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Poverty and access to healthcare services among rural households in Osun state, Nigeria

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ABSTRACT

The purpose of this research was to look at the effects of poverty on access to health care services among rural families in Osun state. The study's overarching goal was to identify household characteristics that influence healthcare service selection, as well as the amount of accessibility of rural households to healthcare facilities. Structured questionnaires were used to obtain primary data. For the selection of 160 rural families, a multistage sample strategy comprised of systematic random and purposive sampling procedures was used. Descriptive statistics and the Chi-square test were used to analyze the data obtained to get a conclusion and policy suggestions. The findings of this study indicated that the majority of respondents (38.1 percent) had a secondary school education and that farming was their primary employment. Seventy-five percent of respondents had access to public health centers, but the majority (37.5 percent) travel a distance of 5-9.9 kilometers before seeking health care. Finally, it was suggested that relevant health authorities update their data and ensure that it is in sync with population trends. This would help the government, policymakers, and concerned stakeholders identify villages or settlements in need of immediate healthcare assistance. It was also urged to the government that measures such as health insurance schemes, mobile healthcare delivery, and care for the elderly, among others, be made accessible and cheap to all people, regardless of class, position, or location.

Keywords: Poverty, Healthcare, Healthcare Access, Rural areas

1. INTRODUCTION

Debates are raging among academics, policymakers, and professionals on access to healthcare in low-income nations (Trani et al., 2011). Health care and associated expenses are important sources of poverty in low-income countries (LIC). In India, Noponen et al. (2004) discovered a prevalence of 1.2 monthly illnesses per impoverished family. According to Krishna (2007), the expense of disease treatment accounts for 85 percent of all instances of destitution. The need for a link between poverty and poor health has long been acknowledged by the scientific community. Social scientists have traditionally concentrated their efforts on investigating the links between financial (or consumption) poverty and important indices of health status, such as mortality, morbidity, and nutritional status. According to Sen (1984), there has been increasing pressure for

"multidimensional" and "people-centered" understandings of poverty, which has been fueled by Sen's work. This has encouraged a focus on individual capabilities (how people can function) and more nuanced conceptualizations of poverty. Preventable fatalities and bad health, in this view, are not only consequences of poverty, but essential components of poverty.

The causes of poverty in rural regions are varied and multifaceted and may be traced back to culture, gender, climate, markets, and government policies (Khan, 2001). Rural poverty accounts for almost 63 percent of world poverty, and it is estimated that over half of the rural population in Sub-Saharan Africa lives in absolute poverty (Avery, 2016; Rowson, 2011). When it comes to Nigeria, the National Bureau of Statistics (2020) estimates that over 82 million Nigerians are poor, with 52 percent of them residing in rural regions. It is important to note, however, that if poverty was measured in terms other than economic poverty, the estimate of poverty incidence in Sub-Saharan Africa would rise (Sahn and Stifel, 2012). Adults' health has an impact on their capacity to work, which in turn impacts the household's well-being, including the development of children (Asenso-Okyere *et al.*, 2011).

The quality of treatment, geographical accessibility, availability of the correct sort of care for individuals in need, financial accessibility, and acceptance of service are all factors in gaining access to healthcare services (Peters et al., 2008). The underutilization of public health services in underdeveloped nations has been a worldwide issue (Zwi, 2001). Poverty may also be linked to a lack of access to adequate health care and services in developing nations, notably in Sub-Saharan Africa. With a per capita spend of US$ 9.44, Nigeria's health system is ineffective and badly underfunded (World Bank, 2010). As a consequence, Nigeria continues to have one of the poorest health indices in the world, accounting for 10% of all maternal fatalities worldwide. Medical physicians, according to research, have a high incidence of absence (about 40%), particularly in rural locations (Hamid et al., 2005). Geographic factors such as population density, remoteness, and a lack of services all have an impact on healthcare delivery in rural areas, and these are the typical travel problems that rural residents face (Chipp *et al.*, 2010; Regan and Wong 2009).

Travel distances, according to Brem *et al.*, (2006), have a negative impact on health care services for patients in rural locations when compared to those in metropolitan areas. According to Chipp et al (2010), rural residents lack access to medical specialists and consultants such as oncologists, psychiatrists, and cardiologists. According to Nwabu (2008), a home's poor status restricts the types of healthcare, health-enhancing, and non-health items that members of the household may consume, and people are presumed to pick their healthcare services. Rural development is interested in healthcare availability and usage because they are important aspects of well-being and components of human capital (Aghion et al., 2010). In rural locations, where physical occupations are more plentiful, access to and use of healthcare is likely to be more essential than education in influencing labor productivity. This study thus seeks to investigate the consequences of poverty on access to health care services among rural households in Osun State with a view of strengthening the health care delivery system.

2. THE STUDY AREA

Osun state is an inland state in Nigeria's Southwestern region, with Osogbo as its capital. Kwara State borders it on the north, Ekiti State on the east, Ondo State on the west, Ogun State on the south, and Oyo State on the west. According to the 2006 preliminary census estimates, it has a population of 3,416,959 people (National Population Commission, 2010). The state is made up of 30 local government districts with a total land area of 9,251km2 (see Figure 1). It is home to several prestigious universities, notably Obafemi Awolowo University (O.A.U.) in the historic town of Ile-Ife, which is regarded as the Yoruba race's birthplace. Other significant cities and towns in the state are Ilesha, Iwo, Ede, Ijebu-Jesa, Ila Orangun, Ejigbo, Ode-Omu, Ibokun, Ikirun, Ifetedo, Esa-Oke , etc. Healthcare facilities in Osun state are provided by both government and private/individual.

3. CONCEPTUAL, THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

3.1. Concept of Poverty

A clear and globally recognized definition of poverty, according to Anyawu (1997), is problematic since multiple criteria have been employed to characterize the phenomena. This has an impact on many elements of human life, including physical, moral, and psychological well-being. Nevertheless, Lister (2004) characterizes poverty as "loss of involvement in decision-making," "a violation of human dignity," or "powerlessness." Poverty, according to the World Bank (2008), is a severe lack of well-being that has various aspects. Low earnings and the inability to get the essential commodities and services required for a dignified existence are examples. Poverty, according to the Central Bank of Nigeria (2002), is defined as an individual's inability to meet basic requirements such as food, clothes, and shelter. It represents a lack of meaningful work, skills, possessions, and self-esteem, as well as an inability to satisfy social and economic commitments. The CBN's viewpoint is based on a lack of access to social and economic facilities like education, potable water, sanitation, which limits the possibility of increasing welfare to its full potential.

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Sen (1987) described poverty as the absence of particular qualities, such as the ability to participate in society with dignity. However, according to Osmani (2013), a major common theme underlying all of these streams of ideas is the diversity of people's perceptions and experiences of poverty, the diversity of how poverty is measured, and how poor people strive to either escape or cope with poverty, and the diversity of policy interventions needed to combat poverty. It is thus critical for poverty researchers to recognize the variety of poverty definitions in each poverty survey, despite the necessity to identify with a certain definition of poverty for any given study.

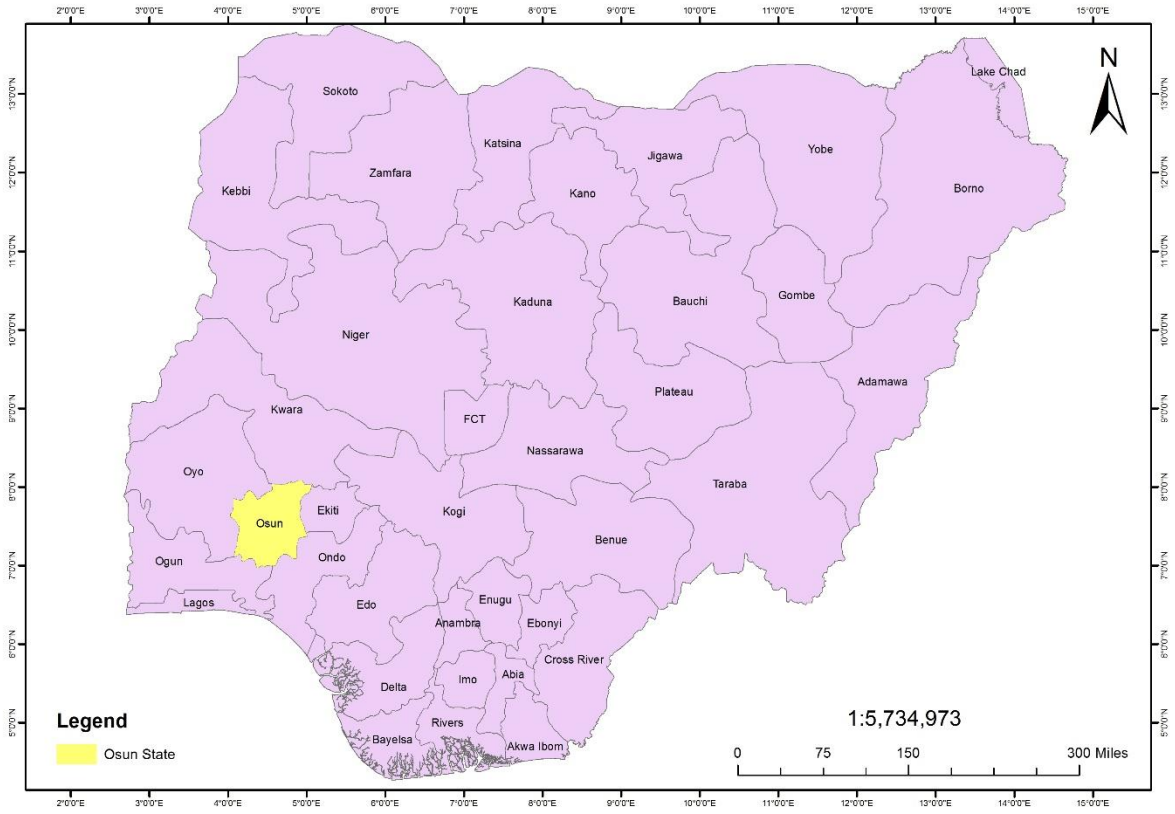

Fig. 1: Map of Osun state in Nigeria Context

Source: Ministry of Lands, Physical Planning & Urban Development, Osun State, 2019

3.2. Concept of Health

Health is defined as "a condition of full physical, mental, and social well-being, not only the absence of sickness or disability," according to the WHO constitution quoted by Huber et al (2011). Some health experts, on the other hand, have characterized the WHO's concept of health as utopian. Disease, incapacity, and death are far simpler for health care providers to cope with than this romantic image of health (Yassi, 2011). However, the larger WHO definition of health is the most suited for usage since it represents a universal 'basic need,' a social need and fundamental right associated with social justice (Doyal and Gough, 1991). In basic words, it defined vulnerable individuals as those who are at risk of having their health harmed or deteriorated for several causes (Huber et al., 2011). Health is therefore defined as the ideal state of perfect physical, mental, and social well-being rather than the absence of sickness. Hendy (2010) recognized the major components of good health as a sound diet, a healthy environment, spiritual aspects of health, and sickness as the primary threat to good health.

3.3. Empirical Review on Poverty and HealthCare Status

Several studies have attempted to demonstrate a link between poverty and health, with inconsistent findings. For example, CIHI (2013) offered evidence on the association between poverty and health from sixteen research that used eight distinct data sets from various nations. Subjective health reports, mortality, emotional stability, chronic conditions, general life satisfaction, and physical functioning of bodily organs were among the health status outcome measures used, while socioeconomic status measures included

current income levels, recent income change, poverty flags, current earnings, multi-period average incomes, distribution, and a number of spells of poverty. According to the WHO, poor health is both a cause and a result of poverty. Illness may decrease household savings, limit cognitive capacity, reduce productivity, and lead to a worse quality of life, all of which contribute to the creation or perpetuation of poverty.

In consequence, the poor are more vulnerable to personal and environmental risks, are less well-nourished, have less access to knowledge, and are less able to access health care services. "As a result, the poor are more vulnerable to sickness and disability." The dilemma is exacerbated by the fact that more than half of the world's impoverished live in rural regions. In a study on geographic access to healthcare for Rural Medicare beneficiaries in the United States, Chan et al. (2006) argued that people of rural areas had a greater travel distance than their counterparts in urban areas. Awiti (2014) discovered in her research on Poverty and Health Care Demand in Kenya that big household sizes and lengthy distances to the nearest healthcare facility predict poverty for all age groups. The research also found that poverty reduces the chance of visiting a contemporary healthcare provider among all citizens, regardless of age, and that poverty has a negative influence on a person's desire for modern health care services when other characteristics are held constant.

The authors stated that "all of the studies that incorporate indicators of income levels are strongly linked to health outcomes." (CIHI, 2013). It is projected that if developing countries had the same health and socioeconomic circumstances as the most industrialized countries, the current yearly toll of over twelve million fatalities among children under the age of five could be lowered to fewer than four hundred thousand (WHO, 2009). Other poverty and health experts stress that restricted access to food, decent housing, and education are some of the avenues via which prolonged hardship may substantially impact health. Furthermore, the poor are subjected to environmental contaminants, physical dangers to health and safety, hazardous employment, and persistent psychological stress (Minkler, 2009). Minkler also said that economic disparity is more likely to lead to illness. Psychosocial variables interact with material, behavioral, and socio-cultural factors to influence the health of persons living in rural areas (Bernadette, 2015). Wilkinson and Pickett's (1999) finding revealed a high relationship between income inequality and mortality within nations, which has subsequently been verified in a study by Kennedy and Kaplan (2011).

3.4. Theoretical Framework

Grossman Healthcare Demand Theory serves as the theoretical foundation for this investigation. Among the theoretical and empirical research on the demand function for healthcare, the link between health, healthcare, and economic growth has been emphasized. Grossman's orthodox static utility-maximizing framework is used to characterize the demand for healthcare services (1972). Individuals are believed to consume healthcare in this paradigm not because they value healthcare in and of itself, but because it increases their stock of health, which is employed as a productive resource. Cropper (1977) modified Grossman's model to account for the disutility that disease may impose on people, as well as to investigate disparities in demand for preventative and curative treatment, as well as the dynamics of demand for healthcare over the life cycle.

Healthcare is primarily a production process, and many of its economic fundamentals are shared with production in general. Several research provides insights on healthcare's influence on health. On the one hand, data shows that spending on lifestyle and the environment may deliver higher marginal advantages per dollar spent on health than healthcare. Healthcare, on the other hand, is seen as a primary contributor to health. Economists and politicians are very concerned about the price and income elasticities of healthcare demand. This is dubecausehey assess the impact of different pricing and distributional strategies on healthcare demand.

Prices have little effect in shaping the distribution of healthcare resources among people if demand is not sensitive to price. In the absence of financial restrictions, free health services may be warranted. However, if healthcare is price sensitive, certain user fees should be levied to prevent misuse. These fees, however, should not be so exorbitant that they compel people to make rash judgments about whether or not to seek medical treatment. Similarly, if income has a substantial impact on demand, with a direct influence on price responsiveness, some type of targeting of subsidized healthcare services may be beneficial.

4. METHODOLOGY

This study uses a cross-sectional survey design. This design has the advantage of providing information in a short amount of time, such as the time required for administering the survey and collecting the information. Two types of data were collected and used in course of this research work which are qualitative and quantitative and they were sourced from both primary and secondary sources. Primary data were gathered by the researchers from fieldwork through the administration of household questionnaires, unstructured interviews and personal observation which includes identifying and counting of the housing units. Secondary data were sourced from academic publications, published and unpublished dissertations, articles, journals, textbooks, internet all of

which will serve as background framework work for literature review, conceptual and theoretical underpinning of the research. A multi-stage sampling technique was employed in the selection of respondents. The first stage involved the selection of the three (geopolitical senate-district of the state. The second stage involve the random selection of the Local Government Areas (LGAs) from the districts. The third stage was the random selection of two villages each from the LGAs totaling to 6 localities across the districts. The fourth stage was characterized with the determination of the total number of houses to be sampled during the course of the study. Google earth and ground trothing were used to identify the total number of housing units in the selected localities which gave a total of 2,355 houses in the six (6) localities. The fifth stage was characterized with sampling 10% of the total identified housing unit in the 6 localities which resulted to 236 questionnaires being administered.

Quantitative Materials and Methods

For this study the, structured questionnaire is the quantitative data source and one of the primary data capturing tools. The study, using a household survey and structured questionnaire, was administered to each sampled household. The researchers consider a household as a group of people living under the same roof with a common financial source. Questionnaires were administered to each sampled household head or an adult representative in an event where the household head was not at hand. The structured questionnaire was designed to capture households' socio-economic characteristics (gender, age, income); household factors that drive the choice of healthcare services (employment status, educational background, cultural or religious believe); condition of healthcare facilities as well as the level of accessibility of rural households to healthcare facilities. The quantitative data was analyzed using descriptive and inferential statistics (Chi-square at $p \leq 0.05$).

For effective representation across the state, the state was stratified into 3 districts based on the existing political zone. From each district, 1 local government area were purposively selected totaling 3 LGAs across the state and from the selected LGAs, 2 rural communities were purposively selected totaling 6 rural communities across the states. The 3 LGAs selected are Oriade, Ede South and Ifelodun from Osun East, Osun West and Osun Central district respectively. Hence, the six selected rural communities across the state include Iloko-Ijesa, Iwaraja, Akoda, Alajue, Iba and Dagbolu.

In order to obtain the sample size for the study, the total number of houses in each selected community was determined with the aid of Google Earth software and was subsequently updated with ground trothing. The total number of residential buildings are 295, 206, 109, 211, 549, and 224 from Iloko-Ijesa, Iwaraja, Akoda, Alajue, Iba and Dagbolu communities respectively and this comprised the sample frame for the study (See Table 1). To determine the sample size, 10% of the residential buildings in each community were chosen for the purpose of questionnaire administration. Hence, the sample size are 30, 21, 11, 21, 55, 22 from Iloko-Ijesa, Iwaraja, Akoda, Alajue, Iba and Dagbolu selected communities respectively (See table 2). The respondents for the study were household heads or a representative and were selected on systematic sampling with one respondent in every 5 housing units.

Qualitative materials and method

Face-to-face interviews conducted across the study area served as the qualitative data capturing instrument. Convenience-sampling was used to select and interview household heads, while purposive-sample technique was employed to select and interview community groups and healthcare management heads.

Table 4.1: Selected communities and Housing unit

S/N	Local Governments Areas	Selected Communities	Total Number of Housing Unit in the areas
1	Oriade	Iloko-Ijesa	295
		Iwaraja	206
2	Ede South	Akoda	109
		Alajue	211
3	Ifelodun	Iba	549
		Dagbolu	224

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Total	**1,594**

Source: Authors' Compilation & Google Earth 2020

Table 4.2: Sample Frame and Sample size for Data Collection

S/N	Selected communities	Nos of Residential Buildings	Sample Size (10%)
1	Iloko-Ijesa	295	30
2	Iwaraja	206	21
3	Akoda	109	11
4	Alajue	211	21
5	Iba	549	55
6	Dagbolu	224	22
Total		**1,594**	**160**

Source: Authors' Compilation & Google Earth 2020

5. RESULTS AND DISCUSSION

This section discusses the socio-economic characteristics of the sampled residents, household factors that drive the choice of healthcare services, extent to which existing healthcare facilities comply with planning standards. Analysis of information obtained from the respondent's perspective through oral interview obtained during the course of questionnaire administration is also discussed in this section.

Table 5.1: Socio-Economic Characteristics

Variable	Number of Respondents	Percentage
Gender of Respondents		
Male	113	70.6
Female	47	29.4
Total	**160**	**100**
Age of Respondents		
18-25	20	12.5
26-35	28	17.5
36-45	36	22.5
46-55	40	25.0
Above 55	36	22.5
Total	**160**	**100**
Marital Status		
Single	20	12.6
Married	97	60.6
Separated	5	3.1
Divorced	17	10.6
Widowed	21	13.1
Total	**160**	**100**
Income range (Naira/Month)		
0 - # 10000	33	10.4
# 11000 - # 20,000	186	58.7

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# 21,000- # 30,000	57	18.0
Above # 31,000	41	12.9
Total	**317**	**100**

Source: Authors' Field Survey, 2020

Table 3 shows the analysis on gender of respondents which reveals that 70.6% of respondents were found out to be male, while female constitute 29.4% of respondents. The distribution gives a range of access to the respondents of both genders sampled in the communities and does not infer that there are more males than females but the variation may probably be due to the availability of people during the periods of the survey.

It is also observed from the Table that the structure of age distribution has majority of the respondents to be adults with 25% falling within the age of 46yrs-55yrs, followed by 22.5% who are above the age of 55 yrs. Also, 22.5% of the respondents fall within the range of 36yrs-45yrs, 17.5% fall within the age range of 26-35 years while 12.5% of them fall between 18-25 years. The study area is mostly inhabited by the productive age group (18-60 years). If the health need of the community members are well taken care of, it will enhance the productivity of the labour force which can improve rural food production, improve local economy and ultimately reduce rural poverty.

Table 3 further reveals the result of analysis on marital status which shows that the majority of the respondents at 60.6% were married with the percentage of widowed respondent coming second with 13.1%, 12.6% were single while 10.6% represented the divorced. Only 3.1% of sample respondents were separated couples.

Also, Table 3 shows the income level of the respondents in the study area; the majority of respondents (47.5%) earn between #11,000 – ₦20,000 per month, 29.4% of respondents earn between ₦21,000 – #30,000, 17.5% of respondents sampled earn between 0 – #10,000 while 5.6% of respondents earn above #31,000 every month.

Table 5.2: Household factors that drive the choice of healthcare services

Variable	Number of Respondents	Percentage
Occupation		
Trading	36	22.5
Farming	76	47.5
Civil Servant	8	5.0
Artisan	34	21.3
Others (Specify)	6	3.7
Total	**160**	**100**
Academic qualification		
No formal education	31	19.4
Primary education	49	30.6
Secondary education	61	38.1
Tertiary education	19	11.9
Total	**160**	**100**
Household Size		
8	74	46.2
9-20	59	34.4
21-32	29	18.1
Above 32	2	1.3
Total	**160**	**100**
Ethnicity		
Yoruba	125	78.1
Igbo	30	18.8
Hausa	5	3.1
Total	**160**	**100**

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Religion of Respondents		
Islam	98	61.2
Christianity	55	34.4
Traditional	7	4.4
Total	**160**	**100**

Source: Authors' Field Survey, 2020

Analysis of occupational status of respondents shows that 47.5% of respondents engage in farming and other agro-allied activities, 22.5% are traders, 21.3% are artisans, 5.0% are civil servants while 3.8% engage in other things. It can be deduced from the table above that inhabitants of the study are mostly farmers, which cannot be farfetched from the fact that the communities sampled are rural areas. Rural areas in Nigeria serve as a base for food production (Haruna, 2000). Rural dwellers are majorly involved in agricultural activities (Leon, 2005).

Table 4 further shows the analysis on the educational status of respondents which reveals that 38.1% of respondents have secondary education, 30.6% have primary education, 19.4% of respondents have no formal education, and 11.9% have tertiary education. The Table shows that the majority of the residents have secondary education and as such could be regarded as not being literates.

In addition, Table 4 reveals that 46.2% of respondents have 8 household members, 34.4% of them have between 9-20 household members while 18.1% have between 21-32 household members. Also, 1.3% of sampled respondents have above 32 household members. This shows the level of the population which is usually sparse in rural areas in Nigeria.

The result of analysis on the ethnicity of respondents shows that 78.1% of respondents are of Yoruba extraction, 18.8% of respondents are Igbos and 3.1% of respondents sampled are Hausas.

Concerning the religion of respondents, 61.3% of them are Muslims, 34.4% are Christians while 4.4are traditional worshippers.

Table 5.3: Level of accessibility of rural households to healthcare facilities

Variable	Number of Respondents	Percentage
Healthcare Provider		
Public health centers	120	75.0
Private health centers	16	10.0
Self-medication	14	8.8
Traditional care	10	6.3
Total	**160**	**100**
Health services accessed		
Free drugs	67	41.9
Health education	15	9.4
Maternal health services	68	42.5
Laboratory services	10	6.3
Total	**160**	**100**
Affordability of health services		
High	83	51.9
Acceptable	54	33.8
Low	23	14.4
Total	**160**	**100**
Distance to nearest health center		
Less than 4.9km	43	26.9
5.0km-9.9km	60	37.5
More than 10km	57	35.6
Total	**160**	**100**

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Transport mode		
Walking	48	30.0
Public transport	79	49.4
Private car	33	20.6
Total	**160**	**100**
Time Travel		
Less than 30 mins	70	43.8
More than 30 mins	90	56.3
Total	**160**	**100**
Travel cost		
High	82	51.2
Acceptable	46	28.7
Low	32	20.0
Total	**160**	**100**

Source: Authors' Field Survey, 2020

Table 5 reveals the healthcare provider accessed by respondents. Majority of the respondents (75.0%) have access to public healthcare, 10.0% have access to private healthcare, 8.8% of them practice self-medication while 6.3% of the respondents patronize traditional care.

Analysis on the health services accessed reveals that 42.5% of the respondents have access to maternal healthcare, 41.9% of them have access to free drugs, 9.4% of the respondents access health education while 6.3% of the respondents' have laboratory services.

It is also observed in Table 5 that majority of the respondents (51.9%) believe that the affordability of the health services provided is high, 33.8% believe that the affordability is acceptable while 14.4% of the respondents believe that the affordability of the health services provided is low.

According to an interviewee:

"The money collected before we access healthcare is too high including government hospitals before we are admitted in private hospitals ,f or example, we pay up to #50,000, for government clinics, we pay up to #30,000 which is quite on the high side."

(Research Respondent, January 2020).

According to another interviewee:

"The clinics here are ripping us off. Although the quality of service provided to us is poor, yet they charge us exorbitant prices before they admit us in their hospitals."

(Research Respondent, January 2020).

From table 4.5, it is revealed that 37.5% of the respondents travel between 5.0 to 9.9 km to access the nearest healthcare facility, 35.6% of the respondents travel more than 10 km to access the healthcare facility closest to them while 26.9% of them travel less than 4.9kms to have access to the closest healthcare center.

The table further shows the analysis of the mode of transport used in accessing healthcare facilities. Findings revealed that 49.4% of the respondents use public transport to access healthcare facilities, 30.0% of the respondents use a privatcarsar to access healthcare facilities while 20.6% of them access healthcare facilities by walking.

The table also shows that 56.3% of the respondents travel for more than 30 minutes trying to access their healthcare facility while 43.8% of them spend less than 30 minutes trying to access their healthcare facility.

From table 4.5, the majority of the respondents (51.2%) believe that the travel cost is high, 28.7% of the respondents believe that the travel cost is acceptable while 20.0% of the respondents believe that the travel cost is low.

According to an interviewee:

"We spend a lot of money trying to access the closest healthcare facility due to the distance to the village, it costs us about #1,000-#2,000 to and fro each time we visit the clinic."

(Research Respondent, January 2020).

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6. ASSESSMENT OF THE CONDITION OF EXISTING HEALTHCARE SERVICE PROVIDERS IN THE STUDY AREAS

The health care facilities in the study areas were assessed in accordance with certain variables (see Table 4.1). A total of 12 health care facilities registered with the state ministry of Health were identified across the study areas. In addition, the findings revealed that 9 of the 12 health care facilities are publicly owned while 3 are owned by private. Also, all the health care facilities aropened for daily operation.

Table 4.1: The Attribute Table of Health Care Facilities in the Study Areas

S/N	Selected Communities	Name Of Existing Healthcare Services	Ownership Status Of Healthcare Service	Opening Days / Week
1	Iloko-Ijesa	(i) Iloko-Ijesa Primary Health Centre	Public	Daily
		(ii) Iloko-Ijesa Comprehensive Health Centre	Public	Daily
2	Iwaraja	(i) Iwaraja Primary Health Centre	Public	Daily
3	Akoda	(i) Akoda Primary Health Centre	Public	Daily
		(ii) Redeemer Hospital	Private	Daily
4	Alajue	(i) Alajue Oja Primary Health Centre	Public	Daily
5	Iba	(i) Iba Maternity centre	Public	Daily
		(ii) Iba Model Primary Health Centre	Public	Daily
6	Dagbolu	(i) Dagbolu Health Clinic	Public	Daily
		(ii) Staff Clinic	Private	Daily
		(iii)Barika Maternity Home	Private	Daily
		(iv) Shiffa Hospital	Private	Daily

Sources: Osun State Ministry of Health
Authors' Field work, 2021

6.1. Evaluation of the health care facilities in the study area

An on-spot assessment of the essential facilities and services was carried out to verify their availability at the health centers. In addition, the condition of these essential facilities and services at the health care facilities were assessed on a three-point rating of "good, fair and poor" and in a few cases, they were assessed on "well equipped, fairly equipped and poorly equipped" while electricity was assessed on "very frequent, frequent and not frequent". The conclusions arrived at were drawn from the combination of the judgment of the researchers, patient, and personnel. The result was shown in Table 4.2.

The study shows that the entire healthcare facilities (100%) in the study areas have family planning units but only 33.3% of them were adjudged to be well equipped, 50% were fairly equipped and 16.7% were poorly equipped. In a similar vein, the entire healthcare facilities (100%) in the study areas have laborr room but only 16.7% were well equipped, 58.3% were fairly equipped and 25.0% were poorly equipped. Furthermore, toilets were found to be available at all the health care facilities, 66.7% were in good condition, 25.0% were adjudged to be fair while 8.3% were in poor condition. The study revealed that all the health care facilities have access to electricity, however, 75.0% of them have a very frequent power supply, 16.7% enjoy frequent power supply, and only 1 (8.3%) do not have frequent power supply. The study shows that 5 (41.7%) of the health care facilities have functioning ambulance vehicles while 75.0% have no ambulance vehicle. The entire 5 ambulance vehicles were deemed to be in fair condition. Furthermore, only 7(58.3%) of the healthcare facilities carry out full laboratory services and 5(41.7%) do not. in addition, none of the laboratories was deemed to be well equipped, 5(71.4%) were fairly equipped and 2(28.6%) were poorly equipped. Also, the study shows that all the health care facilities have access to water. However, 75.0% of them have a very frequent water supply, 16.7% enjoy a frequent water supply, and only 1 (8.3%) do not have e frequent water supply. Finally, the study revealed that all the health care facilities have solid and liquid waste disposal. Also, 6 (50.0%) are good, 3(25.0%) were fair in condition while 3(25.0%) were deemed to be poor in condition.

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Table 6.2: Evaluation of the Health Care Facilities in the Study Areas

S/No	Facilities	Availability	Frequency	Percentage	Condition	Frequency	Percentage
1	Family Planning Unit	Yes	12	100.0	Well equipped	4	33.3
		No	0	0.0	Fairly equipped	6	50.0
					Poorly equipped	2	16.7
	Total		**12**	**100.0**		**12**	**100.0**
2	Labour Room	Yes	12	100.0	Well equipped	2	16.7
		No	0	0.0	Fairly equipped	7	58.3
					Poorly equipped	3	25.0
	Total		**12**	**100.0**		**12**	**100.0**
3	Ward/Indoor Facility	Yes	12	100.0	Well equipped	4	33.3
		No	0	0.0	Fairly equipped	5	41.7
					Poorly equipped	3	25.0
	Total		**12**	**100.0**		**12**	**100.0**
4	Toilet	Yes	12	100.0	Good	8	66.7
		No	0	0.0	Fair	3	25.0
					Poor	1	8.3
	Total		**12**	**100.0**		**12**	**100.0**
5	Car park	Yes	8	66.7	Good	3	37.5
		No	4	33.3	Fair	3	37.5
					Poor	2	25.0
	Total		**12**	**100.0**		**8**	**100.0**
6	Electricity	Yes	12	100.0	Very Frequent	9	75.0
		No	0	0.0	Frequent	2	16.7
					Not Frequent	1	8.3
	Total		**12**	**100.0**		**12**	**100.0**
7	Ambulance vehicle	Yes	5	41.7	Good	0	0.0
		No	7	58.3	Fair	5	100.0
					Poor	0	0.0
	Total		**12**	**100.0**		**3**	**100.0**
8	Pharmacy/Drug Store	Yes	8	66.7	Well equipped	0	0.0
		No	4	33.3	Fairly equipped	4	50.0
					Poorly equipped	4	50.0
	Total		**12**	**100.0**		**8**	**100.0**
9	Laboratory	Yes	7	58.3	Well equipped	0	0.0
		No	5	41.7	Fairly equipped	5	71.4

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					Poorly equipped	2	28.6
	Total		**12**	**100.0**		**7**	**100.0**
10	Water supply	Yes	12	100.0	Very Frequent	9	75.0
		No	0	0.0	Frequent	2	16.7
					Not Frequent	1	8.3
	Total		**12**	**100.0**		**12**	**100.0**
11	Solid and Liquid Waste Disposal	Yes	12	100.0	Good	6	50.0
		No	0	0.0	Fair	3	25.0
					Poor	3	25.0
	Total		**12**	**100.0**		**10**	**100.0**

Source: Authors' Field work, 2020

Table 7: Chi-Square Tests showing the relationship between Income level and choice of Healthcare facility

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.224[a]	9	.042
Likelihood Ratio	16.553	9	.056
Linear-by-Linear Association	1.612	1	.204
N of Valid Cases	160		

a. 13 cells (81.2%) have an expected count of less than 5. The minimum expected count is .08.

Source: Authors' Compilation, 2020

The Chi-Square test shows that there is a significant relationship between income structure and choice of the healthcare facility. This was captured by the value of the P-value (P) -0.42 which is less than our chosen significance level α = 0.05. Income and economic status have been identified as part of the important indicators of service utilization and the degree to which income influence health-seeking (Hodge *et al.*, 2016). Most times the choice of health care facility and services used become dependent on the cost compared to the generally recognized advantages. As indicated by Buor (2005), the capacity to make payment for services informs the utilization of particular health services. In most cases, some may be ready to pay for services, but the resources to compensate for the exchange of services, may not be available. Indisputably, low income can be an obstacle to health-seeking and health services utilization thereby engendering a great health care burden on individuals (Gotsadze *et al.*, 2005).

Table 8: Chi-Square Tests showing the relationship between Educational qualification and choice of Healthcare facility

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.329[a]	12	.034
Likelihood Ratio	17.984	12	.061
Linear-by-Linear Association	3.201	1	.213
N of Valid Cases	160		

a. 16 cells (80.0%) have an expected count of less than 5. The minimum expected count is .05.

Source: Authors' Compilation, 2020

The Chi-Square test shows that there is a significant relationship between educational status and choice of a healthcare facility. This was captured by the value of the P-value (P) -0.42 which is less than our chosen significance level α = 0.05. Both education and health are at the center of individual and population health and well-being (Raghupathi & Raghupathi, 2020). Studies such as Schuldt et al., (2017) have observed significant effects for education on healthcare facility choice as participants with a higher academic degree were more certain in their choices. Educated patients usually have more information about their disease, so are more obsessed with their choices (Mosadeghrad, 2013).

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7. CONCLUSION

Access to adequate and functional healthcare services should not but be a necessity for all persons regardless of their status, financial ability, and location. The prevalent of poverty has been found out to be a bane to achieving adequate access to good healthcare and facilities, particularly among rural developing countries. In this light, considering the extent of poverty in Nigeria, more attention must be given to promoting health care access, especially in rural areas. To address the issues, the following recommendations are suggested:

Relevant health agencies should update their data and ensure they are in tandem with population trends this will assist the government, policymakers and concerned stakeholders to identify communities or settlements in need of urgent healthcare intervention and supports to guarantee adequate access by all.

Government should make the provision of healthcare services more affordable to people in rural areas by ensuring policies such as health insurance schemes, mobile healthcare delivery, care for the aged, etc available and affordable to all regardless of class, status, and location.

All healthcare facilities particularly in rural areas should be upgraded, adequately equipped, and increase personnel this will help to meet the health demands of the rural dwellers thereby reducing traveling time and easing the pressure on healthcare facilities in urban areas

In conclusion, to meet Sustainable Development Goal numbers 1 and 3 which hinge on addressing all forms of poverty and attaining healthy life for all, there is a need for relevant stakeholders in the public and private sphere to give concurrent focus on these two salient issues.

Authors' contributions

Both authors equally contributed to every section of the work.

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Conflicts of interests

The authors declare that there are no conflicts of interests.

Data and materials availability

All data associated with this study are present in the paper.

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