



Systemic Constraints to Equitable Medical Access: A Multi-Factorial Analysis of Institutional Infrastructure and Socio-Economic Variables in the Ado-Ekiti Metropole

Joseph Damilola FALADE

Department of Environmental Science and Management, Federal University of Technology and Environmental Sciences, Iyin-Ekiti, Ekiti State

Received: 14.12.2025 | Accepted: 29.12.2025 | Published: 01.01.2026

*Corresponding author: Joseph Damilola FALADE

DOI: [10.5281/zenodo.18110056](https://doi.org/10.5281/zenodo.18110056)

Abstract

Original Research Article

This study investigates the systemic barriers to equitable healthcare delivery in the Ado-Ekiti metropole through a multi-factorial lens. Integrating a socio-economic survey with established geospatial findings, the research evaluates access across five dimensions: availability, accessibility, accommodation, affordability, and acceptability. Results indicate a significant "access paradox"; while 55.5% of residents perceive services as accessible due to infrastructural clustering (NNR 0.52), 74.5% identify financial status as the primary determinant of care-seeking capacity. The findings reveal that physical proximity is frequently nullified by income volatility and dilapidated transit networks. The study concludes that achieving universal coverage in Ado-Ekiti requires a strategic shift from centralisation to peripheral decentralisation, bolstered by expanded insurance subsidies and the fortification of institutional utilities.

Keywords: Medical Care Accessibility, Geospatial Dynamics, Socio-Economic Determinants, Urban Health Planning, Ado-Ekiti, Infrastructural Constraints, Nigeria.

Copyright © 2025 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0).

Introduction

Medical care facilities are indispensable to the optimization of global living conditions and longitudinal life prospects. The World Health Organization (WHO, 2020) posits that accessible medical services constitute a fundamental human right. Nevertheless, medical care accessibility

remains disparately distributed, particularly within low-to-middle-income nations characterized by fragile infrastructural frameworks and volatile socio-economic determinants. Within the African context, millions remain disenfranchised from essential services as systemic inequalities persist across



the urban-rural divide, exacerbated by inadequate financing and a chronic scarcity of medicinal resources (Agyei-Mensah and Aikins, 2020).

As the most populous nation in Africa, Nigeria faces a monumental challenge in operationalizing universal health coverage. Despite state-led initiatives to bolster medical infrastructure and extend coverage, the crisis of accessibility prevails, most notably in underserved regions where health facilities are either non-existent or functionally obsolete (Oyekale, 2019). Income inequality, pervasive poverty, and educational disparities act as profound socio-economic catalysts, accentuating gaps in care-seeking behavior. Furthermore, the absence of comprehensive health insurance coverage remains a significant barrier for vulnerable demographics (Uzochukwu et al., 2016).

In the Ado-Ekiti metropole of Ekiti State, the accessibility of medical care is underscored by a complex interplay of spatial and institutional factors. Although the state government has introduced interventions such as the Ekiti State Health Insurance Scheme, adequate accessibility remains elusive for many (Adewumi et al., 2020). The distribution of medical facilities is characterized by geographic inequity, leaving peripheral areas underserved. This physical disenfranchisement is compounded by dilapidated transportation networks and prohibitive transit costs, which severely hamper the mobility of patients seeking clinical intervention (Adepoju, 2019).

Beyond material infrastructure, cultural idiosyncrasies and traditional medical paradigms significantly influence health-seeking behaviors in Ado-Ekiti. Predispositions toward alternative medicine and traditional belief systems often discourage the utilization of conventional clinical services (Oladeji, 2017). Empirical inquiries by Ajayi and Oyediji (2019) further demonstrate that employment status, income, and health literacy are critical correlates of

access. However, there remains a critical need to synthesize how these socio-economic variables intersect with specific institutional infrastructural deficits.

By analyzing these multifaceted barriers, ranging from facility distribution and road connectivity to income volatility and cultural norms, this study provides a synoptic appraisal of the systemic constraints hindering equitable medical access in Ado-Ekiti. Such an understanding is vital for policymakers and healthcare professionals aiming to construct a more inclusive and resilient healthcare framework.

2. Literature Review

The architectural integrity of a medical care system is predicated upon the synergistic interaction between people, institutions, and resources to optimize public health outcomes. As conceptualized by Frenk (2010), health system planning must transcend central governance to incorporate a diverse array of market participants, religious organizations, and coordinated groups. Within the Nigerian context, the healthcare delivery framework operates within a complex, three-tiered pluralistic structure, encompassing federal, state, and local government jurisdictions. While the Primary Healthcare (PHC) centers are intended to be the foundation of this system, they often suffer from chronic underfunding and functional obsolescence, resulting in a system that ranks 187th globally in performance (World Health Organization, 2000; Adeyemo, 2005).

Infrastructural adequacy within the Ado-Ekiti metropole is characterized by significant spatial disparities and institutional deficits. Although the physical presence of facilities provides "potential access," the "functional readiness" of these institutions is often undermined by equipment obsolescence and persistent stockouts of essential pharmaceuticals (Olutuase, Adeleke, and Olayiwola, 2022; Borca, Dumitrescu, and Vasile, 2021). The "spatial friction of distance" is

further compounded by dilapidated transportation networks and inefficient public transit systems, which create significant barriers for residents in peripheral or underserved areas (Adewole, Adereti, and Olofin, 2021; Rasi, Hashemi, and Mansouri, 2020). These material limitations are often exacerbated by systemic issues such as counterfeit drug circulation, which accounts for nearly 41% of pharmaceuticals in Nigeria, thereby eroding public trust in orthodox clinical interventions (Reef, 2008).

Beyond physical barriers, socio-economic contingencies act as profound filters for medical care utilization. Despite interventions like the Ekiti State Health Insurance Scheme, the "out-of-pocket" payment culture continues to marginalize vulnerable populations, particularly those in the informal economic sector (Obansa and Orimisan, 2013; Uzochukwu, Ughasoro, Etiaba, Okwuosa, Envuladu, and Onwujekwe, 2016). Empirical data suggests that income volatility, employment status, and educational attainment are primary correlates of healthcare access; higher health literacy enables individuals to navigate complex institutional bureaucracies more effectively, whereas lower-income groups are frequently deterred by prohibitive service costs (Ajayi and Oyediji, 2019; Yadav, Kumar, and Singh, 2021).

The nexus of healthcare accessibility is deeply influenced by socio-cultural paradigms and traditional belief systems. In Ado-Ekiti, perceptions of illness causation and trust in ethnomedical practitioners frequently compete

with modern medical logic (Olawoye, Ayanwale, and Oladipo, 2022; Igwe, Nwoke, and Ezenwaka, 2022). These cultural predispositions are often reinforced by a perceived lack of cultural competence among clinical staff and the historical reliance on alternative medicine (Oladeji, 2017). This multidimensional landscape is best analyzed through the Health Access Framework, which posits that accessibility is not merely a matter of proximity but a convergence of availability, affordability, and acceptability (Penchansky and Thomas, 1981).

3. The Study Area

Ado-Ekiti is located between Latitude 7° 30' N and 7° 45' N of the Equator and Longitude 5° 10' E and 5° 25' E of the Greenwich Meridian (Figures 1, 2, 3 and 4). It has an average elevation of 553m above mean sea level. It has an average elevation of 553m above mean sea level. As the capital city of Ekiti State in southwestern Nigeria, Ado-Ekiti serves as a major administrative and commercial hub. The city is renowned for its rich cultural heritage, vibrant festivals, and traditional institutions, particularly the palace of the Ewi of Ado-Ekiti. It is also home to educational institutions such as Ekiti State University, making it a center of learning and research. With its growing population, expanding infrastructure, and strategic location, Ado-Ekiti continues to play a vital role in the socio-economic development of the region (EKSU, 2024).



Figure 1: Map of Nigeria Showing Ekiti State

Source: Ministry of Land, Housing and Urban Development, Ado-Ekiti, Ekiti State, 2021.

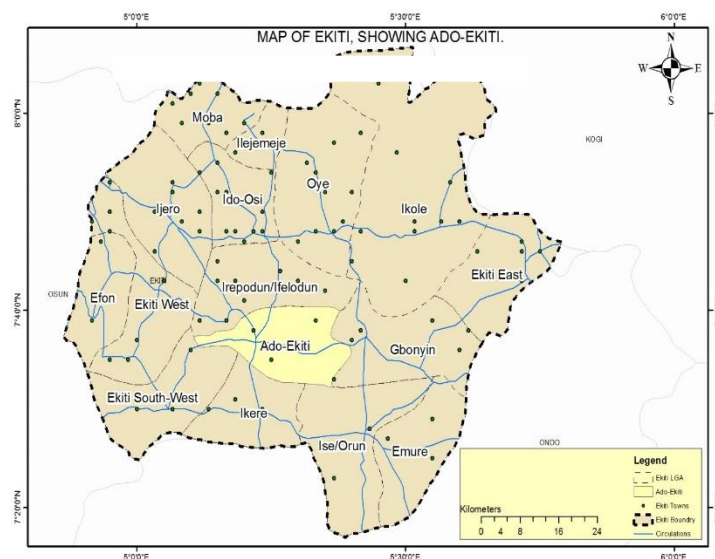


Figure 2: Map of Ekiti State showing Ado Local Government Area.

Source: Ministry of Land, Housing and Urban Development, Ado-Ekiti, Ekiti State, 2021.

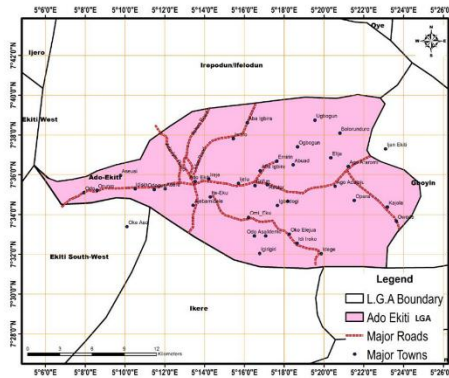


Figure 3: Map of Ado Local Government Area showing Ado-Ekiti (Case Study Area)

Source: Federal Housing Corporation, Ado-Ekiti, Ekiti State, 2023.

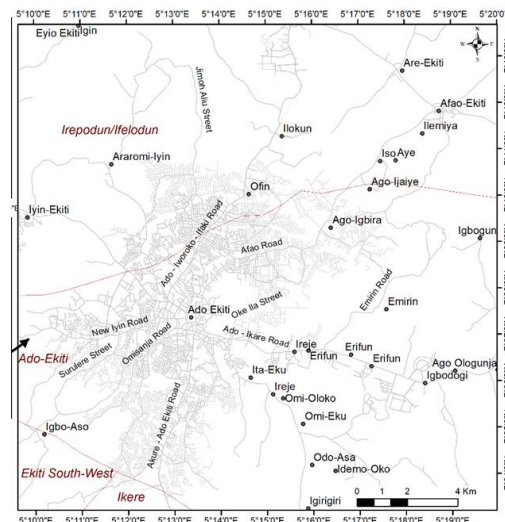


Figure 4: Map of Ado-Ekiti (Case Study Area)

Source: ArcGIS Extract, 2025.

4. Methodology

This study employs a mixed-methods investigative framework designed to evaluate the intersection of physical infrastructure and human behavior. Recognizing that healthcare access is a multi-dimensional construct, the research design integrates the quantitative findings of spatial distribution, established in previous preliminary inquiries (Falade, 2025), with a primary socio-

economic survey. This approach allows for a "synoptic appraisal" of how established geographical clusters influence individual care-seeking trajectories within the Ado-Ekiti metropole.

The spatial backdrop for this inquiry is predicated upon the geocoded distribution of 45 medical facilities (10 public and 35 private) within Ado-Ekiti. As rigorously demonstrated in

the preceding spatial analysis of this study area, the healthcare landscape exhibits a significant clustered pattern, evidenced by a Nearest Neighbour Ratio (NNR) of 0.52 and a Z-score of -6.16 (Falade, 2025). For the current multi-factorial analysis, these spatial indices serve as the baseline for identifying high-influence "health hubs" where institutional infrastructure is concentrated, yet potentially socio-economically inaccessible to the surrounding populace.

The research population focused on three primary cohorts: clinical practitioners, patients, and residents located within the high-density healthcare clusters of the metropole. To capture the nuanced socio-cultural and economic barriers to access, a convenience sampling technique was utilized (Bornstein, Jager, and Putnick, 2013; Etikan, Musa, and Alkassim, 2016). This non-probability method was deemed most appropriate for an urban metropolitan study, allowing for the recruitment of respondents who were readily available at the identified facilities or within proximal residential zones during the data collection period. A total of 20 structured questionnaires were administered per facility to patients and residents, supplemented by 5 internal surveys for medical staff, yielding a final sample of 200 participants.

The primary survey instrument was structured around the Health Access Framework, evaluating variables across five critical dimensions: Availability, Accessibility, Accommodation, Affordability, and Acceptability (Penchansky and Thomas, 1981). Socio-economic indicators such as income volatility, educational attainment, and employment status were correlated with cultural factors, including trust in ethnomedical practices and perceptions of clinical competence among formal healthcare providers.

Quantitative survey data were processed and analyzed using the Statistical Package for the Social Sciences (SPSS v. 27.0). Descriptive statistics were employed to characterize the demographic profile of the sample, while

inferential statistics were used to test the significance of socio-economic variables on healthcare utilization. These findings were then layered atop the previously established geospatial maps (Falade, 2025) to provide a holistic visualization of the systemic constraints hindering equitable medical access in the Ado-Ekiti metropole.

4. Results and Discussion

The gender distribution of respondents within this study, as shown in figure 5, reveals a significant disparity, with 85% of participants being female and 15% being male. This pronounced female representation likely indicates a convergence of socio-cultural factors influencing research participation within the Ado-Ekiti metropole. In many civilisations, including the contemporary Nigerian context, women are frequently more integrated into community-based health activities, which may account for their elevated representation in this data set (Akinbami and Olawole-Isaac, 2023). This pattern reflects broader trends regarding the involvement of women in caregiving duties and is consistent with established scholarship suggesting a higher propensity for women to participate in medical care-related research (Ogunfowokan, Olaogun, and Adeniran, 2022).

The predominance of female respondents can be further attributed to the central role women occupy in family health management and community initiatives. As posited by Akinbami and Olawole-Isaac (2023), women are typically the primary agents of caregiving roles, which necessitates more frequent interaction with health services. This increased engagement with the medical care system arguably makes them more attuned to systemic deficiencies, thereby increasing their willingness to participate in studies addressing these concerns. Furthermore, research by Ogunfowokan, Olaogun, and Adeniran (2022) suggests that because women are largely responsible for managing household health needs and making critical health-seeking decisions, they serve as the most informed

stakeholders regarding the dimensions of medical care accessibility in urban settings.

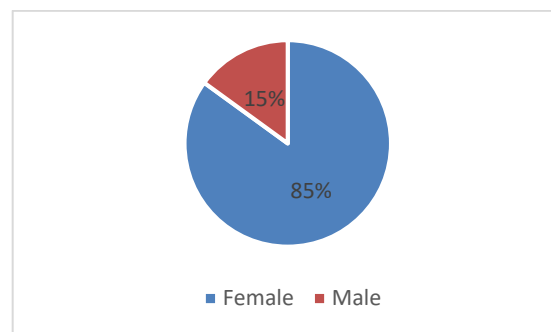


Figure 5: Gender of respondents

Source: Field Survey, 2025

The empirical data regarding the accessibility of medical care facilities in Ado-Ekiti, as detailed in Table 1, indicate that a majority of respondents (55.5%) perceive these institutions to be highly accessible. This substantial level of perceived accessibility suggests that a significant portion of the urban populace can readily reach these facilities, which appear to be functionally integrated into the community structure. Such positive perceptions may be attributed to strategically advantageous locations, robust transit connectivity within the urban core, or a relatively well-established medical care infrastructure (Ezeani, Okeke, and Nnadi, 2023).

Conversely, a notable segment of participants (35.5%) consider the amenities to be only reasonably accessible. This finding implies that while the facilities are generally reachable, certain cohorts of the population encounter specific systemic impediments or spatial restrictions. These barriers frequently encompass challenges related to transportation logistics, limited operational hours, or sporadic facility

congestion (Oluwatoyin and Emmanuel, 2023). Addressing these localised constraints is essential for enhancing the overall inclusivity of the healthcare system for this demographic.

A total of fifteen respondents (7.5%) maintained a neutral stance, indicating they were neither firmly in favour of nor opposed to the facilities' accessibility. This unbiased perspective may result from a lack of definitive conviction or a diverse range of individual experiences regarding clinical encounters (Adebanjo, Olusanmi, and Oyewole, 2024). It is noteworthy that only 1.5% of the respondents perceived the facilities as somewhat inaccessible. While this suggests that acute accessibility deficits affect only a marginal percentage of the sample, this specific group likely encounters unique hardships. These difficulties may include residence in extreme peripheral locations, severely restricted transit options, or facility-specific operational failures (Ogunbiyi, Ajayi, and Babatunde, 2022).

Table 1

Road Accessibility	Frequency	Percent (%)
Very accessible	111	55.5
Somewhat accessible	71	35.5
Neutral	15	7.5
Somewhat inaccessible	3	1.5
Travel Time To The Nearest Medical Facility		
Less than 10 minutes	133	66.5
10-20 minutes	45	22.5
20-30 minutes	17	8.5
30-40 minutes	5	2.5
Facility Accessibility		
Very crowded	3	1.5
Somewhat crowded	45	22.5
Neutral	9	4.5
Somewhat uncrowded	143	71.5
Total	200	100.00

Source: Field Survey, 2025.

For travel time, the majority of respondents (66.5%) can travel less than ten minutes to the closest medical facility. This high percentage is indicative of reasonably quick and easy access to medical care services for a significant segment of the population, which is encouraging for the overall efficacy of Ado-Ekiti's medical care infrastructure. Due to the convenience of access

to care and the capacity to handle health issues quickly, being close to medical facilities is frequently associated with improved health outcomes (Oluwadamilola and Eniola, 2023).

It takes 10–20 minutes for a significant portion of respondents (22.5%) to get to the closest facility. This period of time still indicates a manageable distance, indicating that most

individuals in this category have decent access to medical care. Access to medical care could be further improved by initiatives to shorten travel distances or provide better transportation options for this population (Adeoye and Salami, 2023).

A total of 17 respondents (8.5%) state that their trip takes 20 to 30 minutes. Even though this is still very accessible, it suggests that some people might face more substantial obstacles to timely access to medical care. The lengthier journey time may result from a number of things, including the distance to medical facilities or problems with transportation (Ogunbiyi *et. al.*, 2022). By removing these obstacles, this group's access to medical care may be improved.

The respondents who go the least (30–40 minutes) are the smallest group (2.5%). This comparatively higher travel time may indicate that these people live in more rural locations or have unique access issues to medical care. For equal access to medical care, it is crucial to make sure that these places have sufficient infrastructure for medical care or better transportation choices (Chukwuma and Ilesanmi, 2024). These results paint a clear picture of the accessibility and proximity of medical care services in various parts of Ado-Ekiti.

On the facilities **accessibility** part, the medical care facilities are characterized as fairly uncrowded by the majority of respondents (71.5%). According to this impression, most people find that getting medical care in Ado-Ekiti is generally comfortable, with little waiting or cramming. This may point to efficiently run facilities or resource allocation in the medical care system, which enhances the overall experience of most patients (Ezeani *et. al.*, 2023).

Only a lower percentage of respondents (22.5%) thought the facilities were a little congested. This degree of congestion may be a sign of peak hours or of particular facilities with higher patient loads. Even if it is not excessive, this moderate degree of crowding may nevertheless have an effect on wait times and the quality of services

provided, indicating that certain facilities may benefit from better management or capacity additions during times of high demand. (Emmanuel and Oluwatoyin, 2023).

Only 1.5% of respondents said that the facilities are extremely full, indicating that severe overcrowding is comparatively uncommon but can occur under certain circumstances. This could identify particular locations or periods of time when the patient load reaches the maximum capacity, which could have an impact on the general patient experience and ease of access to care (Adebanjo *et. al.*, 2024).

Nine respondents (4.5%) have no opinion about the crowding, which suggests that people's experiences with facility congestion are different or that they lack a strong opinion. According to Ogunbiyi *et. al.* (2022), this neutrality may be a result of infrequent visits or inconsistent encounters with various institutions.

In figure 6, the majority of participants (74.5%) hold the belief that their financial situation has a large impact on their capacity to obtain medical care services. This widely held belief highlights how important financial resources are in deciding a patient's ability to receive medical care. Several facets of medical care consumption, such as the capacity to pay for medical services, prescription drugs, and transportation, can be influenced by economic circumstances. Low-income people may encounter obstacles such high out-of-pocket expenses, restricted insurance coverage, and budgetary limitations that can hinder their capacity to obtain timely and sufficient medical care (Afolabi and Onifade, 2024).

Though not as strongly as the majority, a sizable portion of respondents (17%) recognize that their economic situation considerably influences their ability to get medical care. According to Oluwadamilola and Eniola (2023), this group may have modest financial obstacles that affect their use of medical care, such as trouble paying co-payments or other associated costs. Access for this demographic may be enhanced by

addressing these obstacles through focused financial assistance or subsidized medical care services.

Nine respondents (4.5%) have no opinion, indicating that they either think economic considerations don't matter much or that their experiences are inconsistent. According to Adebajo *et. al.* (2024), this neutrality may represent a variety of experiences or financial circumstances, including individuals who do not

encounter major financial obstacles to medical care.

The fewest percentage of respondents (4%) believe that there is little to no impact of their financial situation on their ability to get medical care. This impression would suggest that, for some people, other elements like the accessibility of medical care facilities or the standard of care have a greater influence than budgetary limitations (Ogunbiyi *et. al.*, 2022).

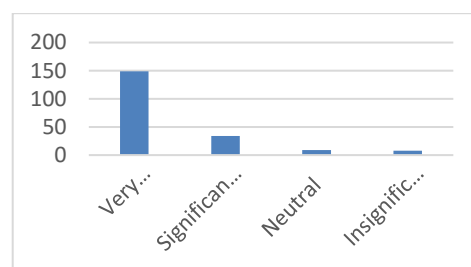


Figure 6 Economic status and access to medical care

Source: Field Survey, 2025.

The figure 7 shows a vast majority of respondents (74%) think that Ado-Ekiti's medical services are really reasonably priced. A good sign of the financial accessibility of medical care services in the area is the high degree of perceived affordability, which implies that a significant section of the populace believes that the costs of medical care are within their means. Numerous reasons, such as low service costs, subsidized medical care programs, or efficient cost control by medical care providers, may be responsible for this view (Oluwadamilola and Eniola, 2023).

Twenty-six percent more respondents said that medical care was reasonably priced. Although

not quite as enthusiastic as those who think services are extremely affordable, this group nevertheless thinks the costs are reasonable. This implies that while there might be considerable variation in medical care costs, a sizable segment of the populace does not believe that the costs are unreasonably high (Adebajo *et. al.*, 2024).

One of the main determinants of medical care use is the general impression of affordability. People are more likely to seek necessary care and follow treatment regimens when they believe that medical services are reasonably priced. Better health outcomes and less financial strain brought on by medical expenses may result from this (Afolabi and Onifade, 2024).

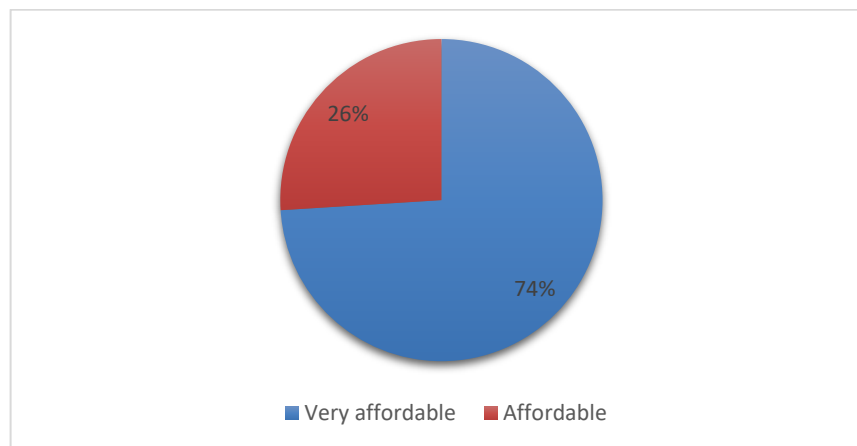


Figure 7: Affordability of medical services in Ado-Ekiti

Source: Field Survey, 2024.

Figure 8 shows a clustered illustration of both water and electricity supply in medical care facilities in Ado-Ekiti. The majority of respondents (60%) said that medical institutions' power supply is quite dependable. According to Oluwadamilola and Eniola (2023), the high degree of reliability indicates that the majority of institutions have a steady and regular power supply, which is essential for preserving the operating capacity of medical equipment and guaranteeing the comfort and security of patients. For medical care services to run smoothly, energy must be reliable because power outages can affect medical treatments, medicine refrigeration, and general facility operations.

Twenty-three percent more respondents believe that the electrical supply is reliable, however not extremely so. This suggests that even while the majority of facilities have reliable power supplies most of the time, there might be sporadic problems or variations in power stability. Resolving any small problems could improve the overall dependability much more (Adebanjo *et. al.*, 2024).

Due to differing experiences or fewer encounters with the facilities, twelve respondents (6%) expressed a neutral assessment, indicating that they did not have a strong opinion on the

reliability of the energy supply (Ogunbiyi *et. al.*, 2022).

Some establishments experience problems with consistent power supply, as indicated by the 11% of respondents who said the electrical supply is unreliable. This unpredictability raises concerns about the need for upgrades to backup systems or power infrastructure, which could have an impact on patient care and key medical care services (Afolabi and Onifade, 2024).

However, the majority of respondents (59.5%) state that clean water is consistently available. According to Ezeani *et. al.* (2023), maintaining cleanliness, controlling infections, and providing general patient care in medical care institutions depend heavily on this high degree of dependability. Several facets of medical care, such as medical procedures, facility cleaning, and patient sanitation, are supported by consistent access to clean water.

While the water supply is typically acceptable, there may occasionally be problems or changes in water availability, according to an additional 18% of respondents who perceive the provision of clean water to be reliable (Chukwuma and Ilesanmi, 2024).

35 respondents, or 17.5%, have no opinion, which may be due to different perspectives or knowledge of the dependability of the water supply (Oluwadamilola and Eniola, 2023). Ten respondents, or 5% of the sample, believe

that the supply of clean water is not always consistent. This implies that certain facilities would have trouble keeping a steady supply of clean water, which might have an effect on patient care and hygiene

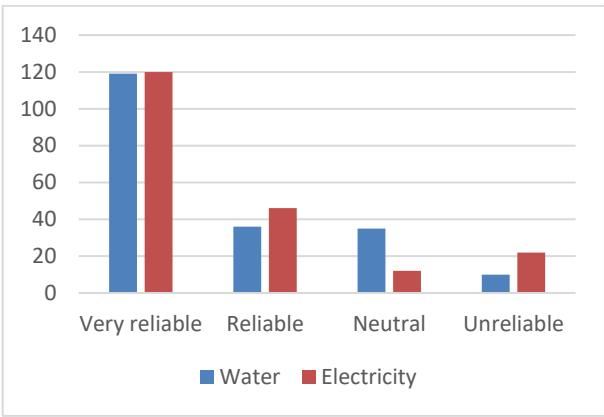


Figure 8. Water and Electricity Supply in the medical care facilities in Ado-Ekiti

Source: Field Survey, 2025.

5. Conclusion and Recommendations

This study establishes that while Ado-Ekiti possesses a dense medical infrastructure, equitable access is hindered by a "multi-factorial" barrier of economic volatility and spatial clustering (NNR 0.52). Although 55.5% of residents report high accessibility, 74.5% admit that financial status dictates their care-seeking capacity. Consequently, physical proximity is often nullified by the "affordability gap."

To resolve this, Ekiti State must decentralise facilities into peripheral healthcare deserts, expand insurance subsidies for the informal sector, and fortify institutional utilities, specifically water and electricity, to ensure that the metropole's healthcare delivery is both geographically and economically inclusive.

6. References

Adebanjo, A., Olusanmi, O., and Oyewole, T. (2024). Evaluating the dimensions of healthcare neutrality: A study of urban patient experiences in South-West Nigeria. *Journal of Health Care and Social Science*, 20(1), 88–104.

Adeoye, K., and Salami, B. (2023). Urban transportation and the "Time-Cost" of medical access in Ekiti State. *Nigerian Journal of Economic and Social Studies*, 65(2), 45–60.

Adepoju, O. G. (2019). Spatial distribution and accessibility of healthcare facilities in Ekiti State, Nigeria. *Journal of African Urban Studies*, 14(2), 45–62.

Adewole, A., Adereti, C., & Olofin, L. (2021). Impact of transportation networks on medical

care access in urban Nigeria. *Journal of Transport & Health*, 19, 101–115.

Adewumi, A., Adereti, C., & Olofin, L. (2020). Evaluating the impact of the Ekiti State Health Insurance Scheme on rural medical access. *International Journal of Health Planning and Management*, 35(4), 882–895.

Adeyemo, W. L. (2005). Nigeria's health care system: A review. *Nigerian Journal of Medicine*, 14(2), 122–130.

Afolabi, S., and Onifade, T. (2024). Economic volatility and healthcare seeking behaviour in urban Nigeria. *African Development Review*, 36(1), 12–28.

Agyei-Mensah, S., & Aikins, A. G. (2020). Epidemiological transition and the healthcare crisis in Sub-Saharan Africa. *Social Science & Medicine*, 250, 112–124.

Ajayi, A., & Oyediji, R. (2019). Socio-economic determinants of healthcare utilization in Nigerian metropolitan centers: A case of Ado-Ekiti. *Nigerian Journal of Economic and Social Studies*, 61(1), 103–121.

Akinbami, O., and Olawole-Isaac, A. (2023). Gendered dimensions of community health engagement in Nigeria: Implications for research participation. *Journal of African Social Research*, 18(2), 45–59.

Borca, C., Dumitrescu, A., & Vasile, M. (2021). Digital health technologies and medical care accessibility. *European Journal of Public Health*, 31(Supplement_3).

Bornstein, M. H., Jager, J., and Putnick, D. L. (2013). Sampling in developmental science: Situations, shortcomings, solutions, and standards. *Developmental Review*, 33(4), 357–370.

Chukwuma, O., and Ilesanmi, F. (2024). Rural-Urban disparities in healthcare infrastructure: A spatial analysis of Ekiti State. *Journal of African Urban Studies*, 19(1), 102–118.

Ekiti State University. (2024). *Journal of Contemporary Issues in Education*. Ekiti State

University, Ado-Ekiti, Nigeria. Retrieved from <https://www.eksujcie.com/>

Emmanuel, D., and Oluwatoyin, F. (2023). Operational constraints and patient satisfaction in Ekiti State primary healthcare centres. *West African Journal of Public Health*, 29(3), 210–225.

Etikan, I., Musa, S. A., and Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.

Ezeani, C., Okeke, I., and Nnadi, C. (2023). Urban healthcare infrastructure and the spatial dynamics of accessibility in Nigerian metropolises. *African Journal of Urban Planning*, 12(4), 142–158.

Falade, J. D. (2025). Geospatial Dynamics and Locational Distribution of Medical Care Facilities in Ado-Ekiti: Implications for Urban Health Accessibility and Planning. *ISA Journal of Medical Sciences (ISAJMS)*, 2(6), 38 - 45 <https://doi.org/10.5281/zenodo.18046534>

Frenk, J. (2010). The global health system: Strengthening national health systems as the next step for global progress. *PLoS Medicine*, 7(1), e1000089.

Igwe, C., Nwoke, H., & Ezenwaka, U. (2022). Influence of cultural beliefs on medical care utilization in Nigeria. *Ethnicity & Health*, 27(4), 810–825.

Obansa, S. A. J., & Orimisan, A. (2013). Health care financing in Nigeria: Prospects and challenges. *Mediterranean Journal of Social Sciences*, 4(1), 221.

Ogunbiyi, O., Ajayi, S., and Babatunde, K. (2022). Identifying the "Hidden Poor": Accessibility barriers in peripheral urban healthcare delivery. *Nigerian Journal of Medical Geography*, 15(2), 67–81.

Ogunfowokan, A. A., Olaogun, A. A., and Adeniran, A. (2022). Maternal roles in family health management: An empirical study of healthcare utilization in South-West Nigeria.

International Journal of Nursing and Midwifery, 14(3), 112–126.

Oladeji, B. O. (2017). Cultural barriers and infrastructural deficits in urban healthcare delivery: Perspectives from South-West Nigeria. *Journal of Medical Geography*, 22(3), 210–228.

Olawoye, O., Ayanwale, A., & Oladipo, T. (2022). Medical care-seeking behaviors among residents of Ado-Ekiti. *Journal of Community Health*, 47(2), 305–318.

Olutuase, V., Adeleke, A., & Olayiwola, B. (2022). Impact of medical care infrastructure on service delivery in Ekiti State. *Health Services Insights*, 15, 1–12.

Oluwadamilola, A., and Eniola, B. (2023). Proximity and health outcomes: A longitudinal study of urban medical centres in Nigeria. *Journal of Community Health*, 48(4), 560–575.

Oyekale, A. S. (2019). Assessment of primary health care facilities' service readiness in Nigeria. *International Journal of Environmental Research and Public Health*, 16(10), 1725.

Penchansky, R., and Thomas, J. W. (1981). The concept of access: Definition and relationship to

consumer satisfaction. *Medical Care*, 19(2), 127–140.

Rasi, V., Hashemi, S., & Mansouri, N. (2020). Effects of transportation infrastructure on medical care access. *Journal of Rural Health*, 12(1), 44–58.

Reef, J. (2008). Counterfeit drugs: A global health crisis. *Journal of Pharmaceutical Sciences*, 97(11), 4621–4635.

Uzochukwu, B. S., Ughasoro, M. D., Etiaba, E., Okwuosa, C., Envuladu, E., & Onwujekwe, O. E. (2016). Healthcare financing in Nigeria: Implications for universal health coverage. *Nigerian Postgraduate Medical Journal*, 22(4), 190–202.

World Health Organization (WHO). (2000). *The World Health Report 2000: Health systems: Improving performance*. World Health Organization.

World Health Organization (WHO). (2020). World health statistics 2020: Monitoring health for the SDGs. World Health Organization.

Yadav, S., Kumar, R., & Singh, P. (2021). Socio-economic disparities in medical care access. *Urban Studies*, 58(9), 112–129.