Accessibility and Utilization of Healthcare Facilities among Internally Displaced Persons (IDPs) In Abuja, Nigeria

Victor Nichols Ukpere., Prof. 'Dare Dickson Ajayi., Akingbehin Akinwasola Akinfolarin

Department of Geography, University of Ibadan, Lagos, Lagos, Nigeria

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ABSTRACT

In Nigeria, internally displaced people (IDPs) are challenged by chronic obstacles in getting vital healthcare services despite the existence of various humanitarian and government interventions. This research paper focuses on investigating the spatial distribution, accessibility, and utilisation of healthcare facilities in the IDP camps of the Federal Capital Territory (FCT) in Abuja. Through descriptive research design, GPS data from 31 IDP camps were gathered and assessed using a nearest neighbour analysis. Questionnaire data from 357 IDPs were analysed using descriptive statistics, ANOVA, and logistic regression. Findings indicate that the distribution of IDP camps in the FCT is clustered, with 87 percent of the camps located in the Abuja Municipal Area Council. Healthcare facilities were generally within walking distance generally with the majority of the IDPs taking less than two minutes to arrive at the services, and there was no charge for transport. Although these are geographically close, a number of socio-economic and cultural elements that had a considerable impact on the utilisation of healthcare were evident, such as education, income, gender, perceived need, and cultural norms. The paper also points out discrepancies in the access of services and discrepancies in quality of care among camps. The results indicate the necessity of the specific health measures, enhanced resource distribution, and culturally competent engagement strategies to increase access and use of healthcare services by IDPs in the FCT. Enhancement of primary healthcare provision in camps and targeting social determinants of health have been important to the enhancement of health outcomes among displaced populations.

Keywords: Internally displaced persons, healthcare accessibility, healthcare utilisation, spatial analysis, Abuja, Nigeria

BACKGROUND OF THE STUDY

Internal displacement is one of the most prominent humanitarian and social health threats of the 21st century. As of 2020, there were 41.6 million displaced individuals because of conflict and violence worldwide, most of whom belong to the low- and middle-income countries (Internal Displacement Monitoring Centre [IDMC], 2020, 2021; Ekezie, Adaji, and Murray, 2020). The highest percentage of these populations is in Africa, which has about 17.8 million IDPs by the year 2018 (IDMC, 2020). Internally displaced persons are people who are compelled to escape their normal places of residence within national borders and, in some cases, without the legal status of refugees (Ekezie et al., 2020).

Over the past ten years, Nigeria has been facing long lasting and extensive displacement. During the year 2020 alone, around 2.7 million individuals had been internally displaced throughout the nation (Varrella, 2021). The reasons behind displacement are complex and intersecting, comprising the Boko Haram insurgency, armed banditry, pastoralist-farmer conflicts, land disputes and criminal attacks, communal violence, and frequent flooding (IDMC, 2020). These drivers serve to strengthen each other causing significant instability and huge migrations of vulnerable populations in the northeast, northwest, north-central and part of the southern states.

IDPs also have poor health outcomes compared to many other crisis-affected groups due to the disruption of livelihoods, social structures, nutritional accessibility, and available health care as a result of displacement (Massey, Smith, and Roberts, 2017). Many studies indicate that morbidity and mortality in IDP settings are contributed by preventable and curable diseases such as respiratory diseases, diarrhoea diseases, malaria and

measles among others which cause up to 60-95% of deaths in displacement settings (Yitageasu et al., 2025). It is an especially serious case with children, who are at a high risk of developing complications associated with malnutrition. Systematic nutritional and health risks were demonstrated through the reported tens of thousands of Nigerian IDP children who need to be treated with severe acute malnutrition (UNICEF, 2022).

There are also reproductive health risks that are experienced by displaced women. Childbearing among the IDP women in Nigeria has been described as a high-risk factor because of the low levels of antenatal care, insufficient skilled birth attendance, prohibition of certain cultures, and excessive or nonexistent maternal health services (Jibirilla, 2021). Consequently, IDP settlements tend to be sites of preventable maternal and neonatal morbidity.

The Federal capital territory (FCT) of Abuja has a significant number of displaced populations as the area is central to the displaced population, a security perception, and the institutions of the federal government. However, the lack of academic interest in healthcare access and use in these settlements is a problem, even though there are more than 31 camps. Existing research on the IDP health is inclined to deal with health issues, overall living conditions, or humanitarian responses (Yitageasu et al., 2025; Owoaje et al., 2016; Massey et al., 2017; Ekezie et al., 2020). There are limited studies on access to healthcare in the context of displacement, and even less on spatial analysis of service distribution or socio-cultural factors leading to healthcare-seeking behaviour.

Similar barriers to healthcare access have been found in other studies in Africa and in other regions such as financial limitations, lack of health services, shortages of drugs, accessibility of facilities, and cultural practices (Parwak, Dandu, and Haar, 2019; Elmukashfi et al., 2025). Research has shown that even in displacement and emergency environments, displaced populations face long-term barriers to health care such as insufficiency of funding, lack of necessary medicines, and insufficient personnel to provide health care that significantly restricts access to health care and leads to poor health statuses of the affected populations (Alfahal et al., 2025). But these studies do not cover spatial disparities in the camps and the unique dynamics in Abuja.

Also, more general studies of healthcare access and satisfaction among the vulnerable populations reveal the importance of quality of the healthcare staff, perceived severity of the illness, convenience, the proximity of the services, and the social-economic status (Ahmed et al., 2025; Adegoke et al., 2019). However, such investigations tend to target the general populations but not displaced populations.

This leads to a knowledge gap that is important in the knowledge about the distribution of healthcare facilities within the IDP camps in Abuja, the variation in accessibility among the different camps and how socio-economic and cultural issues influence the pattern of utilisation. Since the FCT reflects a concentration of IDP settlement, as the majority of the camps are located in the Abuja Municipal Area Council (AMAC), it is necessary to conduct a spatial analysis and uncover disparities to guide focused health responses.

Problem Statement

Despite the effective documentation of health issues faced by IDPs in the continent of Africa, there is still much to be known about spatial and socio-cultural factors behind the accessibility and utilisation of healthcare in the Federal Capital Territory. There are studies of health status, death rates, and interventions in the IDP settings conducted in the past (Yitageasu et al., 2025; Ahmed et al., 2025; Massey et al., 2017). Nonetheless, there has been inadequate coverage of spatial differentials in accessibility of healthcare services across camps in these studies. Also, the existing studies have found some factors concerning the malnutrition and the prevalence of diseases (Parwak et al., 2019; Çamcı et al., 2025), but these studies do not examine the role of cultural background, belief systems, and socio-economic factors on the healthcare-seeking behaviours of IDPs.

Additionally, despite the fact that certain research has explored the patterns of healthcare among general populations or refugees (Sherif et al., 2022; Adegoke et al., 2019), almost none of the studies have studied the healthcare-utilisation patterns of IDP in Abuja--though the areas are characterized by a unique demographic landscape, cultural landscape, and infrastructural landscape. A similar study by Saeed et al. (2025) also established that internally displaced persons (IDPs) still have considerable challenges with healthcare access, especially because of financial limitations, inadequate free services, and incompetent health care professionals,

the analysis also reveals that the research of displacement continues to pay minimal attention to the spatial accessibility and cultural factors that can potentially influence healthcare use.

Therefore, there is minimal information on the distribution of the healthcare facilities in relation to the location of the IDP camps in Abuja and the influence of socio-economic and demographic aspects on the use of healthcare. Absence of this sort of evidence reduces the ability of policymakers and humanitarian actors to develop equitable and context-sensitive health interventions. The paper fills these gaps by evaluating methodically spatial disparities in access to and use of healthcare services and by analysing cultural and socio-economic determinants of health-seeking behaviour in the FCT among the IDPs.

Aims

To evaluate the accessibility and utilisation of healthcare facilities among internally displaced persons (IDPs) in the Federal Capital Territory (FCT), Abuja

Research Objectives

- To determine the spatial distribution of healthcare facilities across IDP camps in the FCT
- To determine variations in healthcare accessibility among IDPs
- To analyse the influence of socio-economic and demographic factors on healthcare utilisation among IDPs

Research Questions

- How healthcare facilities are spatially distributed across IDP camps in the FCT?
- How does healthcare accessibility very among IDP camps?
- What socio-economic and demographic factors influence healthcare utilisation among IDPs?

Significance Of The Study

The current research on completion will be applicable in a number of aspects.

First, the research provides the evidence on the adequacy of current services and their equitable distribution by mapping the distribution of healthcare facilities across IDP camps. This information would help policy makers and humanitarian organizations know where to add facilities, staff or finances are needed.

Second, the research determines the important cultural and socio-economic determinants of healthcare-seeking behaviour amongst the IDPs. Knowledge of these determinants helps to offer specific health education, community mobilization, and culturally competent interventions to enhance service acquisition.

Third, analyzing accessibility differentials assists the parties in effecting reforms to avoid obstacles- including making accessibility hard due to long travel distance, unavailability of services or the attitude of providers. The discovery of these barriers is also helpful in enhancing the referral systems, aligning NGO support, and focusing on high-need camps.

Lastly, the study addresses a significant academic gap by the combination of spatial analysis with behavioural and socio-economic aspects of healthcare use in IDPs settings. The holistic approach is an addition to the literature on displacement health and a basis on which to conduct future research on health equity in vulnerable urban populations.

LITERATURE REVIEW

Conceptual Framework

Internally Displaced Person (IDPs)

Internally displaced persons (IDPs) are people who have been displaced because of a conflict, violence, catastrophe, or human rights violations but have also stayed within their national borders (IDMC, 2020a; OHCHR, 2021). Globally, there is an upward trend in internal displacement, and more than 41 million people are currently IDPs, the majority of whom live in low- and middle-income countries (IDMC, 2020; Ekezie, Adaji & Murray, 2020). The greatest proportion of these populations are found in Africa, which you can find almost 17.8 million IDPs in 2018 (IDMC, 2020). In Nigeria, frequent insurgency, tribal conflicts, natural calamities and farmer/herder disputes have created a population of 2.7 million estimated IDPs (Varrella, 2021). Such conditions make IDPs more vulnerable, such as having no shelter, food, loss of livelihood, insufficient health services (Global Protection Cluster, 2021; OHCHR, 2021).

IDPs have a disproportional mortality and morbidity related to the infectious diseases, malnutrition, mental health, and poor living conditions (Ali et al., 2024; Massey, Smith and Roberts, 2017). This is further aggravated by the overcrowding, poor sanitation, and interruption of vaccination and regular healthcare services, which increases the risk of spreading diseases further (Cantor et al., 2021). Another aspect that contributes to vulnerability is access to healthcare, as IDPs may be excluded from receiving critical medical care, particularly in locations with little resources and a history of conflict (Ekezie et al., 2021).

Availability of and Access to Healthcare Services.

Healthcare is affected by a variety of factors, such as the facilities availability, distance, cost, sociocultural beliefs, and health system capacity (Ogah et al., 2024). According to the United Nations High Commissioner of refugees (2005), the IDPs have often been found without quality health care centers, necessary drugs, and competent staff. The issues of accessibility are frequently connected with geographic factors, unsafe settings, poor transportation, and the high opportunity cost of seeking health care (Cantor et al., 2021).

The use of healthcare is based on the real utilisation of the services and is influenced by both enabling factors (income, awareness, availability of facilities) and predisposing factors (beliefs, education, and demographic traits) (Gabrani et al., 2020). Research indicates that utilisation depends heavily on quality of care, staff attitude, service availability, distance to health facilities and affordability (Onwukwe, 2025). Demand patterns are also influenced by socio-demographic factors like age, gender, and marital status, but some studies indicate that these characteristics do not have a consistent relationship (Ahmed et al., 2025; Adegoke et al., 2019).

Health Problems of Internally Displaced people

The environment has been a major health risk factor among IDPs, and their health system is disrupted, and the living conditions are overcrowded. The morbidity and mortality of IDP camps are high with infectious diseases like malaria, diarrhea, acute respiratory illness, and measles (Owoaje et al., 2016). The research conducted in Africa demonstrates that children and adults suffer malnutrition that leads to the higher death rates (UNICEF, 2022).

Among the displaced populations, non-communicable diseases and mental disorders, such as depression, post-traumatic stress disorder (PTSD), and anxiety, are becoming more commonly known (Makhashvili et al., 2017). Evidence of Ukraine, Colombia, and Sudan demonstrates that the levels of psychological distress associated with the conflict and displacement are high (Lagos-Gallego et al., 2017). Poor sanitation, high population density, low vaccination rates, and disease vectors are also associated with frequent cases of communicable disease outbreaks (Ekezie et al., 2021; Cantor et al., 2021). These overlapping conditions are a depiction of the damaged health conditions that define IDP settings.

Determinants of Healthcare Accessibility and Utilisation

The socioeconomic, spatial, cultural, and health system factors influence the accessibility and utilisation of healthcare among internally displaced persons (IDPs). The socioeconomic factors like income, education, and employment largely determine the accessibility and affordability of healthcare services to the people. It has been demonstrated that such variables as age, gender, educational level, and income influence the access and the rate of healthcare utilisation (Nwokoro et al., 2022). Less affluent IDPs will either postpone or resist seeking treatment because of transportation expenses, consultation charges, or the inability to afford medicine (Summers and Bilukha, 2018).

Spatial issues are also essential when it comes to access determination. Recent studies in the rural areas indicate that a long distance and poor transport systems diminish chances of accessing primary and secondary health services in a timely manner significantly, especially where roads are not well developed and there are few means of transport especially in areas with limited means of transport. As an example, spatial analysis in rural Ghana demonstrated that remote communities with minimal health services had significantly longer commuting distances and reduced access to care, and research in the Diffa province of Niger highlighted that almost half of the population was more than 5 km from a health facility, and thus these populations needed mobile outreach to access care (Nsiah et al., 2024; Rabiou et al., 2024).

The health-seeking behaviour also depends on cultural and religious beliefs. Attitudes toward sickness, traditional medicine, and gender roles determine the utilisation of formal healthcare services. In other instances, women are limited to mobility or permission to get care. The given sociocultural reasons promote differences in utilisation despite the presence of services (Makhashvili et al., 2017).

Utilisation is also affected by health system-related determinants such as availability of drugs, staffing, service hours and staff attitudes. The frequent shortages, long waiting hours, and negative relations with the providers discourage services (Ekezie et al., 2021).

Although there is a considerable body of research, not many studies exist that can be taken as sufficient in terms of the spatial differences or cultural factors in medical use among the IDPs. These deficiencies outline the necessity of spatially aware and culturally sensitive methods (Owoaje et al., 2016).

Theoretical Framework

The theoretical frameworks used in the current research include the Aday and Andersen Model and the Health Belief Model (HBM). These models offer complementary insights on the role of socioeconomic, structural, and behavioural determinants on the health-seeking behaviour of internally displaced persons (IDPs).

Aday and Andersen Healthcare Utilisation Model.

Aday and Andersen Model (Andersen and Newman, 1973) discusses the utilisation of healthcare complex in terms of three types of determinants, namely, predisposing factors, enabling factors, and need factors. The predisposing factors are demographic factors, social structure, and health beliefs that determine the propensity of an individual to use health services. Enabling factors relate to factors that promote or impede access, which include income, transport, and healthcare facility accessibility. Need factors denote a perceived or assessed disease of an individual, which causes the choice to seek care.

The model is popularly employed in studying health-seeking behaviour particularly in populations vulnerable to health, where access disparities are common. Its applicability to the populations of IDP is due to the possibility of consider both system-level and individual-level factors in the model, such as spatial access, financial capability, cultural beliefs, and perceived severity of illness (Azfredrick, 2016). The framework is consistent with the evidence that socioeconomic factors, spatial constraints, and health systems restrictions are highly important in IDP healthcare behaviour (Elmukashfi et al., 2025; Njuguna et al., 2024). Therefore, the model offers a holistic basis of the analysis of healthcare access and utilisation among IDPs in the Federal Capital Territory.

The Health Belief Model (HBM)

Health Belief Model (HBM) assumes that health behaviour is determined by the perception of people regarding their vulnerability to disease, perceived severity of that disease, perceived prevention of action, and perceived obstacles to obtaining care (Gidado et al., 2023). Other modifying factors that are acknowledged by the model include demographic characteristics, knowledge, and cultural beliefs and cues to action that makes individuals seek care.

The theory of HBM is especially valuable in explaining healthcare behaviour among IDPs since cultural and behavioural variables have a strong impact on how displaced people explain illness and determine whether to request formal care (Adesina et al., 2021). Perceived barriers can be shaped by beliefs in traditional healing, distrust of formal health systems, gender norms, and beliefs regarding costs or provider attitudes, and discourage utilisation. Although the model provides a strong behavioural perspective, its shortcomings are the impossibility of measuring psychological constructs and the presence of multiple conflicting beliefs (Gidado et al., 2023). However, the HBM offers a suitable model to determine the role of the cultural perceptions and behavioural inclinations in terms of care seeking among the IDPs.

The combination of the Aday and Andersen Model and the HBM enables the study to combine the determinants of structure (spatial access and resource availability) with behavioural and perceptual determinants (beliefs and attitudes). This two-theory framework is necessary to interpret the compound of multi-layered issues that define the accessibility and use of healthcare among Abuja IDPs.

Empirical Studies

The empirical data on internally displaced persons (IDPs) always indicate that the lack of displacement subjects individuals to the increased risk of health problems and serious obstacles to healthcare services. One theme that is common in the literature is the imbalance of the burden of communicable diseases among displaced populations. According to Yitageasu et al. (2025), infectious diseases such as diarrhoea, acute respiratory infections, malaria, and measles cause most deaths in displacement settings, which are usually between 60 and 95 percent of all reported mortality. The same tendencies can be observed within African settings, where overpopulation, poor hygiene, malnutrition, and the lack of preventive care contribute to the susceptibility to disease outbreaks. Owoaje et al. (2016) confirmed these reports by reporting high rates of malaria, diarrhoea, respiratory infections, and nutritional deficiency in the case of IDPs in Nigeria.

Some other empirical research has expanded the definition of IDP health challenges to non-communicable diseases (NCDs) and mental disorders. Nuh (2025) emphasized the high prevalence rates of chronic diseases, anxiety, and depression in displaced groups, whereas Makhashvili et al. (2017) observed co-morbid mental health and chronic diseases in Ukrainian IDPs. Similar results were shown by Parwak, Dandu and Haar (2019), which revealed evidence of severe malnutrition in displaced children, highlighting the complexity of health vulnerability. Taken together, these results demonstrate that displacement results in a multifaceted relationship between physical and psychosocial risk of health not limited to infectious diseases.

One research area is a significant body of empirical research on the accessibility and use of healthcare. Another common obstacle is the geographic constraints. Mosha et al. (2025) established that the long travel time and ineffective mode of transportation were the most important factors that decrease the level of healthcare use, particularly in remote or structurally vulnerable environments. Research in Nigeria resonates with these difficulties. Zainab & Omotayo (2025) showed that the utilisation patterns are strongly predicted by the proximity of healthcare facilities, whereas Hassan (2024) explained that accessibility is multidimensional, with geographic, financial, and acceptability components influencing it. All these studies indicate that access to healthcare services is not merely a matter of availability, but space positioning is a determining factor.

Empirical findings also include socioeconomic determinants. Nwokoro et al (2022) and Mwami and Oleche (2017) named the factors of income, education, and employment as essential determinants of health-seeking behaviour. Weak socioeconomic position- prevalent amongst IDPs- decreases capacity to afford transport, consultation, and drugs, hence decreasing the probability of care seeking (Rodríguez-Morales et al., 2019). In

Nigeria, Langat et al (2025) observed that poor quality of care, high drug prices, and inefficient staffing further undermine the use of the services, which implies that poor socioeconomic status intersects with structural deficiencies to enhance access barriers.

Another important dimension that is explored in literature is cultural and behavioural factors. Studies in the IDP settings have recently revealed that cultural beliefs and attitudes towards illness matters in a great deal in determining the behaviour of seeking healthcare as well as influencing the use of formal health services. As an example, a study by Saeed (2025) of women in an internally displaced persons camp, in Niger State, Nigeria found that culturally based beliefs regarding illness and traditional practices were some of the most limiting factors in accessing and implementing modern healthcare services alongside financial and logistical limitations. Similar outcomes were achieved by Abhadionmhen et al (2025) who determined that distrust in orthodox medicine and preference towards traditional remedies affect the health-seeking behaviors. Utilisation is also influenced by gendered norms; Amodu et al (2020) observed that women's access to reproductive healthcare in IDP settings is informed by spousal consent, cultural expectations and finances. These studies point to the fact that cultural acceptability is as important as geographical and financial accessibility.

Even though there is significant empirical literature, there are still significant blanks to fill, especially in the aspect of geographical differences in healthcare accessibility among the IDPs. According to a study, much of the available literature either considers non-displaced populations or research on accessibility determinants in a general way or does not address spatial disparities (Adegoke et al., 2019). Even those that describe IDPs explicitly, like Gidado et al. (2023), hardly address the inter-camp differences or even consider the connection between spatial patterns and utilisation behaviours. The importance of this omission lies in the fact that IDP camps are frequently different in both place and infrastructure, and also in their closeness to health facilities, which may both contribute to health outcomes significantly (Deinne & Ajayi, 2018). Moreover, the role of culture on healthcare utilisation has not been studied well in the spatial context. Cultural determinants were addressed in articles by Adesina et al (2021) and Adegoke et al (2019) but not many empirical studies have combined them with a spatial or a socioeconomic study. Consequently, the literature tends to be partial in its views and analyzes determinants independently of their interdependence.

Altogether, the current empirical research offers useful data concerning the health issues of IDPs and the predictors of healthcare access and use. Nevertheless, there is no literature that provides detailed, spatially informed studies that take into account cultural, socioeconomic, and system-level variables. This gap supports the topicality of the present research, which uses a spatial approach to analyze the differences in accessibility and usage of healthcare at the IDP camps in the Federal Capital Territory, Abuja, and considers socioeconomic and cultural predictors.

METHODOLOGY

Research design

The descriptive research design was employed to determine the level of accessibility and utilisation of healthcare facilities among IDPs in the Federal Capital Territory (FCT), Nigeria.

Study Area

The study area is the Federal Capital Territory (FCT) which Federal Capital Territory lies between Latitudes 8 27'm 30" to 9o 26' 00" North of the Equator, and between longitudes 6º 48' 00" to 7º 44' 00" East of the Greenwich as shown in (Figure 1). The FCT was created formed in 1976 from parts of the states of old Kwara, Niger, Kaduna, and Plateau States with the bulk of the landmass carved out of Niger State (Balogun, 2001). It is within the middle belt region of the country.

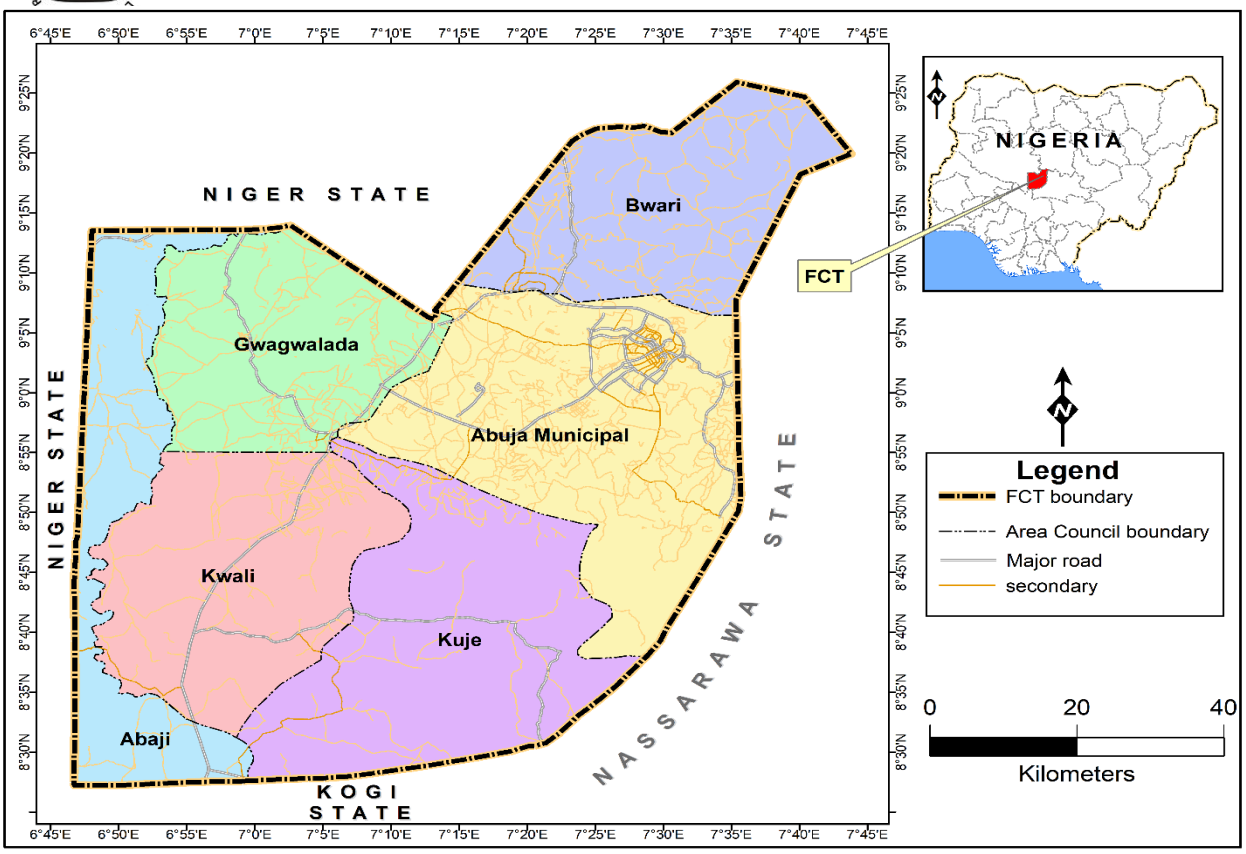

Figure 1: The Study Area (FCT).

Source: Federal Capital Development Area (FCDA), Abuja.

Population of the study

The population of the study comprised individuals (both males and females) in IDP camps in the FCT. During data collection, only respondents of 18 years and above at the selected IDP camps were sampled given that they are assumed to be able to respond to their health situations.

Types and sources of data

The objectives and hypotheses of the research were addressed using primary and secondary data. Primary data encompassed data on the sites of IDP camps in Abuja, healthcare accessibility measurement, and utilisation, perceived obstacles to care accessibility, and the socioeconomic, spatial, cultural, and religious profiles of IDPs. Other primary data was obtained regarding the types of healthcare services accessible, the health issues that IDPs experience and the healthcare seeking behaviour. These data were collected using two primary tools namely GPS (Global Positioning System) and a structured questionnaire.

Point-location data (northing and easting coordinates) were collected in all officially recognized IDP camps in the six Area Councils of the Federal Capital Territory using GPS devices. GIS procedures were used to map and analyze the spatial patterns of the camps using these coordinates. The spatial features of GPS allowed to analyze the position of camps and their position in relation to healthcare facilities.

The rest of the primary information was gathered by administering the structured questionnaires to the IDPs at the chosen camps. The questionnaire gave details of the demographic features of the respondents, access to healthcare services, patterns of use, and perceived barriers.

Primary data was supplemented with secondary data, such as official lists of known IDP camps and available FCT spatial data, which facilitated the mapping and analysis process.

Sampling technique

In this study, stratified and systematic random sampling techniques were employed in sample selection and questionnaire administration. A stratified sampling technique was used to sample all the 31 IDPs in the area. This process enabled variation in accessibility and utilisation of healthcare facilities to be easily understood. In addition, the systematic random sampling technique was thereafter used to administer the questionnaire with an interval of two between the first sampled respondent. As much as possible, respondents were approached in places of residence. Since, they are found in specific geographical locations, and not orderly organized; the systematic random sampling approach was more appropriate. Systematic random sampling according to Alfaha et al (2025) is considered most suitable given the characteristic layout of the districts; as some districts are well-planned and numbered, while others are poorly planned and numbered. The administration of the questionnaire using this technique involved an interval of two between the first sampled respondent. That is after the first IDP has been sampled, the third person was sampled, and so on.

Sample size

The second phase of sampling is sample size determination i.e., the determination of the number of respondents (IDPs) to constitute the survey. Hence, the sample size for the study was ascertained using the Taro Yamane's formula of 1969 cited in Samuel et al (2025). The Taro Yamane formula is mathematically defined as:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = Sample size

N = Total population of IDPs in the camps (39595)

E = limit of tolerable error (0.05)

Therefore,

$$= \frac{39595}{1 + 39595 \times 0.05^2}$$

$$= \frac{39595}{99.99}$$

$$= 396$$

This means that 396 represents the sample size which implies that a total of 396 questionnaire copies will be administered to IDPs in the identified camps in relation to their population sizes.

Data collection

In this study, data were collected using GPS and questionnaire. First, as already explained in the preceding section, GPS was used to collect point data (coordinates) which was used to show the locations of IDP camps on the map. The point data collected were thereafter be transferred into the GIS software to determine the location of IDP camps in the study area. The GIS technique enabled the transformation of the point data. On the other hand, a structured questionnaire was administered to IDPs in of selected camps. The questionnaire was administered by the researcher with the help of three research assistants. The questionnaire had sets of questions designed to provide give answers to the research objectives. It was divided into three sections. Section A

examined pertains the socioeconomic and demographic characteristics of IDPs; Section B had a set of questions that measured availability and accessibility to healthcare facilities; while Section C contained a set of questions to measure the utilisation of healthcare facilities as well as the barriers to healthcare facilities utilisation.

Data analysis processing

Data on the locational distribution of IDP camps were generated through the use of point data with the aid of a global positioning system (GPS) with the aid of Garmin GPS 76S. A Softcopy of the map of FCT was obtained from GIS Laboratory, Department of Geography, University of Ibadan. Data on the boundaries of the FCT were sourced from an already existing map of the FCT.

Method of data analysis

Data obtained from the point location on the location of IDP camps were analyzed using nearest neighbour analysis (NNA). NNA was carried out to determine the distributional pattern of IDP camps in the study area. For questionnaire analysis, the descriptive and inferential statistical tools, tables, simple percentage, One-Way Analysis of Variance (ANOVA), logistic regression analysis, and principal components analysis (PCA) were used to analyse the data collected through the questionnaire (Kim, 2017). The first hypothesis which states that the distribution of IDP camps in the FCT is not random was analyzed using nearest neighbour analysis (NNA); the second hypothesis which states that the pattern of healthcare service accessibility varies significantly among IDP camps in the area was tested using ANOVA. The third hypothesis which states that the level of healthcare service utilisation is significantly influenced by socio-economic, spatial, religious, and cultural factors was tested using logistic regression analysis (Agresti, 1996). Statistical analysis was executed within the assistance of Microsoft Excel and SPSS (22.0) software for windows. These software packages are essential for the present study because they make it possible for the researcher to analyze the data in diverse ways depending on the objectives of the study.

In the present study, data transformation into dummies of 1 and 0 were carried out on some items to make them data appropriate for a parametric test (Deinne and Ajayi, 2017). Thus, positive responses were assigned the value 1, and negative 0. For instance, the question “Have you utilized the available healthcare facilities?” with Yes and No options was recoded into 1 for Yes and 0 for No. Also, items measured on the Likert Scale with responses ranging from strongly agree to strongly disagree were recoded into dummies of 1 for agree and 0 for disagree. Thus, responses of strongly agree and agree were taken as 1, and others as 0 (strongly disagree and disagree). This is because they represent positive and negative responses.

Ethical Consideration

The study was carried out in line with internationally accepted ethical standards of research with human subjects, which incorporate respect to persons, beneficence, and justice (World Health Organisation, 2023). The study included solely voluntary participation and all participants were adults of 18 years and above.

Before data collection, the participants were informed clearly and comprehensively of the study purpose, study procedures and research participants’ rights. The informed consent had been obtained in writing by all the participants prior to enrolment. The participants were told that they had the right to refuse or pull out of the study at any point without any penalties (Dahal, 2024).

During the course of the research, confidentiality and anonymity was ensured. There were no personal identifiers and all data were anonymised during analysis and reporting. Data were also stored safely and accessed by the research team only. Considering the sensitive situation among internally displaced individuals, extra attention was paid so that involvement did not lead to a state of psychological distress, coercion, or harm (Brittain et al, 2020).

RESULT OF FINDINGS

This chapter presents the analysis of result obtained from the administered questionnaire in order to appraise the level of accessibility and utilisation of healthcare facilities by IDPs in the Federal Capital Territory (FCT), Nigeria. In particular, it examines the spatial distribution of healthcare facilities across the IDP camps in the study area; determine the variation in the accessibility to healthcare in the IDP camps and makes attempt to find out the influence of socio-economic and demographic factors on healthcare utilisation by IDPs in the FCT.

Socioeconomic and Demographic Characteristics of Respondents

This section gives an account of the major socioeconomic and demographic characteristics of internally displaced persons (IDPs) in the chosen camps in the Federal Capital Territory (FCT). These attributes are the focus of interpreting differences in awareness, access, and use of healthcare services because socioeconomic profile tends to inform health-seeking behaviour and service uptake.

The study involved 357 respondents. Table 1 shows their demographic profile. The majority of respondents were females (64.4%), which demonstrates that women are more likely to be included in displacement contexts, perhaps because they are more at risk during conflict and crises. Ali et al. (2024) demonstrate similar trends in demographics and provide the statistics of 60 percent females among the IDPs in Sudan.

The age distribution shows that the majority of the respondents were young adults. The sample consisted of individuals aged 18-30 years (47.9%), 31-43 years (31.4%), and 44-56 years (20.7%). The average age of the participants was 32.7 years of age, which is consistent with the results of IDP populations in Sudan and the Dalori Camp in Nigeria (Ali et al., 2024; Faronbi et al., 2019). This age distribution implies that there is a high number of active population that can be effective in reporting experiences of accessing and using healthcare.

Regarding marital status 60.2 were married and 39.8 were single. This domination of married people can impact on the healthcare decisions of households especially in societies where spousal consent or household duties impact on the autonomy of women to seek care. On religion, 65.5% of the respondents were Muslims and 34.5% Christians. The religious mix is a reflection of the various socio-cultural backgrounds of displaced individuals in the FCT.

The level of education was diverse. Approximately 44.3% had primary or Quranic education, 33.3% had secondary education and 22.4% had no formal education. The high percentage (77.6) of individuals with primary or secondary education reflects a moderately high literacy level that may positively affect knowledge of health information and healthcare services utilisation.

Table 1: Socioeconomic profile of respondents

Variables	Categories	Frequency	Percentage
Sex	**Male**	**127**	**35.6**
	Female	**230**	**64.4**
Age at last birthday	**18 – 30yrs**	**171**	**47.9**
	31 – 43yrs	**112**	**31.4**
	44 – 56yrs	**74**	**20.7**
Marital status	**Single**	**142**	**39.8**
	Married	**215**	**60.2**

Religion	**Christianity**	**123**	**34.5**
	Islam	**234**	**65.5**
Education	**No education**	**80**	**22.4**
	Primary/Qur'anic	**158**	**44.3**
	Secondary	**119**	**33.3**

Source: Author, 2023

Spatial Pattern of IDP Camps in the FCT

This section deals with the initial research aim which was to establish the spatial distribution of the IDP camps within the FCT. It also tests the hypothesis one, which says that the IDP camps distribution in the FCT is not random.

Nearest Neighbour Analysis (NNA) was performed in ArcMap 10.5 which utilized projected coordinates (UTM Zone 32N) of all 31 different camps that were identified. NNA can be used in assessing the spatial patterns since it quantifies the extent of clustering or dispersion with respect to an assumed random distribution.

Table 1 results indicate a nearest neighbour ratio (Rn) of 0.54 whereby the observed mean distance is 4146.04 and the expected mean distance is 7718.93. Z-score with p-value of 0.000001 is -4.93, which means that the clustering pattern is very significant. This indicates that the IDP camps are localized as opposed to being scattered at random in the FCT. This clustering can be an indication of settlement patterns, security concerns or the availability of support systems in terms of NGOs and host societies.

Table 2: Spatial pattern of IDP camps in FCT, Nigeria

	Z-Score	P-Value	Observed Mean Distance(m)	Expected Mean Distance(m)	Rn-Value	No. of IDP Camps	Area of study(m^2)	Pattern
FCT	-4.93031	0.000001	4146.04	7718.9258	0.54	31	7388145051	Clustered

Source: Author's Analysis, 2023.

Table 2 result showed that the clustered trend has programmatic consequences: some of the areas can experience service overload and others will not have the basic support. It can also indicate the process of displacement based on the hotspots of conflict or concentration around urban/peri-urban areas of the FCT.

Variation in Healthcare Accessibility Among IDP Camps

The second research hypothesis was whether there is a significant difference in the access to healthcare within the IDP camps. ANOVA was employed to measure variation among three principal indicators of the proximity to health facilities, approximate distance to facilities, and time spent to access care.

The results (Table 3) indicate that none of the indicators ($p > 0.05$) have significant variation. Namely, the proximity to healthcare facilities ($F = 0.718$, $p = 0.864$), distance to facility ($F = 0.691$, $p = 0.890$), and the time to reach the facilities ($F = 0.440$, $p = 0.996$) demonstrated that the level of accessibility was similar in all the camps.

This uniformity indicates that health institutions are relatively near to IDP settlements thus the need to travel is minimised and access to care is timely. Elmukashfi et al. (2025) documented similar results in the relocated

populations in the northern parts of Uganda, where the distance decreased the geographic barrier to medical services.

Table 3: ANOVA result of the variation in the pattern of healthcare accessibility

Pattern of accessibility	Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Near from residence to healthcare facilities	Between Groups	3.486	30	0.116	0.718*	0.864
	Within Groups	52.788	326	0.162		
	Total	56.275	356			
Approximate distance to the nearest healthcare facilities	Between Groups	3.869	30	0.129	0.691*	0.890
	Within Groups	60.893	326	0.187		
	Total	64.762	356			
Time taken to access healthcare facilities?	Between Groups	5.351	30	0.178	0.440*	0.996
	Within Groups	132.078	326	0.405		
	Total	137.429	356			

*Not significant at 5% alpha level

Awareness of Healthcare Facilities

To determine of the level of awareness, respondents were asked whether they knew of any healthcare facility in their camp. The outcome (Table 4) indicates that there was 100 percent awareness among respondents. The visibility of facilities, recurring activities of NGO, the communication between peers, and the necessity of medical attention may be the reasons behind this high awareness.

Table 4: Level of awareness of healthcare facilities

Option	Frequency	Percent
Yes	357	100.0
No	0.0	0.0
Total	231	100.0

Source: Author, 2023

Availability of Healthcare Facilities

Table 5 shows that the range of healthcare facilities available is quite wide and varied in all of the camps. All camps (100%), had clinics and pharmacy kiosks, which means that the basic care and necessary drugs are always available. In 98% of camps, Health NGOs were also in operation, usually providing their services free of charge. In 95.5 percent of the camps there were faith-based organizations, and other sources of important maternal and emergency care included traditional birth attendants (80.1%), and maternity outposts (89.1%).

These results support a multi-layered and heterogeneous healthcare environment in the camps, which involves both formal and informal providers as service providers.

Table 5: Level of availability of healthcare facilities

Facilities	Percentage response (%)	
	Yes	No
Clinics (tents)	100	0
Pharmacy stores (kiosks)	100	0
Maternity centre/outpost	89.1	10.9
Health organization/NGOs	98.0	2.0
Traditional birth attendants	80.1	19.9
Faith based organizations	95.5	4.5

Source: Author, 2023

Common Health Problems Reported by IDPs

The respondents pointed out various health issues that were common in the camps. The most commonly reported disease was malaria (94.7%), just as the case was with other displacement environments in Nigeria and Uganda. Poor environmental conditions, overcrowding, and lack of sanitation in the camps were also the major causes of respiratory infections, diarrhoeal diseases, and skin infections.

Adults were mostly associated with musculoskeletal pains, symptoms associated with stress and children were often associated with fever, cough as well as rashes. The enormous burden of communicable diseases is in line with the reports of Faronbi et al. (2019) who report that malaria, diarrhoea, and respiratory infections are the leading morbidity diseases among displaced populations.

Healthcare Utilisation Among IDPs

Healthcare utilisation is a concept that is used to describe how the IDPs accessed medical care when they were sick. The distribution of healthcare-seeking behaviour is given in Table 6

The patterns of utilisation were mixed among the respondents. Most (62.5) reported that they accessed care when they were sick and 37.5% did not access available services. Clinics in the IDP camps were the most visited clinics among individuals who took care. A minority of respondents also applied traditional treatment methods, including herbs or spiritual healing, and it can be attributed to the cultural and religious norms.

Table 6: Healthcare facilities utilisation in the IDP camps

Utilisation	**Frequency**	**Percent**
Yes	223	62.5
No	134	37.5
Source: Author, 2023		

The comparatively large level of utilisation indicates that the closeness and knowledge of healthcare facilities encourage utilisation. Nevertheless, the 37.5% non-utilisation level indicates the presence of systematic barriers, such as treatment cost, unavailability of drugs, staff attitude, and cultural beliefs.

Factors Influencing Healthcare Utilisation (Logistic Regression Results)

A logistic regression analysis was established to determine the predictors of healthcare utilisation among IDPs using socio-economic, spatial, religious, and cultural variables. These findings are provided in Table 7.

Table 7: Summary of logistic regression result showing influence of socioeconomic and demographic factors on healthcare utilisation in IDP camps

Model	Variables	B	S.E.	Wald	Df	Sig.	Exp(B) Odd Ratio
Step 1	Marital status	1.852	0.620	8.928*	1	0.003	2.157
	Constant	3.836	0.584	43.209	1	0.000	46.333

Overall model estimation

Chi-square	**Df**	**Sig.**
13.531*	1	.000
13.531*	1	.000
13.531*	1	.000

Nagelkerke R Square = 0.167; *Significant at 5% confidence level

Source: Author, 2023

DISCUSSION

The present research explored the spatial distribution of medical care, access, and utilisation in internally displaced persons (IDPs) in the Federal Capital Territory (FCT), Abuja. The results show that the utilisation of healthcare depends on the interaction of geographic location, socioeconomic status, cultural norms, and challenges in the health system. This aligns with the facts that displaced populations are also faced with several vulnerabilities, such as poverty, unstable living conditions, and lack of access to basic services, which limit the access to healthcare in a timely manner (Cantor et al., 2021; Ekezie et al., 2021). In general, the research confirms that the proximity is not sufficient to explain healthcare utilisation among IDPs, but rather more comprehensive social and structural realities.

One important observation was that there was a spatial concentration of the IDP camps in Abuja Municipal Area Council (AMAC) with 87 percent of the camps found in the area. It is indicative of the propensity of displaced populations to cluster into regions that seem to be safer and more resource-bountiful based on the availability of governmental institutions and humanitarian organisations (IDMC, 2020; Owoaje et al., 2016). Nonetheless, this trend brings up the issue of spatial inequality, because camps outside AMAC might have inferior healthcare facilities and insufficient institutional backup. Other related studies have demonstrated that access to healthcare is usually not evenly distributed, which hurts displaced populations residing in less hub regions (Cantor et al., 2021). This observation shows the necessity of spatially responsive planning that takes into account the differences between the camps and area councils.

In spite of the fact that healthcare facilities in most cases were easily reachable on foot, usage was not universal since 37.5% of the respondents said that they did not seek healthcare services when they were ill. It supports the point that physical proximity does not necessarily imply successful access, especially in the situations when indirect costs, the perceptions of the service quality, and cultural aspects influence health-seeking behaviour (Nsiah et al., 2024; Rabiou et al., 2024). Examples of vulnerable settings have indicated that there is frequent limitation of healthcare utilization due to economic constraints and poor facility capacity, although medical

facilities are within the same geographical region (Rabiou et al., 2024). Thus, the research confirms that accessibility can be construed as the concept of affordability, acceptability, and quality and not distance only.

The socioeconomic variables of education and income have been identified to affect healthcare utilisation. The more the respondents were better educated and their income was high, the more likely they would access formal healthcare. This is in line with the studies implying that education increases health literacy and service awareness, whereas income enhances the capacity to meet the cost of consultation, transportation, and medications (Nwokoro et al., 2022). In displacement situations, basic needs of survival make people to neglect the need to seek treatment as time goes by. The same results have been highlighted in the case of displaced populations in Ukraine and Sudan, where economic distress decreased healthcare access and made them more susceptible to untreated diseases (Summers and Bilukha, 2018; Saeed et al., 2025). This indicates that the interventions on financial support can enhance the utilisation of healthcare.

Also important were cultural and gender-related factors. Females were also more likely to be impacted by social cultural issues including spousal consent, lack of autonomy and the inclination to use the traditional medicine. This aligns with the evidence that healthcare choices are influenced by culture and domestic power dynamics, especially in the case of displaced women in patriarchal societies (Amodu, Richter and Salami, 2020; Abhadionmhen et al., 2025). One reason why traditional and spiritual healing is still very common is because it is cheap, accessible, and believed in the indigenous systems (Abhadionmhen et al., 2025). These evidences reveal that healthcare interventions should be culturally aware and community and religious leaders to enhance acceptance and lessen barriers.

This paper also revealed that perceived severity of illness was a key determinant of utilisation since a good number of the respondents only sought healthcare services when they felt the illness was severe. This is indicative of a reactive healthcare-seeking behavior of displaced populations, in which fears of expenses and competing survival necessities result in delayed care (Cantor et al., 2021; Saeed et al., 2025). These postponements augment the danger of difficulties and unfavorable consequences, and health education and preventive outreach to improve early healthcare usage are needed.

Barriers on the health system were also eminent such as poor staff attitude, shortage of drugs and poor quality of services. All these problems indicate the vulnerability of weak health systems in conflict-prone settings, where scarce resources and supply chains disruptions decrease the reliability of service (Ekezie et al., 2021; Alfahal et al., 2025). Like evidence in Sudan and Gaza demonstrates that displaced populations often do not have the opportunity to obtain medicines and are dissatisfied with healthcare services (Camci et al., 2025; Ahmed et al., 2025). These obstacles make it less trustworthy and a deterrent to use it, despite the availability of the facilities. Hence, to enhance utilisation, it is necessary to develop and enhance drug supply systems, train the staff, and improve the quality of care, in general.

Lastly, the prevalent health conditions that were identified such as malaria, diarrhoea, respiratory infections, and malnutrition are typical disease burdens in displacement settings. They are closely associated with congestion, inadequate hygiene, and the lack of preventive care (Cantor et al., 2021; Ekezie et al., 2021). The results accentuate the significance of combined interventions that can be directed at the healthcare provision and the environmental health state. Altogether, the paper indicates that the interaction of spatial, socioeconomic, cultural, and system-level factors influences the healthcare utilisation of the IDPs in Abuja and that the measures to enhance the equitable healthcare-related access and health outcomes need to be multi-level.

CONCLUSION

This study evaluated the spatial patterns, availability, and use of healthcare services by internally displaced people (IDP) in Abuja, the Federal Capital Territory. The results have indicated that the concentrations of the IDP camps are considerably high with most of them being situated in the Abuja Municipal Area Council (AMAC). This geographical arrangement indicates that it is a way to seek security and to reach humanitarian aid, yet it implies inequalities among camps that are located further than the established urban facilities.

In spite of the fact that healthcare facilities were sometimes within two-minute distance, the study established

that physical availability did not necessarily mean higher utilisation. The proportion of respondents who reported using healthcare services when ill is at 62.5%, and 37.5% said they never sought healthcare despite having adequate access. This disparity highlights the impact of socioeconomic, cultural and perceptual barriers on health-seeking behaviour. Education, income, marriage, gender dynamics, cultural preference towards traditional medicine and perceived severity of disease were several factors that greatly influenced the possibility of seeking formal care. These results validate the applicability of the Aday and Andersen Healthcare Utilisation Model and the Health Belief Model that emphasizes the interaction of predisposing, enabling, and need-based variables in healthcare decision making.

Moreover, structural barriers such as drug shortages, poor staff attitudes, and service quality were found to be significant discouraging factors to utilisation. These problems prove that enhancing physical access is not enough; properly addressing the needs of displaced populations requires the healthcare services to be acceptable, affordable, and reliable as well. In general, the research highlights that the spatial, social, and cultural determinants of healthcare behaviour among IDPs in the FCT are interconnected, and they should be tackled together.

Limitations of the Study

Despite the positive information provided in the study, there are a number of limitations that need to be noted. First, the study was based on a great extent on self-reports that can be subject to recall bias or socially desirable answers. Second, though spatial analysis was good to depict the position of camps and facilities it did not determine the quality of transportation, road accessibility and seasonal changes that can influence movement. The study is also cross-sectional, which makes it difficult to monitor any behaviour change over time or with varying camp conditions.

The use of officially recognised IDP camps implies the exclusion of informal or unregistered settlements which are usually more vulnerable. Their omission can be a misrepresentation of entire level of healthcare access issues in the FCT. Also, despite the result of some significant predictors of utilisation obtained by logistic regression, some other potentially significant factors, including mental health status, length of displacement, or previous negative healthcare experiences, were not investigated in details. However, these shortcomings do not take away the role of the study in enhancing healthcare planning of the IDPs.

RECOMMENDATIONS

Based on the results, the research suggests adopting the multi-level strategy to enhance access to and use of healthcare among the IDPs in Abuja. To begin with, the healthcare services in the IDP camps must be improved. Having the steady supply of drugs, the attitude of staff members, who should be trained regularly, and a sufficiently qualified staff member would contribute to the establishment of trust and the promotion of the utilisation of provided services.

Second, access differences between AMAC camps and those in other area councils are to be addressed. The extension of services by mobile clinics, outreach programmes and the strategic alignment with the surrounding primary healthcare centres will assist in ensuring that all the camps such as the peri-urban areas are well supported.

Third, the interventions should be culturally aware. Most IDPs use traditional medicine, spiritual healing and some need consent of the spouses before they can access care. Health education campaigns led by involving community leaders, religious organisations and women networks will be used to clear the misunderstanding and ensure that early care seeking behaviours are encouraged.

Fourth, the communities should also be changed towards preventive healthcare practices by sustained health awareness campaigns. Knowledge may be increased by regular health talks, disease prevention outreach, and peer-education programs, which will promote early health-seeking.

Finally, enhancing the environmental and sanitary conditions in camps, i.e. control of waste, drainage and in-

checking of the vectors are needed to reduce the high-weight of communicable diseases. Enhancement of cooperation among government agencies, non-governmental organisations, and camp officials will result in a consistent and fair manner of health services provision.

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APPENDIX 1

Questionnaire

Department Of Geography

Faculty Of The Social Sciences

University Of Ibadan

Accessibility And Utilization Of Healthcare Facilities Among Idps In The Fct

Dear respondent,

The researcher is a postgraduate student of the University of Ibadan. He is carrying out research on the above topic. He therefore needs your support in filling the questionnaire. All the responses in the questionnaire will be kept confidential, as it is only meant for academic purpose.

Thanks for you for your time.

Victor Ukpere

(Researcher)

INSTRUCTION: Please tick [√] in the boxes, as appropriate or complete the dotted lines where necessary.

Section A

Socio-Cultural and Economic Characteristics

1. Sex: Male [ ] Female [ ]
2. Age at last birthday: pls specify …….
3. Marital status: (a) Single [ ] (b) Married [ ] (c) Divorced [ ]
4. Religion: (a) Christianity [ ] (b) Islam [ ] (c) others, please specify……
5. Education: (a) No education [ ] (b) Primary/Qur'anic [ ] (c) Secondary [ ] (d) Tertiary

   [ ] (e) Others, please specify……

Section B

Availability And Accessibility to Healthcare Facilities

6. What type of healthcare facilities are available to you in this IDP camp?

Facilities	**Yes**	**No**
Clinics (tents)		
Pharmacy stores (kiosks)		
Maternity centre/outpost		
Health organization/NGOs		
Traditional birth attendants		
Traditional medicine		
Faith based organizations		

7. How near is your place of residence to the nearest health care facilities? (a) Very near [ ] (b) Near [ ] (c) Far [ ] (d) Very far [ ]

8. What is the approximate distance from your place of residence to the nearest healthcare facilities? (a) < 0.5km [ ] (b) 0.5 – 1km [ ] (c) 2 – 3km [ ] (d) 3 – 4km [ ] (e) 5 – 6km [ ] (f) 7 – 8km [ ] (f) 9 – 10km [ ] (g) >10km [ ]

9. What is the approximate cost from your place to residence to the nearest healthcare facilities? (a) No transport cost [ ] (b) <N100 [ ] (c) N100 – N200 [ ] (d) >N200 [ ]

10. What time does it take you to the healthcare facilities? (a) <1min [ ] (b) 1 – 2mins [ ] (c) 3 – 5mins [ ] (d) 6 – 10mins [ ] (e) > 100mins [ ]

11. What is your mode of commuting? (a) Trekking/foot [ ] (b) Bicycle [ ] (c) Motorcycle / Okada [ ] (d) Tricycle [ ] (v) Bus [ ]

12. What is your level of access to the maternal healthcare facilities? (a) Very high [ ] (b) High [ ] (c) Moderate [ ] (d) Low [ ] (v) Very low [ ]

Section C

Utilization Of Healthcare Facilities

13. Are you aware of the presence of any healthcare facilities in this IDP camp? (a) Yes [ ] (b) No [ ]

14. Have you utilized the healthcare facilities in this IDP camp? (a) Yes [ ] (b) No [ ]

15. If yes, how often? (a) Daily [ ] (b) Weekly [ ] (c) 2 -3 times a month [ ] (d) Monthly [ ] (e) Others (specify)…….. (When ill or sick)

16. What are the usual activities performed? (a) Medical check-up [ ] (b) Lectures by nurses [ ] (c) Drug prescription [ ] (d) Others (specify)……

17. Who decides your utilization of healthcare facilities? (a) Husband [ ] (b) Parents [ ] (c) Friends/relatives [ ] (d) Self [ ] (e) Friends/neighbours [ ] (f) Religious leaders [ ]

18. Will you like to utilize the healthcare facility again? (a) Yes [ ] (b) No [ ]

19. Are you aware of the possible consequences/complications of not utilizing healthcare facilities? (a) Yes [ ] (b) No [ ]

20. If yes, which of the following complications do you think can occur? (a) Prolonged illness [ ] (b) Increased pains [ ] (c) Possible death [ ] (d) Others (specify)…

    …….

21. Does your belief system support the use of alternative medicine? (a) Yes [ ] (b) No [ ]

22. If "Yes", what are the reasons? (a) Efficiency [ ] (b) Medicinal ingredients [ ] (c) Failure of unorthodox medicine [ ] (iv) Cheap and affordable [ ]

23. If "No", what are your reasons? (a) Supernatural [ ] (b) No expiry date [ ] (c) Unregulated dosage for use [ ] (d) Does not provide the required cure for the ailment [ ] (e) Unpleasant odour [ ]

24. Barriers to the utilization of healthcare facilities

Barriers	**Yes**	**No**
Getting permission to go		
Language barrier		
Lack of knowledge about the existing services		
Attitude of healthcare providers		
Schedule of healthcare service		
Traditional or religious reasons		
Husband's acceptance of services		
Previous history of complications		
Previous experiences of the services		
Distance to health centre		
Waiting time		
Not wanting to go alone		
Concern that there may not be a female health provider		
Belief system		

25. In your opinion and observation, which of the following health problems or illness is common in this camp? (a) Malaria/fever [ ] (b) Cough & Catarrh [ ] (c) Diarrhoea [ ] (d) Measles [ ] (e) Heart diseases [ ]