



Health Status of Households and Access to Health Facilities in Nigeria: Interrogating the Public and Private Sectors Participation

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This research studied the imperatives of health status of households and access to health facilities in Nigeria through the vista of Public and Private Sectors participation. Its aim is to make health care delivery accessible, available and affordable, inclusive of all the members of the households without discriminations. This is in line with the United Nations' Sustainable Development Goals (SDGs), Goal 3, which crux is to ensure healthy lives and promote well-being for all at all ages. Contemporarily, economists have contended that health care delivery system should through fiscal readjustments incorporate both the public and private sectors. Since health is a public good, the discourses should not be centred on the public alone as seen in most developing countries, Nigeria

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inclusive. In this era of fiscal deficit with respect to production of health outcomes, the government and the governed must synergize in a comprehensive fashion to change the narrative. Thus, Nigeria government should be interested in the well-being of her citizens towards the provision of accessible health care and improvement in health care infrastructure. Consequently, policies must be put in place to harness the various resources in the economy. The study garnered data from the six geopolitical zones in Nigeria through a well-structured questionnaire in a likert- five point scale. Utilizing the Ordinary Least Squares technique, the following results were obtained; the outcomes of the health care system (HOS), quality of health service used as input in production of health (QHS), efficiency of the health care system on the health status (EHS), accountability, transparency and regulation of the health care system (AHS) were all significant in explaining the variations in the health status of Nigerians. In all, the most important finding from the global statistic is the significance of explanatory variables in explaining the variations in the health status of Nigerians. The study concluded that; improvements in the quality of healthcare can lead to better health outcomes; Longer travel times often correlate with poorer health outcomes; higher levels of education generally lead to better hygiene practices; efficient healthcare systems make optimal use of financial, human, and technological resources; there is a positive impact of accountability and transparency on the health status of the population. The study recommended that: healthcare providers should adopt and maintain high-quality standards and continuously improve care delivery processes to enhance patient outcomes; establish more healthcare facilities and encourage the public –private sectors participation in underserved areas to reduce travel times and improve access to care; include hygiene education in school curricula and community programs to instill good practices from an early age; the implementation of continuous quality improvement initiatives to enhance the effectiveness of healthcare services and achieve better health outcomes ;efficiency in healthcare delivery ensures that patients receive timely care, which is critical for successful treatment outcomes and can prevent conditions from worsening and the establishment of robust reporting and monitoring systems. The implication of the findings of this study is that, robust participation of both sectors in healthcare delivery will lead to improved access and better management of health resources.

Keywords: Health status; access to health; public and private sectors.

1. INTRODUCTION

The World Health Organization (WHO) in 2019 in a statement to mark the World Health day, posit that the world's population cannot access essential health services. They maintained that millions of women give birth without help from a skilled attendant; millions of children are cut out on vaccinations against killer diseases, and millions suffer and die because they cannot get treatment for malaria, HIV, TB and other degenerative diseases [1]. In profiling the Sustainable Development Goals (SDGs), (SDG 3), all member countries are in agreement to achieving universal health coverage (UHC) by 2030. Thus, in order to meet this target, about one billion people globally need to benefit from UHC in the next five years. Nigeria has a population of over 215 million people, the largest in Africa. Among the West African countries, it has the second highest density of medical doctors, which is, however, still very low compared to the actual need for such a populous nation [2]. Government expenditure on health is considerably slimmer than what comes from

private contributions, differing by over two thousand billion Nigerian naira. About three percent of Nigeria's GDP is invested in the health sector, considerably below the average spending on healthcare among OECD countries [3]. Also, OECD member countries are mostly high-income countries, whereas Nigeria is an emerging economy and belongs to countries with lower middle income. Nigerians usually have to pay for medicine out of their own pocket. Often, the medicine is expensive and difficult to afford. In 2019, on average, health care made up six percent of Nigerian household spending, with higher figures in rural areas than in urban zones. It can be concluded that the quality of healthcare service delivery in both the public and private sector is undermined and inadequate due to the following: lack of detailed documents in the constitution to define the roles and responsibilities of each tier of government. Unregulated private health sector due to lack of enforcement activities by the SMOH; Poor government funding of the GDP on health; Mismanagement and corruption across the three tiers of government, leading to lack of

accountability of health funds; lack of total coverage of the NHIS across all population groups; lack of well-equipped health centres in the rural areas and lack of institutional support to the private sector [4]. Health sector reform is therefore imperative. Consequently, the reforms packaged primary health care (PHC) as the foundation of the Nation's health system with fiscal responsibilities for health shared among the three tiers of government. With this understanding, the Nigerian health system operates practically on three levels: primary, secondary and tertiary. This corresponds to a shared responsibility from Local, State and Federal Governments respectively. In developed economies, public health infrastructure enjoys funding from government fiscal appropriations, which makes the facilities attractive to government officials and the bourgeoisie to patronize. In developing countries, Nigeria inclusive, the reverse is the case.

Access to basic health services of adequate quality is still deprived to many of the world's poorest people, particularly in Nigeria (United Nation, 2009). In view of ill-funded health systems in developing countries, governments at all levels are faced with a predicament. At all levels, Federal, State and Local Government Areas, a healthy population is potentially a more productive population. This underscores the rationale for resource deployment to health sector infrastructure. Government fiscal disbursement to the health sector is characterized with a lot of shenanigans. Its attendant effect is total rejection of public health facilities by the bureaucratic class who should have boosted confidence in the system. Historically after gaining independence in 1960, Nigeria focused on developing a public healthcare system. The government established numerous healthcare facilities and invested in medical education. Over time, the public healthcare system faced significant challenges, including underfunding, inadequate infrastructure, insufficient medical supplies, and workforce shortages [5] Nigerians have to pay for medicine out of their own pocket. Frequently, the medicine is expensive and difficult to afford [6]. In 2019, on average, health care made up six percent of Nigerian household spending, with higher figures in rural areas than in urban zones. Nigeria is placed at 142 out of 195 countries according to a Lancet report's ranking of health systems performance using healthcare access and quality as its criteria [7]. All these led to inefficiencies and a decline in service quality.

This gave rise to growth of the private sector. The inefficiencies in the public healthcare sector spurred the growth of private healthcare providers. Nigerians, especially those with higher incomes, began to seek assumed better quality care in the private sector. However, the private sector attracted significant investment and introduced innovative practices, technology, and better management, enhancing service quality. The Nigerian government has increasingly recognized the importance of the private sector in healthcare [8]. Policies promoting PPPs aim to leverage private investment and expertise to improve healthcare delivery. In 2005, the Nigerian government launched National Health Insurance Scheme (NHIS), the NHIS was designed to improve healthcare access by promoting health insurance coverage, which includes both public and private healthcare providers. Private healthcare facilities are predominantly located in urban areas, leading to disparities in healthcare access between urban and rural populations. The public sector remains the primary provider in rural areas, but often with limited resources. While private healthcare often offers higher quality services, it can be excessively expensive for many Nigerians. This creates a reliance on the public sector for those who cannot afford private care. Paradoxically, the private facilities make referrals to the public facilities (particularly, tertiary hospital) showing their ineptitude in delivery of health outcomes. In all of these, access to health is in serious catastrophe, with its humongous attendant distortions (both public and private health institutions) in health care delivery and health status of the citizens. Notably, the private sector is more responsive in adopting new technologies, such as telemedicine and digital health solutions, which are increasingly becoming part of healthcare delivery in Nigeria. However, the Nigerian government is also making strides to integrate digital health solutions within the public sector to improve access, service delivery and patient outcomes. Furthermore, COVID-19 Pandemic highlighted and exacerbated existing challenges in both the public and private healthcare sectors [9]. It accentuated the need for robust healthcare systems and increased collaboration between sectors.

The participation of public and private sectors in Nigeria's healthcare system reflects a complex interplay of historical, economic, and social factors. Efforts to improve healthcare in Nigeria must address the disparities between these sectors while fostering cooperation and

leveraging the strengths of both to ensure equitable and high-quality healthcare for all Nigerians. The concern however is on the possibility for Nigeria and Africa to learn from models that worked in developed climes and harness the imperatives of regimes that are still working in a systematic public-private partnership delivery of health outcomes. Overall, the investigations are crucial for enhancing the healthcare system, improving health outcomes, and ensuring that all Nigerians have access to quality healthcare services.

1.1 Statement of Problem

The population of Nigeria with estimated growth rate of 3.2 percent per year is estimated at 402 million people in 2050 [10]. Consequently, the Nation's demand for health care is ever increasing due to the expanding and ageing nature of the demographic composition of the population. However, health care resources and its provisions are limited, owing to so many factors. Nigeria health care system in 2002 had one doctor to a 1000 population but in 2020 the ratio of doctor to patient ratio came to 1: 2753 which translates to 36.6 medical doctors per 100,000 persons. In 2002, ratio of 0.28 nurses to a 1000 population but in 2020 there was 88. 1 nurses per 100,000 member of Nigeria's population, (a ratio of 1: 1,135). Similarly, in 2002 pharmacist to a 1000 population ratio of 0.05, while in 2020, 12 pharmacists per 100,000 members of the population (pharmacist to population ratio of 1:8,317) (WHO, 2006; Business Day, 2020).

As pointed out by kpmgafrika.com [11], Africa is not a healthy continent on all indicators of health. Africa lags behind the rest of the world. In terms of life expectancy at birth for the period 2020, across the African continent there was 62 years for males and 65 years for females. While the average life expectancy globally was 70 years for males and 75 years for females in mid-2020. The scenario above presents Africa as the worst disposed in health care delivery as contrasted with the rest of the world. For instance, Nigeria holds approximately 10% of the world's burden of disease. The country has a high incidence of communicable diseases as well as a rising incidence of non-infectious diseases like cancer, diabetes and hypertension. Its primary healthcare services are inadequate, specifically in rural areas. The country has the 10th highest maternal mortality ratio in the world [12]. Also disturbing is the fact that estimated 40,000 Nigerian women die in pregnancy and

child-related causes each year [13]. Contemporary figures show a maternal mortality rate of 576 per 100,000 live births, the fourth highest on Earth. Every year estimated 262,000 babies die at birth, the world's second highest national total. Infant mortality currently stands at 69 per 1,000 live births while for under-fives it rises to 128 per 1,000 live births. More than half of the under-five deaths, precisely, 64 per cent result from malaria, pneumonia or diarrhea [14]. It is perceived that investment in the health sector has been high in recent years but the proportion of patients able to access appropriate treatment remains insignificant. The reason for the abysmal outlook of the sector is due to the way in which health care is funded in Africa, particularly in Nigeria. The health sector has depended heavily on foreign donors and large dependency on out-of-pocket spending which place the greatest burden on the poorest members of the society. The barriers to access ranges from a multifaceted constraints like the households' immediate economic circumstances and cultural phenomenon up to the weakness and limited reach of the country's health care system especially the primary health system. More recently, there has been a gradual shift from infectious disease (communicable diseases) to non-infectious diseases (non-communicable diseases) like diabetes, high blood pressure, low blood pressure, stroke, Alzheimer, Parkinson diseases etc., that are now ravaging both the young and the old. This indicator has serious consequences towards meeting the Sustainable Development Goals' (SDGs).

The Nigerian economy has witness economic recession twice between 2016 and 2020, by extension; the health sector has also been bedevilled by persistent resource deficiencies. These deficiencies are associated with dwindling government revenue and inability of Health Ministries at both Federal and State levels to obtain increasing share in National and State budgets [15]. Consequently, the Nigerian health sector has suffered disproportionately, with the health needs of many Nigerians (especially the rural and urban poor) remaining unattended. In large towns and cities, there is plethora of government hospitals as well as private hospitals providing health care services. In addition to all these, most towns hosting Universities have at least a teaching hospital located in them with grants from Federal Government for training and retraining of health personnel [4]. Despite all these, many of these health centres have been deserted as the perceived quality of care by the

people have declined. Nevertheless, many could not patronize the specialized government facilities due to the perceived expensive nature of charges for their services, especially towards the move of selling prescribed drugs at prevailing market prices. Analogously, many of those government hospitals have been reduced to mere consulting clinics for dearth of equipment and other pharmaceuticals. This phenomenon has given enhanced patronage to the privately owned health facilities whose quality perception by the people is high but also associated with high cost. However, there are a lot of moral hazards inherent in their activities. Cases where a medical practitioner will be made to handle all cases create a lot of disservice to health care delivery. Against this backdrop, many patients and other health consumers tend to patronize home management care, traditional medication and faith based healing centres. The worry of this study is on the worsening and progressive deterioration of the health care system in Nigeria, dearth of health care infrastructure, high infant and maternal mortality rates, shortages in health workforce, ill maintained equipment in the health sector, lack of coordinated synergy in PPP, have among other things compounded the access to basic health in Nigeria. In addition, despite the many support provided by international organizations to the Local, State and Federal governments, the provision of health care service is still a mirage. Thus, worsening access to health care, with its attendant, catastrophic out-of-pocket expenditure. This now puts the issue of public private partnership (PPP) into question. This study, therefore, seeks to provide the template to evaluate health status of households and access to health facilities of Nigerians in the face of both public and private sectors participation.

1.2 Objective of the Study

The main objective of this study is to posit that in spite of the perceived research on access to health care from both the public and private facilities, the endeavours have failed to take care of the measurement of health status of Nigerians. Hence the need to evaluate the public good imperatives of public-private partnerships arrangements in access to health care, which is imbedded in the level of health status of the people of Nigeria.

1.3 Specific Objectives of study

- (i) To examine the quality of the health care system on the health status of Nigerians under the public-private participation.

- (ii) To evaluate the household time, represented by distance to health facility (Accessibility) on the health status of Nigerians under the public-private participation.
- (iii) To test the observable household features on the health status of Nigerians under the public-private participation.
- (iv) To analyze the outcomes of the health care system on the health status of Nigerians under the public-private participation.
- (v) To study the efficiency of the health care system on the health status of Nigerians under the public-private participation.
- (vi) To appraise accountability, transparency and regulation of the health care system on the health status of Nigerians under the public-private participation.

1.4 Research Questions

- (i) What is the quality of the health care system on the health status of Nigerians under the public-private participation?
- (i) Is there a relationship between household time, represented by distance to health facility (Accessibility) and the health status of Nigerians under the public-private participation?
- (ii) To what extent is the observable household features impact on the health status of Nigerians under the public-private participation?
- (iii) Is the outcomes of the health care system affecting the health status of Nigerians under the public-private participation?
- (iv) How efficient is the health care system in impacting on the health status of Nigerians under the public-private participation?
- (v) Is accountability, transparency and regulation of the health care system aiding the health status of Nigerians under the public-private participation?

1.5 Hypotheses

H01: There is no significant relationship existing between quality of the health care system and the health status of Nigerians under the public-private participation.

H02: There is no significant relationship existing between the household time, represented by distance to health facility (Accessibility) and the health status of Nigerians under the public-private participation.

H03: There is no significant relationship existing between the observable household features and the health status of Nigerians under the public-private participation.

H04: There is no significant relationship existing between the outcomes of the health care system and the health status of Nigerians under the public-private participation.

H05: There is no significant relationship existing between the efficiency of the health care system and the health status of Nigerians under the public-private participation.

H06: There is no significant relationship existing between accountability, transparency and regulation of the health care system and the health status of Nigerians under the public-private participation.

2. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Health

The World Health Organization (WHO) defines health as: "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". This definition, established in 1948, emphasizes that health is not just about avoiding illness but involves a holistic state of well-being that includes various dimensions of human life. This broad view encourages a comprehensive approach to health, encompassing physical, mental, and social aspects, rather than focusing solely on the treatment of diseases. According to Merriam-Webster Dictionary (2015) health is the condition of being sound in body, mind or spirit, especially: freedom from physical disease or pain. The definition above is simplistic and narrow. Health is a multifaceted concept. Thus it is very herculean to define it precisely. However, the general understanding of health is that of absence of illness due to physiological and organic imbalances/deficiencies. It is mostly concerned with a person body's mechanical ability and functioning of basic organs of human body.

Broadly viewed, health does not mean mere absence of disease but entails the whole range of personal, physiological, mental, social and moral well-being of an individual. In this respect, the constitution of the World Health Organization

(WHO) as adopted by the International Health Conference (IHC), New York in 1946 represented by sixty-one (61) states provided the framework for broad definition of the concept of health (WHO, 1948). Thus, WHO (1992) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. This definition has also generated some controversies amongst health economist scholars. Most of them contend that health in actual sense is the adequacy of physical and mental capacity of an individual to enjoy life to the full, maximizing optimum level of productive capacity.

According to Doll [16], the definition as provided by WHO is good and inspiring but added that health is a relative concept and varies from one community to another community. Similarly, Saracci [17], averred that there should be a reconsideration of the definition of health; he noted that the definition is too wide and not amenable to any meaningful economic analysis with references to allocation of resources. Lucas and Lloyd [18], observed that the definition as put forward by WHO is unattainable and idealistic. The word "complete" in the definition of health is also ambiguous hence raises some fundamental objection. It is also possible to argue against this definition, because those who could not be considered not in a state of complete physical, mental and social well-being may well view themselves as healthy, for instance a person with arthritis who is able to perform a given task in his work place may not be considered as one who is unhealthy. Thus, health should be defined more appropriately from the practical point of view. This means that health should be seen from the aspect of good health. However, good health indicates the state of pleasant functioning of the body and mind of a person with respect to the individual's physical and social environment that allows an individual to live a contented life devoid of lack of productive capacity and capability.

Modestly, Reddy [19] proposed the practical definition of health to encompass various health indicators such as life expectancy, infant mortality, crude death rate and so on. To Echeta, et al [20] health is a function of number of variables such as medical care, income, culture, education, age, sex, religion, environment etc. Thus, health supersedes just doctors, nurses and hospitals but multifaceted variables that influence the total well-being of an individual. Analogously, health and well-being mean the same. However, Walker and John [21] defined health and well-

being differently. For them health is linked to well-being but tends to have a disease concern, while well-being includes social determinants of health.

2.1.2 Health status

The World Bank conceptualizes health status as a measure that reflects an individual's overall level of health and well-being, encompassing the presence and absence of physical and mental illnesses, as well as the capacity to perform daily activities [22]. This definition often includes indicators such as life expectancy, mortality rates, prevalence of diseases, and other metrics that provide a comprehensive picture of the population's health. The focus is on both the outcomes of health care systems and the broader determinants of health, including socioeconomic factors and access to health services.

2.1.3 Access to health

Access to health refers to the ability of individuals and communities to obtain appropriate, effective, and timely health care services when needed [23]. This concept encompasses several dimensions: Availability-sufficient health services and resources must be available to meet the health needs of the population; affordability-Health services should be financially accessible to all individuals, without causing undue financial hardship; Accessibility- Health services should be geographically reachable, ensuring that physical distance and transportation do not hinder access; Acceptability- Health services must be culturally and socially acceptable to the community, respecting diverse values and preferences; Quality- Health services provided should be of high quality, ensuring effective and safe care. These dimensions collectively ensure that people can utilize health services to maintain or improve their health outcomes.

2.1.4 Theoretical review

The theories linked to health status and access to health under the public and private health participation is considered as follows;

2.2 A Model of Health Related Behaviour and Household Wellbeing

In Grossman's [24] seminal model of demand for health, agent behaviour is simplified using a

utility model. The main assumption of the model is that the individuals (or a household) welfare depends on labour supply (L), the consumption of purchased goods (C), health status (H) and is also conditioned on other observable features (such as school and family background) (Z) as well as unobserved features not excluding tastes (U) (Mariapia, Caryn & Michele, 2007). Thus,

$$U = f(C, L, H, Z, U) \dots \dots \dots (1)$$

Characteristically, allocations are constrained by budget and time. Suppose that the individual works for a wage (W) and that assets and non-labour income is I, then the full income constraint is given as

$$P_c C + P_h H = W L + I \dots \dots \dots (2)$$

Where P_c and P_h are the prices of non-health and health consumption goods respectively. If the latter (P_h) is the only constraint and λ is the marginal utility of income, then the first derivative with respect to health status leads to the standard relationship where the marginal utility of health must equal its

$$\text{cost. Thus, } \frac{du}{dH} = \lambda P_h \dots \dots \dots (3)$$

To Mariapia et al. [25] a person determines his optimal stock of health capital by equating the marginal efficiency of this capital to its user cost in terms of the price of gross investment. The hallmark of the model is that each person has a negatively propelled demand curve for health capital which shifts upward in response to increases in the wage rate. Thus, all other things being equal for given age, level of education, health, taste or inherited health stock, those who experience adverse health events are willing to incur out-of-pocket expenditures. This will help them improve their health status and those who are economically better off, demand a larger optimal stock of health.

Assume also that an individual's real wage, (W) is equal to his costlessly observed marginal product, the standard earning function varies with health status (H), other individual traits (S) (such as schooling, family status and local community infrastructure) and unobservable factors (α) such as ability or school quality and random fluctuations e_w : Thus

$$W = f(H, S, \alpha, e_w) \dots \dots \dots (4)$$

2.3 The Precede Model

To Newman and Omodu [26], in health education, health problems are considered in terms of disease problems and health service problems. These problems are divided into two namely, behavioural and non-behavioural factors. Behavioural factors are those actions which individuals take or fail to take that have consequences to their health status (e.g. lack of information, knowledge, beliefs, attitudes etc) whereas non-behavioural factors are technical factors that are independent of human behaviour such as non-availability, non-affordability, non-accessibility and non-acceptability of service/facility in terms of distance and.

Green [27] popularized the fact that behavioural and non-behavioural factors alone cannot lead to a desired positive health result due to the fact that they concentrate on health consumers and the health providers alone. Consequently, the precede model in an attempt to usher variety of factors that impinge on the peoples' health and health behaviours. The model has tripod factors to include; consumers, providers and supportive system [28].

2.4 Parson's Seek Role Theory

According to Parsons [29] when an individual is sick, he adopts a role of being sick. However, this sick role has four main components;

- (i) The individual is not responsible for his state of illness and is not expected to be able to heal without assistance.
- (ii) The individual is excused from performing normal roles and tasks.
- (iii) There is general recognition that being sick is undesirable state.
- (iv) To facilitate recovery, the individual is expected to seek medical assistance and to comply with medical treatment.

The significance of the Parsons' theory is its attempt to identify typically individuals who are sick. However, the sick lacked the explanation for variability in illness behaviour.

2.5 The Health Belief Model

This model is used to understand health behaviors and predict the likelihood of individuals engaging in health-promoting behaviors. According to Rosenstock, Strecher and Becker

[30], Health Belief Model is premised on an individual's actions to treat and prevent diseases. The model considers four central variables as important. They are as follows:

- (a) The person is perceived vulnerable to disease. (The individual seeks preventive health services if he or she believes they are prone to disease).
- (b) The person's perception of illness severity.
- (c) The person's rational perception of benefits versus costs. An individual is expected to seek treatment if prevention is perceived as having greater benefit than costs.
- (d) The person's cue to action. Here the individual's choice to utilize health services is dependent.

Overall, the Health Belief Model provides a framework for understanding how different factors influence health behaviors and can guide strategies to improve health outcomes through both public and private health initiatives.

2.6 Model of Health Care Utilization

Andersen [31], proposed a model of health utilization which considered three categories of determinants; first are the predisposing characteristics. To Andersen, an individual is more likely to use health services based on predisposing characteristics on demographic factors such as age, gender, and social structure (education, occupation, ethnicity) that influence an individual's propensity to use health services. Second, are the enabling characteristics. This aspect shows the resources of the family and community. Here, economic status is emphasized. Third is need based characteristics which includes the perception of need for health services, whether individual, social or clinically evaluated perceptions of need exist [32]. However, Andersen's model was later expanded in 1970 to incorporate the health care. Health care system includes health policy, resources and organization, as well as the dynamics in them over a given period of time. Andersen's Behavioral Model of Health Services Use provides a comprehensive framework to understand and address factors influencing the utilization of healthcare services. By considering predisposing, enabling, and need factors, this model helps identify and mitigate barriers to accessing health facilities, thereby improving health outcomes in both public and private health sectors.

2.7 Empirical Review

Njau et al [33]. study x-rayed quality of health care services and performance in public hospitals in Africa: A protocol for systematic review. The review objective is to determine the quality of health care services and performance in public hospitals in Africa through a systematic review and meta-analysis of existing studies. The study found out that understanding patients' or clients' expectations and perceptions on the quality of health care services provided in the health care systems are very crucial in the improvement of the health status of the general population.

Tanou et al. [34] studied the effects of geographical accessibility to health facilities on antenatal care and delivery services utilization in Benin: a cross-sectional study. It made use of pooled two rounds of Benin Demographic and Health Surveys (BDHS). The sample included 18,105 women aged 15–49 years (9111 from BDHS-2011/2012 and 8994 from BDHS-2017/2018) who had live births within five years preceding the surveys. They measured the distance and travel time from residential areas to the closest health center by merging the BDHS datasets with Benin's geographic information system data. Utilizing multivariate logistic regression analysis, results showed that the distance to the closest health centre had adverse effects on the likelihood of a woman receiving appropriate maternal healthcare. The estimates showed that one km increase in straight-line distance to the closest health center reduces the odds of the woman receiving at least one antenatal care by 0.042, delivering in facility by 0.092, and delivering her baby with assistance of skilled birth attendants by 0.118. The study also showed the negative effects of travel time and altitude of women's residence on healthcare utilization. Nonetheless, these effects were mainly seen in the northern part of Benin. They that geographical accessibility to health facilities is critically important for the utilization of antenatal care and delivery services, particularly in the northern part of Benin. Improving geographical accessibility, especially in rural areas, is significant for further use of maternal health care in Benin.

Mohammed & Shamima [35] measured physical accessibility to health facilities, the study of Khulna city. It estimated the geographical accessibility of health facilities by population coverage, average travel time and distance to

the closest hospital. Despite the abundance of evidence on the inadequacy of health services in Khulna City, the study found that even with existing health facilities, discontent about the unavailability of health services can be mitigated in most areas.

Quattrochi et al. [36] examined the effects of changes in distance to nearest health facility on under-5 mortality and health care utilization in rural Malawi, 1980–1998. It combined retrospective reports on 18,714 births between 1980 and 1998 from the 2000 Malawi Demographic and Health Survey with a 1998 health facility census that includes the date of construction for each facility, including 335 maternity or maternity/dispensary facilities built in rural areas between 1980 and 1998. Using Cox proportional hazards models, and linear probability models, findings revealed that greater distance was associated with higher mortality and lower health care utilization.

Elechi et al. [37] considered “eliminating barriers to accessing healthcare through public-private health sectors collaboration and resource utilization for achievement of efficiency in Nigeria's educational system. The paper considers strategies to eliminate barriers to accessing healthcare through public-private health sectors collaboration as means to achieving efficiency in educational sector”. The findings reveal that too be healthy one need to acquire knowledge and skill regarding activities for healthy living and to acquire knowledge and skill, one must be in health. The paper concluded that, education and health are basic human right which cannot be compromised.

Ofoli et al. [38] surveyed “preventive healthcare uptake in private hospitals in Nigeria: a cross-sectional survey (Nisa premier hospital). Concentrating on the private healthcare sector in Nigeria, the study sought to characterize the features of uptake of preventive care to better understand the current preventive healthcare landscape. It utilized the descriptive cross-sectional study, using survey questionnaire administered to adult patients attending the Family Medicine Out-Patient Department (OPD) at Nisa Premier Hospital, Jabi Abuja. Data collected were analyzed using SPSS version 23 (IBM SPSS, Chicago, IL, USA). The results showed that; while an overwhelming majority (> 90%) of participants indicated knowledge of benefits of preventive care, and preferred interventions aimed at preventing a disease

before they occur, 48% preferred interventions aimed at reducing disease or injury impact or interventions aimed at ameliorating the impact of ongoing disease or injury with long lasting effect (43%). Unfortunately, less than 40% of respondents would visit the hospital when their health condition is not serious. Important barriers to uptake of preventive care were revealed as cost (45%), distance to the healthcare provider (36%) and lack of health insurance (33%), whereas poor education (19%), social norms (13%) as well as cultural and religious beliefs (10%) towards accessing certain health services appeared to be lesser barriers. The study concluded that though people are aware of the benefits of preventive care, its uptake will greatly be enhanced through improved health insurance coverage”.

Blake et al. [39] undertook a comprehensive assessment of the burden of disease in Nigeria and compared outcomes to other West African countries. Using data and results of the Global Burden of Diseases, Injuries, and Risk Factors Study 2019. They analyzed patterns of mortality, years of life lost (YLLs), years lived with disability (YLDs), life expectancy, healthy life expectancy (HALE), and health system coverage for Nigeria and 15 other west African countries by gender in 1998 and 2019. Findings revealed that between 1998 and 2019, life expectancy and HALE increased in Nigeria by 18% to 64.3 years (95% uncertainty interval [UI] 62.2–66.6), mortality reduced for all age groups for both male and female individuals, and health expenditure per person increased from the 11th to third highest in west Africa by 2018 (US\$18.6 in 2001 to \$83.75 in 2018). Nevertheless, relative outcomes remained poor; Nigeria ranked sixth in west Africa for age-standardized mortality, seventh for HALE, tenth for YLLs, 12th for health system coverage, and 14th for YLDs in 2019. There was also evidence of a growing non-communicable disease burden facing older Nigerians.

Interpretation Health outcomes remain poor in Nigeria despite higher expenditure since 2001. Better outcomes in countries with equivalent or lower health expenditure suggest health system strengthening and targeted intervention to address unsafe water sources, poor sanitation, malnutrition, and exposure to air pollution could substantially improve population health.

Asogwa, and Odoziobodo, [40] survey was on “Public Private Partnership in the Provision of Health Services for the Millennium Development

Goals: The Imperative Need for Optimizing the Public-Private Mix. It examined the challenges, options and potentials for future partnership. They observed that, both sectors play complementary and important roles as providers of expertise. It concluded that, notwithstanding various investment efforts from the public and private sectors into the Nigeria health economy, the performance of the national health system remains deplorable. The study believes that the declining resource allocation to health, increasing costs and the breakdown in the public health facilities, make the achievement of health-related MDGs’, Millennium Development Goals’, (now SDGs, Sustainable Development Goals’) targets difficult”.

Onwujekwe et al. [41] explored “the effectiveness of different health financing mechanisms in Nigeria; what needs to change and how can it happen? The study was undertaken in the Federal Capital territory of Nigeria and two States (Niger and Kaduna). Data were garnered through review of government documents, and in-depth interviews of purposively selected respondents. The results showed that health financing mechanisms in Nigeria do not operate optimally. Allocation and use of resources are neither evidence-based nor results-driven. Resources are not allocated equitably or in a manner that minimizes wastage and improves efficiency. None of the mechanisms effectively protects individuals/households from catastrophic health expenditure. In order to improve efficiency of health financing mechanisms, the study recommended that government needs to allocate more funds for purchasing health services; this spending must be based on evidence (strategic), and appropriately tracked”.

Tichenor et al. [42] interrogated “the World Bank’s role in global health knowledge production, governance, and finance. The study found out unique relationships between Bank entities and countries that shape health policy, and the Bank’s position as a center of research, which will permit it to have a formative influence on health economics as applied to international development. The study proposed a future research agenda for the Bank’s influence on global health through three overlapping objects; knowledge-based (shaping health policy knowledge), governance-based (shaping health governance), and finance-based (shaping health financing). It concluded that the COVID-19 pandemic continues to rage, and as state and non-state actors work to build more inclusive and

robust health systems around the world, it is more important than ever to consider how to best document and analyze the impacts of Bank's financial and technical investments in the Global South".

Muhammad and Ahmad [43] studied "the health aid and health outcomes in Nigeria: The role of governance. Their interest is on the uncertainty of whether an aid will deliver results brought about the current strategy of disbursing funds directly to governments in LDCs. This study examine whether foreign aid for health affects the health outcomes in Nigeria and whether other factors, such as the level of transparency of the institutions, are important determinants of health outcomes in the Country. The study utilized ARDL econometric model to assess the said pattern of relationship and roles. The study findings indicated that foreign aid for health improves health outcomes in Nigeria in both short and long run. It also found that key governance indicators such as, Government Effectiveness, Control of Corruption, Accountability and Voice, Rule of Law, quality of regulation, play a vital role in improving the health outcome of under-five mortality as they tend to reduce it. Furthermore, it recommended that: various donor agencies should direct health aid to specific health target like reducing under-five mortality rate than taking several health issues at a go. Government at all levels should uphold merits of good governance as it affects the effectiveness of health aids directed to the country's health sector by those agencies".

3. METHODOLOGY

To prosecute the task set, the approaches of non-experimental, qualitative, exploratory, descriptive and contextual was utilized. The rationale for the non-experimental approach is due to the human characteristics inherent in the research which cannot be subjected to experimental manipulation such as health beliefs and behaviours. The qualitative approach aids explore the behaviour, perspectives, experiences and feelings of people. Since only little is known about this area of interest, explorative studies are therefore undertaken because it is a new area. As stated earlier, qualitative research design was used in this study and combined a well-structured questionnaire to collect data from the respondents. The data generated consist of series of questions related to access to health and health status of Nigerians. Six States were randomly selected in Nigeria.

3.1 Population of the Study

Nigeria constitutes the population of the study. It has approximately 200 million people. It is made up of 36 States and a Federal capital, spread across six geopolitical zones.

3.2 Sample

The unit of analysis is the household. Household here is defined as a group of people living together under one roof or people sharing a community life by being dependent on common holding as a source of income and food. In all, respondents were sampled from selected states from each of the six geopolitical zones. Thus, the following States were randomly selected from each of the six geopolitical zones: South East-Imo State; South South – Rivers State; South West – Oyo State; North Central- Niger State; North West –Zamfara State and North East-Taraba State. Each of the selected States had sixty (60) questionnaires. The study believes that the six selected States provided the required responses for data analysis.

3.3 Data for the Study

Prior to embarking on the actual data collection exercise, research assistants were trained on the use of the instruments of data collection. The research assistants worked with some notable members of the communities who served as pointers to the proposed sampled households. Thus the main tool for collection of data was questionnaire and focus group discussion (FGD). In all 360 questionnaires was randomly administered through a convenience sample methods. However, 336 usable ones were utilized after data smoothening.

Data Analysis Technique: The data analysis involved graphical presentation and the Ordinary Least Squares regression investigations. The choice of likert five point scales for the study is because of its capacity to generate a large sample in which multiple regression analysis can be used.

3.4 Validity and Reliability Tests

In the study, the instruments were given to some head of households randomly selected from Imo State, Nigeria. In order to determine the reliability of the instrument, the study administered the instrument to thirty (30) respondents in Imo State. The data collected through trial testing

were analysed to determine the extent of internal consistency with which the items of the instrument would measure the various traits of interest. The Crombach’s Alpha method was used to establish the reliability of instrument which yielded acceptable index. The study therefore considered the instrument suitable and adequate for the study.

3.5 Model Specification

In line with the task set for this academic discourse, a model is specified to capture Health Status Model. This will be linked to Muriithi [44] which posits that health care is consumption good as well as an investment good. The implication is that health care consumption improves health which in turn increases utility or satisfaction. Thus health is a derive demand and quality health care improves welfare. Quality health

$$HST = F(QHS, HHT, OHS, HOS, EHS, AHS) \dots \dots \dots (5)$$

Where

- HST = Health status
- QHS = Quality of health service used as input in production of health. It include Community level characteristics such as good road networks.
- HHT = Household time, represented by distance to health facility (Accessibility)
- OHS = Observable household features, e.g. education, hygiene.

- HOS = outcomes of the health care system on the health status
- EHS = efficiency of the health care system on the health status
- AHS = accountability, transparency and regulation of the health care system

4. RESULTS AND DISCUSSION

4.1 Graphical Presentation of the Private and Public Sector in Health Care Delivery in Nigeria

Fig. 1 below show that, with respect to the private and public sector participation in health care delivery in Nigeria, Imo, Niger, Oyo and Rivers States representing South- East, North - Central, South- West and South- South Nigeria, utilize more of the private health facilities. However, Zamfara and Taraba States representing North –west and North -East utilize more of public facilities. The implication of this finding is that North –west and North -East of Nigeria is favourably disposed to government health facilities as compared to other geographical areas in Nigeria. This result gives credence to the discourse and conversations around public and private health care delivery in Nigeria. The public and private sector participation cannot be overemphasized if we must achieve the United Nations’ Sustainable Development Goals (SDGs), Goal 3, which crux is to ensure healthy lives and promote well-being for all at all ages.

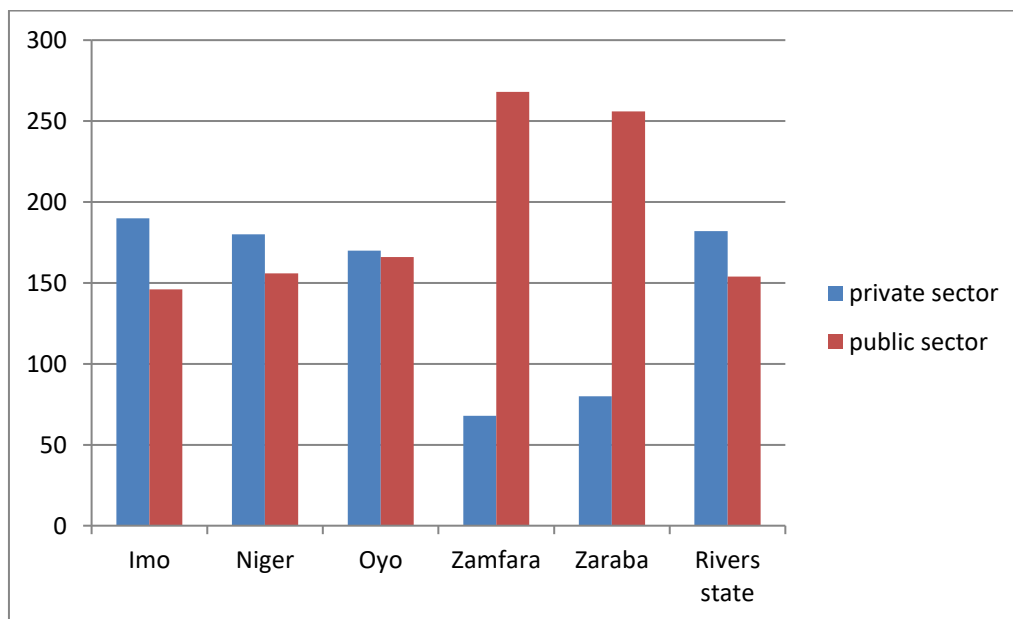


Fig. 1. Bar graph showing private and public sector in health care delivery across six states

4.2 Presentation of Ordinary Least Squares Result

Cursory examination of result of Table 1 and the fitted regression equation 4.1 reveals that the coefficients of Household time, represented by distance to health facility (HHT) (Accessibility) and outcomes of the health care system on the health status (HOS) indicates a positive relationship with the Health status (HST). The implication is that a unit increase in Accessibility of health care will cause Health status to increase by 0.039017 units. In similar vein, a unit increase in outcomes of the health care system will cause Health status to increase by 0.218864 units. This conformed to our expected assumption. Another startling revelation of these coefficients is that accessibility of health care is statistically insignificant in explaining changes in Health status. However, outcomes of the health care system are significant in explaining changes in Health status. Analogously, the coefficient of Quality of health service used as input in production of health (QHS); Observable household features, e.g. education, hygiene (OHS); efficiency of the health care system on the health status (EHS); accountability, transparency and regulation of the health care system (AHS) indicates a negative relationship with the Health status. The implication is that a unit increase in Quality of health service used as input in production of health will cause Health

status to decrease by 0.170743 units ; a unit increase in observable household features, e.g. education, hygiene will cause Health status to decrease by 0.075823 units; a unit increase in efficiency of the health care system on the health status will cause Health status to decrease by 0.199704 units; a unit increase in accountability, transparency and regulation of the health care system will cause Health status to decrease by 0.185285 units. This means that more is expected to be done. Worthy of note is the fact that quality of health service used as input in production of health (QHS); efficiency of the health care system on the health status (EHS); accountability, transparency and regulation of the health care system (AHS) are all significant in explaining the variation in health status of the people. However, observable household features, (education, hygiene) (OHS) showed insignificance with health status of the people.

Meanwhile, the coefficient of determination (R^2) stood at 0.179100, implying that approximately 18% of the variations in health status of the people (dependent variable) is explained or caused by variations in the explanatory or independent variables in the model under consideration while about 82% could be explained by other variables or factors not included in the model. Statistically, a small R-squared values are not always a problem, and high R-squared values are not necessarily good.

Table 1. Ordinary Least Squares result of Health status and each of the explanatory variables

Dependent Variable: HST Method: Least Squares Sample: 1 336 Included observations: 336				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18.21141	1.134889	16.04687	0.0000
QHS	-0.170743	0.059961	-2.847557	0.0047
HHT	0.039017	0.053338	0.731513	0.4650
OHS	-0.075823	0.052494	-1.444399	0.1496
HOS	0.218864	0.049984	4.378674	0.0000
EHS	-0.199704	0.065983	-3.026590	0.0027
AHS	-0.185285	0.063442	-2.920560	0.0037
R-squared	0.179100	Mean dependent var		15.50000
Adjusted R-squared	0.164129	S.D. dependent var		0.627718
S.E. of regression	0.573897	Akaike info criterion		1.747881
Sum squared resid	108.3589	Schwarz criterion		1.827404
Log likelihood	-286.6440	Hannan-Quinn criter.		1.779581
F-statistic	11.96323	Durbin-Watson stat		3.046002
Prob(F-statistic)	0.000000			

Source: E-views 12 output of the Study.

$$HST = 18.21141 - 0.170743*QHS + 0.039017*OHS + 0.218864*HOS - 0.199704*EHS - 0.185285*AHS \dots$$

(egn 4.1)

The important fact here is the significance of the explanatory variables in explaining the variations in the dependent variable. Thus, with respect to the six explanatory variables, four are significant while two are insignificant in explaining the variations in health status of the people. Furthermore, the prob. value of the F-statistic stood at 0.00000 and is less than the 0.05 level of significance, indicating that the joint influence of the explanatory variables on the dependent variable is statistically significant in explaining the variations in health status of the people.

4.3 Hypothesis Testing

The hypotheses are tested using the prob. value of the t-statistic of the parameter estimates. The hypotheses to be tested are re-stated here.

4.3.1 Hypothesis 1

H₀₁: There is no significant relationship existing between quality of the health care system and the health status of Nigerians under the public-private participation.

H_{A1}: There is significant relationship existing between quality of the health care system and the health status of Nigerians under the public-private participation.

From the Table 2, we conclude that there is significant relationship existing between quality of the health care system and the health status of Nigerians under the public-private participation

4.3.2 Hypothesis 2

H₀₂: There is no significant relationship existing between the household time, represented by distance to health facility (Accessibility) and the health status of Nigerians under the public-private participation.

H_{A2}: There is significant relationship existing between the household time, represented by

distance to health facility (Accessibility) and the health status of Nigerians under the public-private participation.

From the Table 2, we conclude that there is no significant relationship existing between the household time, represented by distance to health facility (Accessibility) and the health status of Nigerians under the public-private participation.

4.3.3 Hypothesis 3

H₀₃: There is no significant relationship existing between the observable household features and the health status of Nigerians under the public-private participation.

H_{A3}: There is significant relationship existing between the observable household features and the health status of Nigerians under the public-private participation.

From the Table 2, we conclude that there is no significant relationship existing between the observable household features and the health status of Nigerians under the public-private participation.

4.3.4 Hypothesis 4

H₀₄: There is no significant relationship existing between the outcomes of the health care system and the health status of Nigerians under the public-private participation.

H_{A4}: There is significant relationship existing between the outcomes of the health care system and the health status of Nigerians under the public-private participation.

From the Table 2, we conclude that there is significant relationship existing between the outcomes of the health care system and the health status of Nigerians under the public-private participation.

Table 2. Summary of the t-statistics

Variable	t-statistic	Prob. value	Decision
QHS	-2.847557	0.0047	Statistically significant
HHT	0.731513	0.4650	Statistically insignificant
OHS	-1.444399	0.1496	Statistically insignificant
HOS	4.378674	0.0000	Statistically significant
EHS	-3.026590	0.0027	Statistically significant
AHS	-2.920560	0.0037	Statistically significant

Source: E-views Econometric result of the study

4.3.5 Hypothesis 5

H₀₅: There is no significant relationship existing between the efficiency of the health care system and the health status of Nigerians under the public-private participation.

H_{A5}: There is significant relationship existing between the efficiency of the health care system and the health status of Nigerians under the public-private participation.

From the Table 2, we conclude that there is significant relationship existing between the efficiency of the health care system and the health status of Nigerians under the public-private participation.

4.3.6 Hypothesis 6

H₀₆: There is no significant relationship existing between accountability, transparency and regulation of the health care system and the health status of Nigerians under the public-private participation.

H_{A6}: There is significant relationship existing between accountability, transparency and regulation of the health care system and the health status of Nigerians under the public-private participation.

From the Table 2, we conclude that there is significant relationship existing between accountability, transparency and regulation of the health care system and the health status of Nigerians under the public-private participation.

F-statistic which stood at 0.00000, indicate that the joint influence of the explanatory variables on the dependent variable. This show the joint statistical significance of the independent variables in explaining the variations in health status of the people. This is also supported by the R-Squared statistic. With respect to the six explanatory variables, four are significant while two are insignificant in explaining the variations in health status of the people. However, the overall fitness of the model is good with respect to health care delivery in Nigeria.

Furthermore, the results have shown that the coefficients of Household time, represented by distance to health facility (HHT) (Accessibility) and outcomes of the health care system on the health status (HOS) indicates a positive relationship with the Health status (HST).

Although, HHT is not significant but it holds good prospect for delivery quality of health care to Nigerians. The provision of health care facilities closer to the people is a panacea to achieving better health outcomes. This result is in line with Tanou et al. [34] which studied the effects of geographical accessibility to health facilities on antenatal care and delivery services utilization in Benin. They found out that the geographical accessibility to health facilities is critically important for the utilization of antenatal care and delivery services, particularly in the northern part of Benin. On outcomes of the health care system on the health status, it has the expected assumed sign. It is significant and positive which gives clear directions to health care delivery trajectory in Nigeria. This result is in tandem with the findings of Ofoli et al. [38] concentrating on the private healthcare sector in Nigeria, their results showed that; people are aware of the benefits of preventive care, its uptake will greatly be enhanced through improved health insurance coverage.

The research findings also indicated that, the coefficient of Quality of health service used as input in production of health (QHS) indicates a negative relationship with the Health status. This result is also significant. This is worrisome, signaling the deficiency in the health care system. Quality is still a factor to contend with. The threshold expected is yet to drive the system to positive outcomes. This result corroborates the findings of Njau et al. [33] which found out that understanding patients' or clients' expectations and perceptions on the quality of health care services provided in the health care systems are very crucial in the improvement of the health status of the general population.

With respect to observable household features, e.g. education, hygiene (OHS) and its negative relationship with the Health status, this is also worrisome but we are not surprised. The Nigeria government's investment in human capital development is far from acceptable standards. Education and health funding is far less from the international standards. This finding is supported by Elechi et al, [37] that effective teaching and learning can only take place when the teacher and learner are at reasonable state of wellbeing. Ability to access healthcare has a profound effect on overall health. On the efficiency of the health care system on the health status (EHS) the relationship is also negative with the Health status of Nigerians, this is expected due to the fact that the system does not encourage

efficiency. A lot of health infrastructures are abandoned midway, giving rise to huge sunk cost. This leads to inefficiencies. This finding is in line with the result of Asogwa, and Odoziobodo, [40] on Public Private Partnership in the Provision of Health Services for the Millennium Development Goals. They observed that, both sectors play complementary and important roles as providers of expertise. They concluded that, notwithstanding various investment efforts from the public and private sectors into the Nigeria health economy, the performance of the national health system remains deplorable. Lastly, accountability, transparency and regulation of the health care system (AHS) indicates a negative relationship with the Health status; meaning that the role of health governance cannot be overemphasized. This finding is supported by Muhammad and Ahmad [43] that foreign aid for health affects the health outcomes in Nigeria that the level of transparency of the institutions, are important determinants of health outcomes in the Country. It also found out that key governance indicators such as, Government Effectiveness, Control of Corruption, Accountability, Rule of Law, quality of regulation, play a vital role in improving the health outcome of under-five mortality as they tend to reduce it [45-50].

5. SUMMARY AND CONCLUSION

The findings revealed that;

- (i) there is significant relationship existing between quality of the health care system and the health status of Nigerians under the public-private participation
- (ii) that there is no significant relationship existing between the household time, represented by distance to health facility (Accessibility) and the health status of Nigerians under the public-private participation.
- (iii) that there is no significant relationship existing between the observable household features and the health status of Nigerians under the public-private participation.
- (iv) that there is significant relationship existing between the outcomes of the health care system and the health status of Nigerians under the public-private participation.
- (v) that there is significant relationship existing between the efficiency of the health care system and the health status of Nigerians under the public-private participation.

- (vi) that there is significant relationship existing between accountability, transparency and regulation of the health care system and the health status of Nigerians under the public-private participation.

It is concluded that;

(i) There is a direct correlation between the quality of health services and overall health status. Improvements in the quality of healthcare can lead to better health outcomes and enhanced quality of life. Quality healthcare services are crucial for diagnosing and treating health conditions effectively. Good quality care ensures timely interventions, reducing complications and improving outcomes. High-quality health services often emphasize preventive care, which can significantly enhance health status by reducing the incidence of diseases through vaccinations, screenings, and health education. Quality health services prioritize patient safety, minimizing errors and adverse events. This directly improves health outcomes and the overall health status of individuals.

(ii) There is an inverse relationship between the time to reach health facilities and the health status of individuals. Longer travel times often correlate with poorer health outcomes. Longer travel times to health facilities can delay access to necessary medical care, leading to worsened health conditions and outcomes. In emergencies, quick access to healthcare can be the difference between life and death. Delays caused by long distances can result in poorer health status and higher mortality rates.

(iii) There is a positive correlation between education, hygiene, and health status. Higher levels of education generally lead to better hygiene practices and improved health outcomes. Education increases awareness of good hygiene practices, such as hand washing, safe food preparation, and sanitation, leading to better health outcomes.

Educated individuals are more likely to adopt healthy behaviors and practices that prevent disease and promote well-being. Good hygiene practices are crucial for preventing diseases and promoting public health, highlighting the need for education in fostering these practices.

(iv) The outcomes of a healthcare system have a direct impact on the health status of the

population. Effective systems lead to improved health, while inefficient systems can exacerbate health issues. High-quality healthcare leads to better health outcomes, such as reduced mortality rates, effective management of chronic diseases, and improved recovery from illnesses.

(v) There is a positive correlation between the efficiency of a healthcare system and the health status of the population. Higher efficiency generally leads to better health outcomes. Efficient healthcare systems make optimal use of financial, human, and technological resources, ensuring that more people receive necessary care without unnecessary delays or waste.

(vi) There is a positive impact of accountability and transparency on the health status of a population. These factors contribute to better healthcare delivery, trust, and patient satisfaction. Accountability and transparency build trust between healthcare providers and patients. When patients trust the system, they are more likely to seek care and adhere to treatment plans, improving health outcomes.

6. RECOMMENDATIONS

- (i) Healthcare providers should adopt and maintain high-quality standards and continuously improve care delivery processes to enhance patient outcomes. Efforts should be made to reduce barriers to accessing quality healthcare services, especially for underserved populations. Emphasize preventive care and education to empower individuals to take proactive steps in managing their health.
- (ii) Establish more healthcare facilities and encourage the public-private sectors participation in underserved areas to reduce travel times and improve access to care. Improve transportation infrastructure and services to make it easier and quicker for people to reach healthcare facilities. Implementation of telemedicine services to provide remote consultations and reduce the need for physical travel, especially for routine and follow-up care.
- (iii) Include hygiene education in school curricula and community programs to instill good practices from an early age. Development of initiatives to improve health literacy, focusing on the link between hygiene and health, and targeting both children and adults.

By focusing on education and hygiene, communities can enhance health outcomes and reduce the burden of preventable diseases, contributing to overall improved health status.

- (iv) The implementation of continuous quality improvement initiatives to enhance the effectiveness of healthcare services and achieve better health outcomes. Encourage patient engagement through education and communication, empowering individuals to take an active role in their health care. Improve the efficiency and cost-effectiveness of healthcare systems by optimizing resource allocation and reducing waste.
- (v) Efficiency in healthcare delivery ensures that patients receive timely care, which is critical for successful treatment outcomes and can prevent conditions from worsening.
- (vi) Establish robust reporting and monitoring systems to ensure transparency in healthcare processes and outcomes. Encouraging open communication between healthcare providers and patients, allowing for feedback and improvements in care delivery.

Future Research Directions;

The following make up future research directions for the study;

- (i) Comparative analysis of public and private health services. This will help investigate the quality, affordability, and accessibility of services offered by private against public health facilities. This comprises patient satisfaction, treatment outcomes, and cost-effectiveness.
- (ii) Equity in access to health services. This will engage disparities in health service access based on socioeconomic status, geography, and other demographic factors.
- (iii) Role of health insurance. This will analyze the impact of health insurance schemes on access to health services with respect to health status of the people.

Thus, focusing on these areas, there will be more insights that contribute to policy development, improve health service delivery, and enhance health outcomes in Nigeria.

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DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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