Original Research Article

Access to Public Healthcare Facilities in Urban Areas in Nigeria: The Influence of Demographic and Socioeconomic Characteristics of the Urban Population

Abstract

Background: Ensuring access to healthcare facilities is a high priority need in developing countries. This research aimed to determine the influence of socio-demographic and economic characteristics of the urban population in Nigeria to access to public healthcare facilities.

Methods: We conducted a community-based study in 400 households across the three urban areas of Gombe state, Nigeria. Access to healthcare facilities was quantified in a composite index which considers availability, accessibility and affordability. The head of families was interviewed for information related to access and for the socio-demographic and economic status of the residences. The influence of socio-demographic and economic characteristics was determined using a chi-square test with a significance level of <0.05.

Results: Most of the population interviewed within the selected urban areas had good access (84%) to public healthcare facilities. Socio-demographic and economic characteristics of household representatives such as age ($p = 0.02$), religious status ($p = 0.00$), level of education ($p = 0 .00$), employment ($p = 0.00$) and possession of healthcare insurance ($p = 0.00$) were found to significantly influence access to healthcare facilities in urban areas.

Conclusion: Access to public healthcare facilities within the urban areas was good and the study revealed some modifiable socio-demographic and economic factors that influence access. We recommend the intervention to address the factors to further improve access to public healthcare facilities and to achieve universal healthcare coverage.

Keywords: *Access, Healthcare Facilities, Socioeconomic, Demographic, Urban Areas*

Key Messages:

1. Implications for policy-makers

i. Ensuring access to healthcare facilities is a key to achieve Universal Healthcare Coverage in a country and the study provides a practical method to measure access to public healthcare facilities in urban areas in Gombe, Nigeria. Policymakers will make use of this method to measure this important concept in other geographical areas as well as in any other countries.

ii. The study revealed that access to public healthcare facilities is mostly good.in Gombe, Nigeria. However, it also revealed some modifiable socio-demographic and economic factors that influence access to the facilities. Intervention to address these factors will further improve access and to achieve universal healthcare coverage.

2. Implications for public

Ensuring access to medical facilities is a key responsibility of a government to achieve universal healthcare coverage in a country. This study provided a practical method to measure access to public healthcare facilities through information obtained from the public. The study revealed that access to public healthcare facilities is mostly good in Gombe, Nigeria where the study is conducted. However, it also revealed some modifiable socio-demographic and economic factors that influence access. Intervention to address these factors will further improve access and to achieve universal healthcare coverage. The public should support the policy-makers in designing and implementing such interventions.

Background:

Improving access to basic public healthcare facilities and services is one of the biggest challenges in developing countries. Peters et al (1) noted that people in advanced countries have better access to healthcare service than those in developing or poor countries and within countries. Access to essential healthcare facilities such as hospitals, clinics, dispensaries and maternities is a fundamental attribute of a well-functioning city, town, village, regions or nation. However, access to these essential facilities and services is still low in many parts of the world, and also in Nigeria. It is estimated that about half of the world population lack access to basic healthcare facilities and services they needed (2). The majority of the affected population are in low and middle-income countries (LMIC). In documenting disparities in access to healthcare in low and middle-income countries (LIMC), Peters et al (1), including both geographic and

financial accessibility, availability and acceptability as measures of access to healthcare services. Also, McIntyre et al (3), identified availability, acceptability and affordability as the dimensions to evaluate access instead of using the utilization of care as a proxy for access.

Part of the problem of insufficient access to healthcare facilities is the lack of understanding of the socio-demographic and economic characteristics of the population that are served. These factors are increasingly being recognized as significant healthcare determinant and as sources of health inequality in many parts of the world. It is noted that lack of access to quality and affordable healthcare services among the vulnerable and disadvantaged population breeds inequality in access to the facilities. Several studies, such as (4, 5&6), suggested that it is the young and elderly population who require greater healthcare access compared to other class of age category. Similarly, (7) indicated that females and not males need more access to healthcare facilities and services. (5, 4, 8 & 9) noted that individual employment status and occupational class are important healthcare determinant. Similarly, (6) noted that females access healthcare services more than males, the young and elderly more than those in the middle and intermediate age group, and unemployed more than employed as well as those with access to transport such as cars more than those without the carrier. (10) Noted that socio-demographic characteristics of households influence healthcare insurance enrolments in Ghana.

In many countries, there is a tendency for an increase in the urban population compared to the rural population (11). This is also through for developing countries such as Nigeria (11). This means an increase in the demand for efficient urban healthcare facilities in cities and towns. Widely recognized is the fact that the low urban population are often disadvantaged across multiple dimension such as in demographic, socioeconomic and geographic locations, for instance, gender, ethnicity, religion, etc. (12). However, a critical gap remains in the knowledge of healthcare access in the urban areas or the determinant of access among the urban population. Therefore, the understanding of the significance of socio-demographic and economic characteristics of the urban population to access healthcare is of considerable importance for the planning of healthcare facilities.

Nigeria like other low and middle-income countries (LMIC) has the problem of sub-optimal healthcare facilities and resources (13 & 14). The problem is not only about the rural-urban differences but also urban to urban differences. In terms of healthcare spending, (15) noted

that there is a heavy reliance on out of pocket payment for healthcare services in Nigeria. He stated that more than 90% of the population are uninsured despite the establishment of the National Health Insurance Scheme (NHIS) in 2006. Also, over 70% of the payment for healthcare services in Nigeria is done out of pocket expenditure; which means that people pay their healthcare bills from their little income (16 & 17). One of the policy objectives of health programs in Nigeria since independence is to improve the geographical distribution of healthcare facilities with the plan to increase population access to public healthcare facilities to ensure equal distribution of the facilities across the length and breadth of the country. Previous studies in the area prioritized an increase in the spatial distribution of healthcare resources instead of identifying the dynamics of the population's sociodemographic and economic characteristics. However, an understanding of the influence of geographic, sociodemographic and economic factors of the population in access to healthcare facilities is lacking in the country.

Objectives: The primary objective of this research is to determine the influence of socio-demographic and economic characteristics of the urban population for access to healthcare facilities in urban areas of Gombe state, Nigeria.

Methods:

Study Design and Setting

This was a cross-sectional community-based household survey. We selected households within the urban areas of Gombe, Kumo and Billiri to administer our questionnaires within the three senatorial districts of Gombe state in Nigeria.

Study Population

The study population were residents in a household in the selected urban areas of Gombe state Nigeria where at least two of the 18-25, 26-35, 36-45, 46-55 years and above age groups were residing as occupants. In a household, the head or their representatives who were likely to decide access to healthcare facilities was chosen as the respondent.

Sampling Size and Sampling techniques

Multi-stage sampling techniques were applied for this research. The first stage of sampling was a simple random sampling (SRS) to select a local government area (LGA) from the three senatorial zones or district. A simple random sample was applied as it is the best

method of selection which provides equal chance and probability that each LGA could be selected. The selected LGA's were Gombe, Akko and Billiri local government areas. The second stage involves selecting an urban area with at least two types of healthcare facilities from among the primary, secondary and tertiary healthcare facility using a simple random sampling method. Mostly chosen urban areas were the LGA headquarters, however, if the LGA headquarters does not meet the above criteria, another eligible urban area within the same LGA was selected. The urban areas thus designated from the three LGA's were Billiri, Gombe and Kumo.

For stage three and four, stratified sampling and cluster sampling were used to identify and sample the population to study. Step three was to sample the political ward/unit (W) from each urban area (W1-W3). Wards or units are a group of households within the urban areas with representatives at the LGA councils. The number of wards or units and size varies across the urban areas, for examples, all the wards in Gombe local government are in Gombe town. At the same time, there are no more than three wards in Kumo and Billiri town, respectively. Three wards/areas were selected from each urban areas. The number of households to be included in each urban area was based on the estimated population size in each selected urban area, i.e. Gombe (254), Kumo (88) and Billiri (58) households respectively. In a cluster sampling, the first eligible household, the index households were selected randomly and then the eligible households located on the same road as the index house till all the required number of households are completed. Lastly, the selected household was visited by the data collectors and the heads of the selected households or representative were chosen as respondents.

Defining Access to Public Healthcare Facilities

. For this research, access to public healthcare facilities was defined as a measure of availability, accessibility and affordability. Information on three of the aspects was inquired into from the respondents of each household using an interviewer-administered questionnaire. Availability was based on the presence of the public healthcare facilities within the areas, whereas accessibility was measured as the ability of an individual within the study area to overcome distance to reach healthcare facilities. Affordability was based on the information on whether the available healthcare facilities are affordable. The response was inquired using yes or no options. The data from each household was assigned a score (1 & 0) and were collated to an access index using a simple equation of $x+y+z/n$, where xyz represents the aspect of access and n

is the total number of items included. The definitions and the questions to gather information and the scores used were designed with the inputs from a group of experts in the field of healthcare and health economics.

Demographic and Socio-economic Characteristics Influencing Access to Public Healthcare Facilities

The potential sociodemographic and economic characteristics influencing access to public healthcare facilities in urban areas of Gombe state Nigeria were conceptualized as shown below, (Figure 1.0).

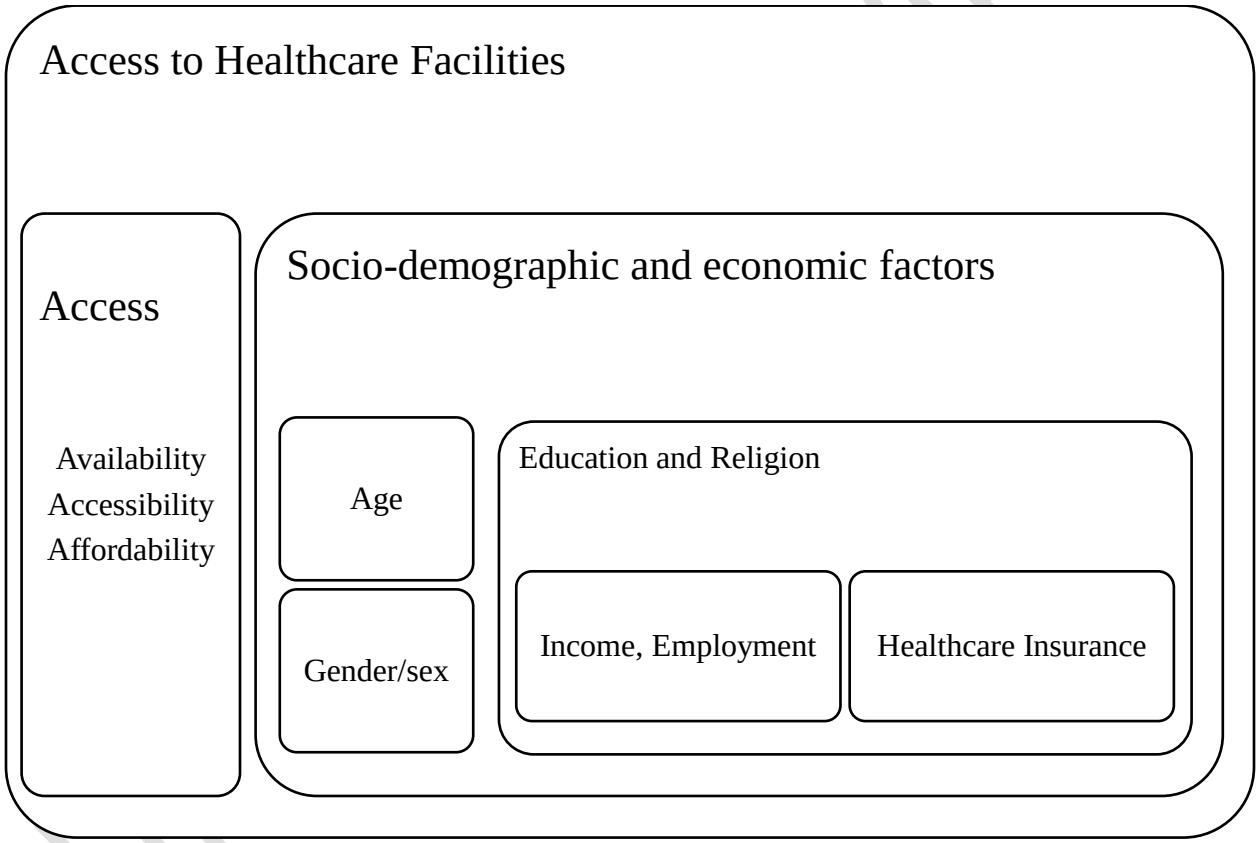

Figure 1.0: socio-demographic and economic factors tested for association with good accessibility to public healthcare facilities.

Data Collection:

The data collectors visited the households and from each of the selected households, the head of the household was chosen as respondent. An interviewer-administered questionnaire was

used to collect the data from the selected respondent. Access to healthcare facilities was measured using a set of questions on availability, accessibility and affordability (Figure 1.0). The questions were related to the experience of households in the selected areas during the past six months. Demographic factors of individual data such as age and gender and socioeconomic factors like education, marital status, religion, employment, income and healthcare insurance were also inquired into (figure 1.0). The interviewers were mostly university graduates with prior knowledge of data collection. Additionally, training and demonstrations were conducted to the data collectors by the principal researcher using an area that is not part of the study areas.

Statistical Analysis:

Descriptive statistics were used for categorical variables. Based on the advice of the expert on the subject of healthcare provision and services, the households with a score of 50% or above for access index were classified as having 'good access' while those households with <50% were classified as having 'poor access'.

Association of sociodemographic and economic characteristics of urban population to access to healthcare facilities in urban areas was examined using cross-tabulation of the factors against good/poor access and the association was tested for statistical significance using a chi-square test. A significant level of $p<0.05$ was used in determining the significant factors.

Results

Basic characteristics of the study population

As stated in the methodology section, from each of the selected households in the three selected urban areas of Gombe state, the person who is making decision-related to healthcare in the family was chosen as the respondent to the interviewer-administered questionnaire. Table 1. showed the details of the social, demographic and economic characteristics of the respondents within the three selected urban areas of Gombe state.

Table 1: Demographic, social and economic characteristics of the study population in the selected urban areas of Gombe state

Urban Areas	***Billiri n= 58***		***Gombe n= 254***		***Kumo n= 88***		***Total n= 400***	
Basic Characteristics	***n***	***%***	***N***	***%***	***n***	***%***	***n***	***%***

Age Groups	18-25	12	20.6	42	16.5	19	21.6	73	18.3
	26-35	15	25.9	96	37.8	31	35.2	142	35.5
	36-45	19	32.8	71	28.0	27	30.7	117	29.3
	50 Above	12	20.6	45	17.7	11	12.5	68	17.0
Sex	Male	32	55.2	146	57.5	55	62.5	233	58.2
	Female	26	44.8	108	42.5	33	37.5	167	41.8
Marital Status	Single	23	39.7	103	40.6	29	33.0	155	38.8
	Married	28	48.3	121	47.6	56	63.6	205	51.3
	Divorced	2	3.4	10	3.9	2	2.3	14	3.5
	Widowed	4	6.9	17	6.7	1	1.1	22	5.5
	Separated	1	1.7	3	0.4	0	0.0	4	1.0
Religion	Muslim	24	41.4	126	49.6	70	79.5	220	55.0
	Christian	32	55.2	123	48.4	12	13.6	167	41.8
	Traditional Religion	2	3.4	4	1.6	3	3.4	9	2.3
	Pagan	0	0.0	1	0.4	3	3.4	4	1.0
Highest Level of Education	Non-formal education	7	12.1	26	10.2	12	13.6	45	11.3
	First school certificate	5	8.6	14	5.5	6	6.8	25	6.3
	Senior school certificate of education	11	19.0	64	25.2	28	31.8	103	25.8
	Diploma	15	25.9	61	24.0	23	26.1	99	24.8
	Degree	20	34.5	89	35.0	19	21.6	128	32.0
Employment	Full time public	13	22.4	65	25.6	27	30.7	105	26.3
	Full time private	7	12.1	19	7.5	1	1.1	27	6.8
	Self employed	8	13.8	26	10.2	15	17.0	39	9.8
	Casual Employment	1	1.7	16	6.3	5	5.7	22	5.5
	Student	13	22.4	61	24.0	29	33.0	103	25.8
	Unpaid family work	7	12.1	3	1.2	4	4.5	14	3.5
	Retired	9	15.5	16	6.3	7	8.0	32	8.0
	Unemployed	13	22.4	48	18.9	27	30.7	88	22.0
Household Annual Income	Minimum	46	79.3	136	53.5	65	73.9	247	62.8
	Medium	9	15.5	68	26.8	7	8.0	84	21.0
	Maximum	3	5.2	50	19.7	16	18.2	69	17.3
Health Insurance	Yes	20	34.5	56	22.0	25	28.4	101	25.2
	No	38	65.5	198	78.0	63	71.6	299	74.8

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The urban population within the age group of 26-35 was high (35.5%) among those interviewed in the three urban areas. However, a slight variation was also observed, for instance in Billiri, almost one-third of the respondents were between the age of 36-45 years, (n= 19, 32.8%) while in Gombe and Kumo, the highest proportion of the respondents interviewed were from the ages of 26-35 years, (Gombe n= 96, 37.8% & Kumo, n= 31, 35.2%). Similarly, the majority of the respondents interviewed were male in all three urban areas i.e. (Billiri, n= 32, 55.2%, Gombe, = 146. 57.5%, Kumo, n= 55, 62.5%. However, for individual religious status, the majority of the respondents in Billiri were Christians, (n= 32, 55.2%) while the majority of the respondents in Kumo were Muslims (n= 70, 79.5%). In Gombe, the proportion of Muslims, (n= 126, 49.6%) and Christians respondents were similar, (n= 123, 48.4%). Also, one-third of the heads of the households in Billiri (n= 20, 34.5%) and Gombe (n= 89, 35.0%) possessed a Degree or its equivalent while in Kumo, about one third (n= 28, 31.8%) had senior school certificate. Full-time public employees and students constituted the majority of the respondents interviewed in all three urban areas, Billiri (n=13, 22.4%), Gombe (n=65, 25.6%) and Kumo (n=27, 30.7%). More than two-thirds of the respondents from Billiri (n= 46, 79.3%) and Kumo (n= 65, 73.9%) possessed a minimum annual income of #216,000 – 349,000, equivalent to the US $ 600-1000, while more than half in Gombe (n= 136, 53.5%) were within this income category suggesting that the majority of the people living in those areas are low-income earners. The results indicate that very few of the respondents interviewed from the study areas possessed healthcare insurance. More than two-thirds of the population interviewed in Gombe (n= 198, 78.0%), Billiri (n=38, 65.5%) and Kumo (n= 63, 71.6%) did not have health insurance.

Access Index

Information on the three factors was inquired into. The table below (Table 2) shows the access score for each urban area based on the number of respondents interviewed.

Table 2: Distribution of the household by the access index in each urban area

Urban Areas	***Access Index***			
	Good Access		***Poor Access***	
	n	***%***	***n***	***%***
Billiri	38	66.0	20	34.0
Gombe	214	84.0	40	16.0
Kumo	74	84.0	14	16.0

The results shown in Table 2 above indicated that more than two-thirds of the urban households in the three selected areas showed good access to public healthcare facilities. Among the three areas, Gombe (n = 214, 84.0%) and Kumo (n = 74, 84.0%) have the highest number of households with good access to public healthcare facilities. In contrast, more than half of the households interviewed in Billiri (n= 38, 66.0%) showed to have good access to public healthcare facilities. Billiri 34% (n =20) had the highest percentage of households with poor access to public healthcare facilities. Despite local variation among the selected urban areas and characteristics of the population, good access to the public healthcare facilities in urban areas of Gombe state were high and that the deep disparities expected among the urban areas are relatively low. Thus the road to achieving healthcare for all in urban areas studied is attainable.

Association of sociodemographic and economic characteristics on access to healthcare facilities in some selected urban areas of Gombe state

Table 3 below presents the results of demographic, social and economic characteristics of the respondents and access to healthcare facilities within the selected urban areas of Gombe state.

Table 3: Demographic and socio-economic characteristics of the respondents on access to public healthcare facilities in urban areas

The independent Variables	***Access Index***				***Significance χ^2, df & p- value***
	Good Access		***Poor access***		
	n	***%***	***n***	***%***	
Sex					
Male	224	96.1	9	3.9	$\chi^2 = 0.5$
Female	158	94.6	9	5.4	df =1, p = 0.47
Age Group					
18 - 25	67	91.8	6	8.2	$\chi^2 = 9.8$
26 – 35	139	97.9	3	2.1	df = 3,
36 – 45	115	98.3	2	1.7	p = 0.02
50 & Above	62	91.2	6	8.8	
Marital Status					
Single	148	95.5	7	4.5	$\chi^2 = 0.38$,
Married	194	94.6	11	5.4	df = 4,
Divorced	14	100	0	0	p = 0.69
Widowed	22	100	0	0	

Separated	3	100	0	0	
Religion					
Muslim	210	95.5	10	4.5	
Christianity	162	97.0	5	3.0	$\chi^2 = 11.4$,
Traditional	7	77.8	2	22.3	df = 3,
Pagan	3	75.0	1	25.0	p = 0.009
Highest Level of Education					
Non-formal education	39	86.7	6	13.3	
First school certificate	23	92.0	2	8.0	
Senior school certificate	97	94.2	6	5.8	
Diploma	97	98.0	2	2.0	$\chi^2 = 13.3$,
Degree/HND	126	98.4	2	1.6	df = 4,
					p = 0.009
Employment					
Full-Time public sector	103	98.1	2	1.9	
Full-time private sector	26	96.3	1	3.7	
Self-employed	43	87.8	6	12.2	
Casual	20	91.0	2	9.0	
Students	100	97.1	3	2.9	
Unpaid family work	7	100	0	0	$X^2 = 7.4$,
Retired	23	100	0	0	df = 7,
Unemployed	61	95.3	3	4.7	p = 0.09
Household Annual Income					
Minimum	236	95.5	11	4.5	
Medium	82	97.6	2	2.4	$\chi^2 = 2.1$,
Maximum	64	92.8	5	7.2	df = 2, p = 0.35
Health Insurance					
Yes	95	94.1	6	5.9	$\chi^2 = 261.2$,
No	287	96.0	12	4.0	df = 1, p <= 0.0001

Evidence from the results above suggests that not all the factors within the socioeconomic and demographic characteristics of the urban population are associated with access to public healthcare facilities. For instance, while age is significant (P = 0.02) in determining access to public healthcare facilities, gender is not (P = 0.47). Similarly, while individual educational level and religion are significant (P = 0.00, & P < 0.00), marital status is not (P = 0.69). Also, income and employment were not significant (P = 0.09 & 0.35) to good access to public healthcare facilities in urban areas. However, possession of healthcare insurance is associated with good access to healthcare facilities among the urban population (P = 0.00).

Discussion

The importance of sociodemographic and economic characteristics of the population in improving access to quality healthcare facilities and services have long been recognized especially in developed countries (26, 27). However, these important characteristics are often ignored or pending in the developing world, although their role is becoming more evident and demanding with a major case in point of universal healthcare coverage (UHC) and as noted by Appiah SCY (28) where individual socio-demographic characteristics are drivers of healthcare utilization among people with health insurance in Ghana.

Access Index

The present study revealed good access to public healthcare facilities in Gombe state, regardless of local variation among the urban areas. Based on the definition used, this implies that the public perceived that the presence of public healthcare facilities within the areas studied to be adequate, the ability of an individual within the area to overcome distance to reach healthcare facility as good and the available public healthcare facilities as affordable. This is in contrast to the difference in the level of access discovered by (6) using an Index of Relative Disadvantage (IRD) where they noted that access varies in mobility and locational attributes. Also, Carmen et al (2020) developed an access measure to evaluate urban access to primary healthcare services in Naples to support decision-makers. The results show that the elderly population within the neighbourhood in the city suffers poor access to primary healthcare services. However, Reshadat et al (2018) employed spatial analysis measures to evaluate access to healthcare facilities in Iran. They discovered random distribution pattern and clear inequality in access to healthcare facilities in Kermanshah Township. It is important to state that there is no urban measure of access to healthcare that integrates both spatial and non-spatial factors. However, the only closely related index are those of Wang and Luo (24) and McGrail and Humphreys (25) that measured access to healthcare in rural areas of Victoria (Australia) and Illinois (USA). Both indexes identified areas of poor access to primary healthcare facilities and associated integrated factors that may help improve access to healthcare in rural areas. Therefore, by using individual perceived response to generate access index to public healthcare facilities, this approach has proved to be a valuable source of identifying measure of access in areas of developing countries where data on socio-demographic and economic and access to healthcare is

lacking. This is one of the strengths of this study compared to others conducted in both developed and developing countries.

Association of sociodemographic and economic characteristics of population and access to healthcare facilities in urban areas of Gombe state

Demographic characteristics: Age and Sex are the most critical demographic variables as well as predisposing characteristics that play a significant role in determining access and to essential services, including healthcare facilities. Women, children and older people often suffered from social marginalization and physical vulnerability due to their gender and age status. Gender is an important demographic variable and a primary driver of healthcare access. However, in a multi-cultured and religious society, male and middle-aged household' members played a significant role in domestic decision making when compared with female. From our findings, there were no significant gender differences for good access (P = 0.48) to public healthcare facilities in urban areas of Gombe state. By looking at the insignificant influence of gender on access to public healthcare facilities, the research findings can infer that gender is not a barrier to access to public healthcare facilities in urban areas of Gombe state. The results could be due to the importance of health to both genders within society and how one Gender can influence another when in need of healthcare. The implication of these findings, therefore, is that the pattern of access is similar. However, identifying and addressing gender difference in access to public healthcare facilities is essential in reducing healthcare inequality and ensure sustainable health for all.

In terms of age of the population, the calculated χ^2 shows that there was a significant difference in terms of the association of age on good access (P = 0.02) of public healthcare facilities among the urban population especially between ages of 36 to 45. These findings could bring about inequality in access, especially among the elderly and vulnerable age groups who are likely to experience difficulties in access to the available facilities and services. This study confirms how the demographic difference of age in healthcare among the urban population can influence good access to healthcare facilities in urban areas and advanced the previous research by explaining in details the variables predicting healthcare access in urban areas of Gombe state.

Social characteristics: Individual, marital status, level of education and religion are predisposing social characteristics that determined and influence how the population access

essential services, including healthcare facilities. Education as the major source of individuals and communities capital formation is known to leads to better health outcomes. Living conditions are expected to differ across different levels of household education attainment, with higher education more likely to predict high living standard (18). Similarly, knowledge helps in developing the confidence to make an informed decision about individual and community health needs. In terms of individual, marital status, we found that there was no significant difference in good access among the population interviewed ($P = 0.69$), thus marital status is not associated with good access thus, it does not influence access to public healthcare facilities in urban areas. However, there is an association between the level of education and good access and was found to influence good access ($P < 0.00$) to public healthcare facilities. Evidence suggested that better education is associated with not only access to the facilities but also high-level access to healthcare facilities among the population in need (19). Similarly, the findings corroborated earlier results by (20), that education and health are linked and critical components of individual and community's health and healthcare outcomes. They argued that individual education as a social determinant is functional because it forms the new members of the society, thus making it influence access to healthcare services in developing countries. However, (21, 22 & 23), argued that access and utilization of public healthcare facilities increase with increases in the educational attainment of the population, although both variables were analyzed simultaneously. Unlike marital status, religion was found to significantly influence access ($P = 0.00$) to public healthcare facilities in urban areas. The implication of these finding is if the patient is not educated, he/she may likely have access to the facility but could not be satisfied with the quality of the services provided. The result suggests that improving educational opportunities of the urban population through sensitization may impact both access and utilization of public healthcare facilities and services.

Economic characteristics: Households and Individual employment status, income and possession of healthcare insurance are economic attributes that are associated with good access to healthcare facilities and can potentially influence good access to public healthcare facilities in urban areas. Our findings revealed a mixed result in terms of the association of economic factors assessed. For instance, both income and employment were not associated with good access to healthcare facilities, therefore their influence is insignificant; this means that irrespective of the individual class of income and employment, he/she can access healthcare facilities whenever the

need arises. The findings are contrary to the common notion that the higher the income, the better the access and the quality of the services received by the population. Evidence from the previous findings suggested that income is significant to access to healthcare, people with higher income are more likely to choose higher-level facilities than those with lower income among the population (19). However, healthcare insurance is associated with access and could significantly influence good access ($P = < 0.00$) to public healthcare facilities in the selected urban areas studied. The findings imply that access to public healthcare facilities differed between the haves and have not among the urban population. This will no doubt create inequality in access as those with healthcare insurance are likely to access and the facilities than those who do not have. Our findings have contradicted previous findings, such as that of (22). He suggested that inadequate individual income is found to influence optimum access and utilization of the facilities, with specific reference to the inability of the population to afford transport and services cost among the health seekers. They are likely to receive inadequate healthcare coverage and probably not to seek healthcare when they are ill, as concluded by (19). The findings suggest that only individual level of education and possession of healthcare insurance to ease the financial burden, especially service cost/fees potentially influence good access to public healthcare facilities in urban areas and not individual income.

Limitation

Several factors constituted limitations for the research. First, the research is limited to selected urban areas in Gombe. Similarly, information related to accessing healthcare facilities was inquired only to one member of the household, which could not be 100% accurate to generalize for the entire household. Also, the access index used to measure access to healthcare facilities for this study was not previously validated. Other limitations are that the determinants used only the characteristics of the respondents whereas ideally it should be based on the characteristics of the entire household.

Conclusion

Access to public healthcare facilities within the urban areas was good. Selected sociodemographic and economic characteristics of the urban population studied such as age, religion, individual level of education, and possession of healthcare insurance were shown to be associated with access to healthcare facilities and thus influence good access to public healthcare

facilities. However, gender, marital status, income and employment were not associated with access to healthcare facilities in the urban areas studied. On this note, we recommended that basic individual demographic and socio-economic characteristics should be considered when planning policies and setting up public healthcare facilities in an urban area, to further improve access to public healthcare facilities and to achieve Universal Healthcare Coverage.

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