were developed for the study. Survey design was adopted for the study. A 24-item validated questionnaire by 3 experts in Test and Measurement was used for data collection. It has two sections: Section A and B. Section A elicited responses on the demographic characteristics of respondents while Section B focused on public expenditures and health outcome variables. Each sub-independent variable of the study was measured by six items. Each of the subscales constituted a 4-point Likert scale. Cronbach Alpha statistics was used to establish the reliability at .79. The study covered some selected residence in Cross River State. A multi-stage sampling technique was employed to select the sample of five hundred (500) respondents drawn from both health workers, in-patients and out-patients as well as residents of the study area. In order to make a good randomization in the study, the study area was divided into eighteen basic clusters to represent each Local Government Area. Within the cluster, participants were made to pick from box with papers written on them “Yes” and “No”. All participants who picked “Yes” in all the clusters and consented were enrolled for the study. This was repeated to obtain all the required sample size for each cluster. Two trained research assistants who were health workers from the eighteen Local Government

Areas were used to administer the questionnaires during the field work with the assistants. Section 'A' covered demographic data of respondents such as sex, age, religion, education, occupation, health workers, marital status and income level, while section B focused on questions which made use of Likert scale presentation in relationship to the variable under study. The Likert scale rating method was adopted to measure attitudinal response of respondents in relation to the phenomenon under study in order to achieve more realistic value of the research findings. Descriptive analysis on the variables were carried out and presented in tables while hypotheses were tested at .05 using One-Way Analysis of Variance (ANOVA) statistical tool.

Research hypothesis one

Table 1: Descriptive statistics and One-Way Analysis of Variance on the influence of health services provision and health outcome among selected residents in Cross River State, Nigeria

Groupings of health services provision		N		Mean		Std. Deviation
Low		115		13.25		.144
Average		151		14.35		.649
High		224		15.23		.159
Total		490		16.98		.450
	Sum of Squares	Df	Mean Square		F	Sig.
Between Groups	.948	2	.948		.011	.989
Within Groups	4494.336	487	6.439			
Total	4495.284	489				

P>.05;df=487, Critical F=2.65

The first hypothesis states that provision of health services does not significantly influence health outcome among selected residents in Cross River State, Nigeria. The independent variable in this hypothesis is provision of health services categorized at 3 levels (low, average and high) while the dependent variable is health outcome measured continuously. To test this hypothesis, the mean of health outcome and the sub-variables from low, average and high provision of health services were computed and associated using an appropriate statistical tool, descriptive statistics and One-Way Analysis of Variance. The outcome is presented in Table 1. The result shows that .011 is less than p-value of 2.65 at .05 alpha level of significant at 2 and 487 degree of freedom. Based on this result, the null hypothesis which states that provision of

health services does not significantly influence health outcome among selected residents in Cross River State, Nigeria is rejected while the alternate hypothesis is retained.

Research hypothesis two

There is no significant influence of family planning activities on health outcome of selected residents in Cross River State, Nigeria

Table 2: Descriptive statistics and One-Way Analysis of Variance on the influence of family planning activities and health outcome among selected residents in Cross River State, Nigeria

Groupings of family planning activities	N	Mean	Std. Deviation
Low	249	41.53	.913
Average	173	43.86	.352
High	68	46.87	.108
Total	490	43.77	.377

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	24.790	2	24.790	.017	.659
Within Groups	4470.494	487	6.405		
Total	4495.284	489			

P>.05;df=487, Critical F=3.16

The second hypothesis states that there is no significant influence of family planning activities on health outcome of selected residents in Cross River State, Nigeria. The independent variable in this hypothesis is family planning activities categorized as (low, average and high). The dependent variable is health outcome measured continuously. To test this hypothesis, the mean of health outcome and its sub-variables between family planning activities were calculated and compared by means of ANOVA. The result of the analysis was presented in Table 2. The result showed the summary of descriptive statistics and One-way Analysis of Variance of health outcome in consonant with the levels of family planning activities among residents. The result shows that the calculated value of .017 is less than p-value of 3.16 at 0.05 alpha level of significant at 2 and 487 degree of freedom. Based on this result, the null hypothesis which states that there is no significant influence of family planning activities on health outcome of selected residents in Cross River State, Nigeria is rejected while the alternate hypothesis is retained.

Research hypothesis three

Nutritional activities do not significantly influence health outcome of selected residents in Cross River State, Nigeria

Table 3: Descriptive statistics and One-Way Analysis of Variance on the influence of nutritional activities on health outcome of selected residents in Cross River State, Nigeria

Groupings of nutritional activities		N	Mean	Std. Deviation
Low		187	13.24	.154
Average		116	14.34	.549
High		187	15.24	.259
Total		490	16.97	.550
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	37.163	2	37.163	.001	.303
Within Groups	4458.122	487	6.387		
Total	4495.284	489			

P>.05;df=487, Critical F=2.14

The third hypothesis states that nutritional activities do not significantly influence health outcome of selected residents in Cross River State, Nigeria. The independent variable in this hypothesis is nutritional activities categorized as (low, average and high). The dependent variable is health outcome measured continuously. To test this hypothesis, the mean of health outcome and its sub-variables between nutritional activities were calculated and compared by means of ANOVA. The result of the analysis was presented in Table 3. The result showed the summary of descriptive statistics and One-way Analysis of Variance of health outcome in consonant with the levels of nutritional activities. The result shows that the calculated value of .001 is less than p-value of 2.14 at 0.05 alpha level of significance at 2 and 487 degree of freedom. Based on this result, the null hypothesis which states that nutritional activities do not significantly influence health outcome of selected residents in Cross River State, Nigeria is rejected while the alternate hypothesis is retained.

Research hypothesis four

There is no significant influence of emergency aid on health outcome of selected residents in Cross River State, Nigeria

Table 4: Descriptive statistics and One-Way Analysis of Variance of the influence of emergency aid on health outcome of selected residents in Cross River State, Nigeria

Groupings of emergency aid	N	Mean	Std. Deviation
Low	187	13.24	.154
Average	116	14.34	.549
High	187	15.24	.259
Total	490	16.97	.550

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	37.163	2	37.163	.001	.303
Within Groups	4458.122	487	6.387		
Total	4495.284	489			

P>.05;df=487, Critical F=2.14

The fourth hypothesis states that there is no significant influence of emergency aid on health outcome of selected residents in Cross River State, Nigeria. The independent variable in this hypothesis is emergency aid which is categorized as (low, average and high). The dependent variable is health outcome measured continuously. To test this hypothesis, the mean of health outcome and its sub-variables between emergency aid was calculated and compared by means of ANOVA. The result of the analysis was presented in Table 4. The result showed the summary of descriptive statistics and One-way Analysis of Variance of health outcome in consonant with the levels of emergency aid among the teachers in secondary schools. The result showed that the calculated value of .001 is less than p-value of 2.14 at 0.05 alpha level of significance at 2 and 487 degrees of freedom. Based on this result, the null hypothesis which states that there is no significant influence of emergency aid on health outcome of selected residents in Cross River State, Nigeria is also rejected while the alternate hypothesis is retained.

DISCUSSION OF FINDINGS

The result of hypothesis one revealed that provision of health services significantly influences health outcome among selected residents in Cross River State, Nigeria. This necessitated the acceptance of the null hypothesis and rejecting the alternate null hypothesis. The finding is in consonant with that of Filmer and Pritchett (2017) and Anand and Ravallion (2023) who found a significant relationship between the public health expenditures and the health outcome. This is equally in agreement with that of Elias (2022) who found that healthcare services and delivery also significantly affected the life expectancy at birth in Central Nigeria. It was also revealed from the study that healthcare services and delivery did have

significant effect on maternal mortality rates in the region. The finding is in consonant with that of Riman and Akpan (2012) and Okon (2018) who findings demonstrated that the high levels of infant mortality and morbidity rate was associated with the high incidence of out-of-pocket payment and the wide disparity and inequality in income distribution. The study further observed a disproportionate disparity in the spatial distribution of health facilities, with concentration of health facilities at the urban areas rather than the rural areas, which of course contributed to the poor service demand.

The second finding of this study also revealed that there is a significant influence of family planning activities on health outcome of selected residents in Cross River State, Nigeria. This finding is agreement with that of Hutchison (2022) which indicated that the lack of knowledge, approval of family planning, and social influences, particularly from husbands, were all associated with poor family planning outcomes in using modern contraception. The finding is equally in consonant with that of Okon (2018) whose findings revealed that the most commonly used contraceptive methods were implants and IUD in 29.4 and 28.4% of the participants respectively while the least used was condoms in 8.3% of the participants. Contraceptive used are highest among those 21–40 years (83.1%) and least among adolescents less than 20 years (6.7%).

The third finding of this study revealed that nutritional activities significantly influenced health outcome of selected residents in Cross River State, Nigeria. This finding is in consonant with that of Ehinomen, Ugwu and Nwosa (2021) whose results showed that the household food expenditures Foodexp, increases the probability of the health status of the household being improved by 1.723 times. The finding is equally in agreement with that of Timothy and Uchechi (2022) whose findings disclosed a low public health expenditure in both countries, the Ghanaian case revealed a negative relationship, which was primarily insignificant, whilst Nigeria indicated a negative one. It is also in agreement with that of Beyene (2023) who found that a 1% increment in people's prevalence for undernourishment reduces their life expectancy by 0.00348 percentage points (PPs).

The fourth finding of this study revealed that there is a significant influence of emergency aid on health outcome of selected residents in Cross River State, Nigeria. This result is in tandem with that of Okeke (2014) whose results suggested that government emergency aids could not significantly reduce under-5 mortality rate while government expenditure on education did not significantly affects total school enrolment. Furthermore, female education was found to have a negative relationship with under-5 mortality (health outcome) though its effect was not significant. The study also shows that additional increase in percapita GDP will increase total school enrolment significantly. The finding is equally in agreement with that of Romanus (2020) and Ogunjimi and Adebayo (2018) whose results of the Toda-Yamamoto causality tests showed a unidirectional causality running from health expenditure to infant mortality while there is no causality between real GDP and infant mortality; a unidirectional causal relationship running from health expenditure and real GDP to life expectancy and maternal mortality; and a unidirectional causal relationship running from real GDP to health expenditure.

The reason behind these findings could be that the inadequate provisions of health services and poor emergency aids by the State government, lack of family planning and nutritional activities among the residents must have culminated to low health outcome among the residents in Cross River State. Poor quality health services could possibly withhold growth, development and progress among residents whose government are found wanting in prioritizing the welfares of the citizens.

CONCLUSION

Based on the findings of this study, it was concluded that the effectiveness of health outcome is a function of public expenditures on healthcare. When the community healthcare officials pay keen attention to the way which they plan, organise, control and coordinate the implementation of healthcare amongst the residents in Cross River State, there is bound to be a better health outcome in service delivery.

RECOMMENDATIONS

Premised on the findings, it is recommended that:

1. More involvement of international donor agencies in the health intervention programmes of Cross River State. This is because the support of foreign partners in fighting the scourge of disease is needed to a high extent within and around the State.
2. Sanctions and strict disciplinary measures should be administered to culprits who are caught in misappropriating public expenditures in healthcare services in order to serve as a deterrent to other intending wrongdoers.

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