

Assessing Housing Quality, Affordability and Health Conditions in a Healthy City Context: A Case Study of Beere, Ibadan.

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INTRODUCTION

Housing is universally valued for providing safety, security, identity and space for social interaction; enabling families to live, learn and grow together, while also being considered a major determinant of quality of life and a major driver of industrial and economic development (Gupta, 2024).

The global housing affordability crisis poses a significant challenge, with millions of people worldwide struggling to secure adequate and affordable housing. As urban populations grow and income disparities widen, the gap between housing demand and supply has become increasingly pronounced, placing a strain on existing housing systems and worsening social inequalities (Akinsulire et al, 2024).

Nigeria as the most populous country in Africa faces a substantial housing deficit that continues to grow amid rapid urbanization and population growth. As such, the increased demand for affordable housing significantly outstrips supply, resulting in millions of Nigerians, particularly in urban areas living in substandard conditions or lacking access to housing altogether (Garba et al, 2024).

However, the provision and availability of affordable housing in Nigerian cities are constrained by obstacles such as limited land, insecure land tenure and high financing cost of construction materials which hinder the development of affordable housing projects. Affordable housing plays a crucial role in addressing these challenges, promoting sustainable urban development and providing benefits such as improved quality of life, social cohesion and economic opportunities (Adedeji, 2023). These challenges affect the city's economic growth, social cohesion and environmental quality, yet there is limited research addressing the problem (Obakin et al, 2024).

Ibadan, one of the largest traditional urban centres in West Africa faces housing affordability issues that are more pronounced in older inner-city neighbourhood such as Beere, where high housing demand co-exists with aging housing infrastructure, overcrowding and low household incomes. These socio-economic dynamics shape housing choices and expose residents to housing conditions that may be financially burdensome. Understanding the level and determinants of housing affordability in Beere is therefore crucial for improving the standard of living and informing urban housing policy in Ibadan.

Although several studies document housing conditions, rent disparities and health problems in parts of Ibadan, there is limited recent empirical research that integrates housing affordability and housing quality as joint factors of health outcomes in core areas such as Beere. This study fills that gap by providing a community-specific analysis (Beere) and examining how affordability and quality together influence the health of Beere residents.

Statement of Problem

In a report by the Central Bank of Nigeria, the following challenges were highlighted to be plaguing the Nigerian housing sector: land tenure system, cost of infrastructure, bureaucracy in government, inadequacy of housing

information system, taxation, high interest rate, inflation, naira devaluation, bribery and corruption etc (Ekpo, 2019).

Despite its historical and cultural relevance, Beere faces significant affordability challenges; exacerbated by socioeconomic vulnerabilities. Households often spend a large proportion of their income on rent, which in turn forces many into overcrowded rooms, dilapidated buildings and poor ventilation.

Existing studies on housing affordability in Nigeria have examined major cities such as Lagos and Abuja. However, there is limited empirical data on housing affordability in cores areas such as Beere. Across these studies, no research in Ibadan has yet examined housing affordability, housing quality and health outcomes in a focused case study of a core environment such as Beere. This is because most studies examine parts of the problem (affordability alone, or quality alone, or health alone), but not the integrated housing/health pathway that this study seeks to address.

Policymakers and planners lack localized evidence to design effective interventions even though Nigeria has embarked on several housing policies in order to provide adequate housing for the teeming population. They include: National Development Plan (NDP 1) (1962-68), National Development Plan (NDP 2) (1970-74), National Development Plan (NDP 3) (1975-80), National Development Plan (NDP 4) (1981-85), National Housing Policy (1991) and National Housing Program (1994-1995). This study addresses this gap by assessing housing affordability, identifying its determinants and analyzing associated living conditions in Beere, Ibadan.

Aim

Exploring the perceived associations between housing affordability, housing quality and reported health outcomes among residents living in Beere, Ibadan.

Objectives

- i. Assessing the level of housing affordability among residents of Beere.
- ii. Evaluating the physical and environmental quality of housing in Beere.
- iii. Exploring residents' reported health outcomes and their perceived association with housing conditions in Beere.

LITERATURE REVIEW

Brief Overview of Housing/Health Relationship

Housing forms one of the most fundamental foundations of human health. It is not only a physical dwelling but a culmination of several variables such as: structural quality, affordability, services, tenure system, neighborhood context and social environment which shape people's daily exposure to risks and opportunities. In cities across Nigeria, this directly or indirectly influence disease pattern of Nigerian cities whether in low or high-density areas and the overall well-being. This relationship become even more pronounced at inner-city neighborhoods such as Beere and Oje in Ibadan; an area characterized by limited resources like aging housing stock and infrastructural deficit which result in producing distinct health outcomes. For instance, poor housing quality, inadequate sanitation and deteriorating environmental conditions. These closely associated with the prevalence of infectious and environment-related diseases (Ojo et al, 2017).

One of the clearest ways in which housing conditions affect health is through overcrowding. When housing is unaffordable, many households share small rooms or partitioned spaces which increases their exposure to communicable diseases. In the same vein, overcrowding encourages the rapid spread of respiratory infections like tuberculosis and childhood illnesses, while also elevating psychological stress due to lack of privacy. In the long run, the frequent occurrence of infections such as malaria, typhoid and respiratory diseases underscore the vulnerability of residents living under such conditions.

Beyond density and the arrangement of housing in a claustrophobic pattern, the quality of the building fabric, such as its structural integrity, ventilation, dampness levels and materials, directly shapes indoor environmental conditions. Buildings with cracked walls, leaking roof and inadequate ventilation trap moisture and heat, creating dampness and mold-prone interiors which promote asthma, bronchitis and pneumonia. Poor ventilation, high indoor temperatures and defective building conditions are strongly associated with asthma, cough and pneumonia among this kind households.

Housing conditions also shape patterns of indoor air pollution, a major yet often overlooked driver of poor health in Nigerian cities. Where households lack facilities like proper kitchen, adequate ventilation or access to clean cooking fuels, they resort to kerosene stoves, charcoal or firewood which is often used at indoor or in semi-enclosed spaces. These fuels emit particulate matter and carbon monoxide, which accumulate in poorly ventilated homes and contribute to chronic respiratory irritation. In the Beere, a significant number of houses feature detached or makeshift outdoor kitchens that rely heavily on biomass fuels, thereby exacerbating exposure to smoke among women, children and the elderly, who spend more time indoors or near cooking areas. The combination of this kind of condition with poor ventilation make the risk more pronounced.

Water and sanitation systems in homes and neighborhood also form a crucial dimension of the housing/health relationship. When safe water is scarce and waste management systems are weak, diseases such as diarrhea, cholera, typhoid fever and parasitic infections flourish. Stagnant water from blocked drains or inadequate refuse disposal facilitates mosquito breeding, thereby increasing malaria incidence. These environmental risks demonstrate that housing quality extend beyond walls and roofs to encompass the broader living environment.

In addition to these, sustainable architecture is the practice of designing environmentally responsible and resource-efficient buildings throughout their lifecycle. Sustainable development is a term that depicts environmentally conscious development. Its aim is to curtail the negative environmental footprint of developments by increasing efficiency and leniency in the utilization, development of spaces, materials and energy. This is derived from an energy and ecologically conscious attitude to the activities in the built environment (Obakin, 2018).

Also, affordability and tenure conditions create another layer of impact. When households allocate disproportionate shares of their income to rent or housing repairs, they have fewer resources for nutritious food, healthcare visits and preventive care. Tenure insecurity or fear of eviction discourages residents from investing in improvement, even when their dwelling is clearly unsafe. This economic pressure perpetuates cycles in which poor housing leads to poor health and poor health further limits households' capacity to improve their living conditions.

Housing in Beere area is predominantly old, poorly maintained and inadequately serviced. At the same time, the neighborhood environment suffers from an unreliable water supply, irregular electricity, inadequate drainage and poor solid waste management. These deficiencies combine to sustain a high prevalence of environment-related diseases, particularly malaria and various respiratory infections. Housing is not just a passive backdrop to daily life; it is an active determinant of health. For neighborhoods such as Beere and Oje, the interaction among affordability pressures, poor-quality buildings, inadequate services and degraded environment produce a complex yet traceable pattern of health outcomes. The implications for research and policy are clear. They include:

- Improving ventilation
- Repair of faulty structures
- Ensure access to safe water
- Strengthening waste disposal
- Reduction of crowding
- Provision of affordable housing options
- Landscaped environment

These can significantly improve health outcomes. Beyond infrastructure, community-based sanitation initiatives, health education and policies that enhance tenure security and affordability can further strengthen residents' capacity to live healthier lives. The benefits of natural landscapes are diverse. This include environmental, social and economic factors. Natural landscapes help people recover from stress more effectively than urban environments. It also aid improvement of physiological indicators such as blood pressure and muscle relaxation in as little as 400 milliseconds. People living in areas with abundant green space experience better general health and immunity, while hospital patients recover faster with views of natural environment (Ajayi et al, 2024). However, this is absent in Beere area.

Global and Nigerian Relevance of the Impact of Housing Affordability and Housing Quality on Health

According to the World Health Organization (WHO) document, "WHO Housing and Health Guidelines", it stated that both quality and environmental context within which the concept of housing is being discussed are some of the major dimensions to environmental inequalities (WHO. 2018). Poor housing conditions are among the main drivers through which environmental and social inequalities can translate into health inequalities, thereby affecting human well-being and quality of life. The quality of housing and the environment in which people live directly affect their health and a country's socio-economic well-being. On the other hand, housing is a major determinant of health, whereas health is not generally considered dependent on housing. The impact of housing on people's health is contingent on several factors, including housing quality, aesthetics, stability, affordability and safety.

A number of conditions that structurally deficient housing can pose to occupants include poor accessibility, slips and falls, stress and isolation (for older adults), poor security and others. This also gives rise to extreme heat conditions, which can harm both respiratory and cardiovascular health. Poor housing can also result in the spread of communicable diseases, triggering allergy and irritant reactions like asthma and the risk of exposure to infectious diseases (Adeniyi, 2022). Some of the problems associated with housing affordability include inadequate water supply, poor sanitation, poor personal hygiene, overcrowding and limited accessibility.

Housing, therefore, has a direct effect on the health outcomes of Nigerians and factors affecting their health in relation to housing include structural building standards, poor hygiene practices, poor environmental design and sanitation and a lack of basic social amenities.

In summary, housing directly shapes physical, mental and environmental health through multiple interconnected pathways. In low-income Nigerian urban areas, these pathways are magnified by economic constraints and infrastructural deficit.

Housing Affordability

Definition

Housing affordability is the ability of a household to access and obtain adequate housing without incurring unwarranted financial hardship. It has two broad aspects: attainability and sustainability. The former refers to access to a house at a given point in time, while the latter denotes the household's ability to continue maintaining the house. (Ezennia et al, 2021). In short, housing affordability is the household's ability to meet housing costs without imposing excessive constraints on non-housing consumption.

Housing is one of the essential social conditions that indicate the living standards of a country's citizens. However, the rapid rates of urbanization reported worldwide have led to a shortfall in housing supply to meet demand (Ezennia et al, 2021).

In earlier years, the concept of housing affordability was associated with the notion that housing expenditures contributed to poverty. But the trajectory has changed towards understanding the challenge it poses towards growing inequities in access to urban resources, with recent literature reframing it as an urban issue (Haffner et al, 2021). Unresponsive housing supply, scarcity of affordable housing, the proliferation and persistence of

precarious dwellings are characteristics of housing affordability in rapidly urbanizing low- and middle-income countries (Kallergis et al, 2022).

Indicators and Measurement Methods

Measuring housing affordability as an essential step in housing policy responses can be approached in two ways: the ratio method and residual income measures (Nwuba et al, 2018).

Hulchanski questioned the concept of housing affordability and argued that it does not necessarily guarantee housing accessibility for all. This posed a challenge to the concept and to the best way to measure it. Considering this, many scholars support the housing cost-to-income ratio, commonly known as the rule of thumb, as the standard method for measuring housing affordability (Jiburum et al, 2021).

The ratio approach is the most common and traditional method for measuring housing affordability, focusing on the relationship between housing cost and household income. It is expressed through indicators such as the house price-to-income ratio or rent-to-income ratio and can be calculated at different levels (median, quartile or individual household). This method relies on a benchmark of a “rule of thumb” and it varies by country (Nwuba et al, 2018).

The residual income method is a measure of housing affordability that determines how much money a household has left for housing after relevant living expenses have been deducted, based on a standard budget. This approach focuses on actual financial capacity rather than just the proportion of income spent on housing (Stone et al, 2011).

Determinants of Housing Affordability

According to WHO Housing and Health Guidelines, the following can be deduced:

- Economic factors: Income level, cost of housing, cost of maintenance/operation (water, energy, heating), transport costs.
- Social factors: Household type, gender, disability status, minority/indigenous status.
- Demographic factors: Household size, age structure, and location needs.
- Housing characteristics: Quality of materials, durability, size, accessibility, availability of basic services (toilets, clean floors, ventilation).
- Neighborhood conditions: Crowding, poverty levels, racial/ethnic composition, infrastructure.

WHO went further to state that the low-income and marginalized groups are more likely to live in overcrowded, poorly built homes which lack basic services such as clean water, safe sanitation and adequate energy, which pose health risk to the occupants. High housing costs can also force households to cut back on essential needs such as food, healthcare, heating and instability from eviction or frequent moves can further harm well-being. As a result, poor health reduces income and increases medical expenses, thereby creating a cycle in which poor housing contributes to poor health (WHO Housing and Health Guidelines).

The above statements from WHO are in line with Ozabor et al, (2025), which state that high land cost, increasing cost of construction materials/labour, limited access to housing finance and the activities of real estate speculators are among the factors affecting housing affordability. As a result, many people are forced to spend a large share of their income on housing and related cost (Ozabor et al, 2025).

Effects of Poor Housing Affordability

According to the World Health Organization (WHO), improved housing conditions can save lives, prevent disease, increase quality of life, reduce poverty and help mitigate climate change. Housing also contributes to the burden of disease through exposing people to dangerous substances, hazards or to infectious diseases.

However, poor housing has significantly worsened residents’ living conditions, leading to overcrowding, financial stress and a substantial share of income spent on rent or mortgage payment. Many households have

been displaced to informal settlements and underdeveloped areas with poor infrastructure, thereby reducing their quality of life and financial security. Inadequate housing conditions have adversely affected their physical and mental health, thereby reinforcing economic vulnerability (Ozabor et al, 2025).

Exposure to poor housing is negatively associated with communicable and non-communicable diseases, poor physical/mental health and mortality. The most frequently reported health impacts associated with housing include coldness, dampness, mold and poor indoor air quality due to inadequate ventilation (Richards et al, 2025).

Healthy City Framework

Definition

Health is most described as the absence of disease and according to the World Health Organization (WHO), it is a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity.

The WHO defines a healthy city as a process and local involvement. It goes further to say “A healthy city is one that continually creates and improves its physical and social environments and expand the community resources that enable people to mutually support each other in performing all the functions of life and developing to their maximum potential.”

The WHO “Healthy Cities program” is a global, systematic initiative aimed at promoting positive health, which identifies eleven (11) characteristics of a healthy city (Ziafati et al, 2024). Initiated by WHO in 1986, Healthy Cities have spread rapidly across the world and it aims to:

- Create a health-supportive environment.
- Achieve a good quality of life.
- Provide basic sanitation and hygiene needs.
- Supply access to health care (WHO Healthy Cities).

The Healthy City Checklist

The following is a checklist provided by WHO for a healthy city:

- A clean, safe physical environment of high quality (including housing quality);
- An ecosystem that is stable now and sustainable in the long term;
- A strong, mutually supportive and non-exploitative community;
- A high degree of participation in and control by the citizens over the decisions affecting their lives, health, and well-being;
- The meeting of basic needs (food, water, shelter, income, safety, and work) for all the city’s people;
- Access by the people to a wide variety of experiences and resources, with the chance for a wide variety of contact, interaction, and communication;
- A diverse, vital, and innovative economy;
- Connectedness with the past, with the cultural and biological heritage of city dwellers and with other groups and individuals;
- A form that is compatible with and enhances the preceding characteristics;
- An optimum level of appropriate public health and sickness care services, accessible to all; and
- High health status (high levels of positive health and low levels of disease)

Empirical Review of Housing and Environmental Conditions in Beere

Key findings from Ojo et al, (2017) showed that housing is generally in a poor and filthy condition in Beere, while establishing that people suffer from environmentally induced diseases such as malaria, measles, chickenpox, typhoid, diarrhea among others. The study concluded by emphasizing the importance of housing and the environment for human health and urged government intervention to improve the quality of life for Beere residents.

Empirical evidence from Ibadan North confirms that poor housing conditions are directly associated with negative health outcomes such as plasmodia. Additionally, many houses failed to meet basic spatial and environmental standard, thereby increasing vulnerability to infectious diseases and environmental stressors (Popoola et al, 2015).

A study by Adetayo et al, (2024) found that housing quality across selected sub-urban areas of Ibadan, even outside inner-core areas such as Beere is poor. This evidence indicates that poor housing quality is a widespread challenge in Ibadan, not limited to any single community.

METHODOLOGY

Introduction

The study employed a qualitative method, using a structured observation checklist and semi-structured oral interviews with households. This was considered the most suitable approach to examine the link between housing affordability, quality, and health.

Study Area

The study area is located in Beere, a core area of Ibadan. It is a historic town and one of the oldest, characterized by a dense population, while also carrying cultural and political significance. It falls within the jurisdiction of the Ibadan North-East Local Government Area.

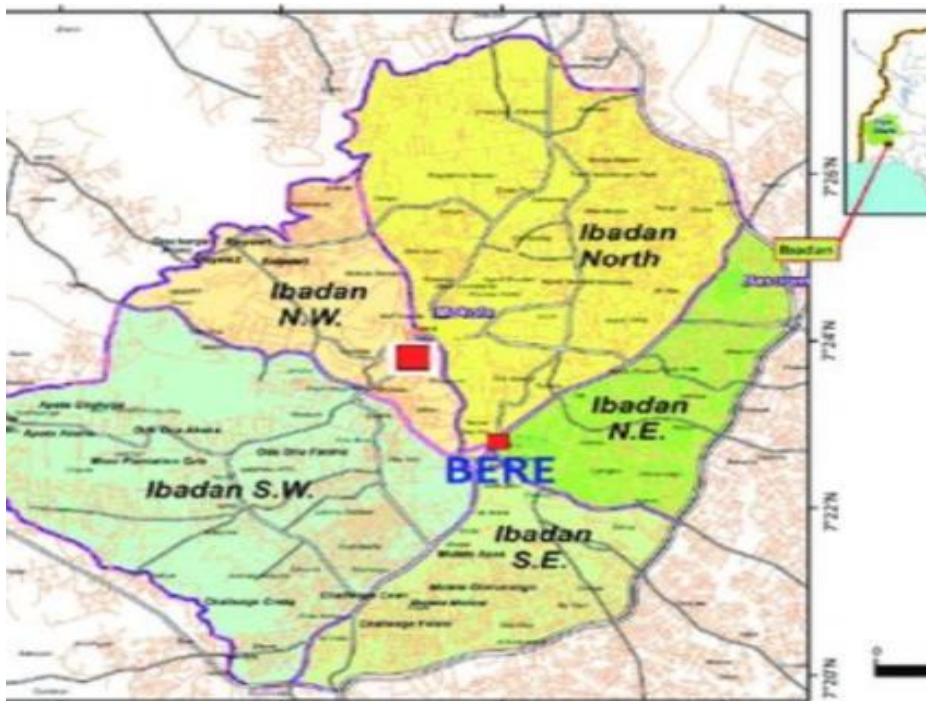


Fig. 1: Map showing the location of Beere in Ibadan

Data Collection

Data was collected using two methods: a field observation checklist and an oral interview.

Field observation checklist: This was used to document the physical and environmental conditions. The checklist covered building/structural condition, ventilation, water/sanitation, environmental conditions and neighbourhood accessibility. The indicators used are presented in table below:

Assessment Category	Indicators
Building and structural condition.	Building type, wall condition, roof condition, visible deterioration, maintenance level.

Ventilation and indoor comfort.	Presence of windows, window size/position, evidence of inadequate airflow and indoor heat condition.
Water and sanitation.	Water source, toilet availability, toilet condition, drainage condition.
Waste and environmental condition.	Waste disposal practices, refuse accumulation, stagnant water, presence of insect or rodent.
Neighbourhood and accessibility.	Road/internal access, emergency access, proximity to health facilities.
Healthy City indicators.	Safety, cleanliness, environmental quality, access to basic services.

Oral interview: semi-structured interviews were held with ten (10) households to gain insight into housing and rent conditions. Oral interviews were used due to the respondents' literacy levels. The interview covered the following:

- Housing affordability and rent rate.
- Common health issues.
- Living conditions.
- Housing quality and comfort.

Sampling Technique

The target audience for this study were adult male and female household inhabitants. Oral interviews were administered to collect data from inhabitants of the study area. A purposive sampling technique was used to select adult household participants, selection of individuals who were inhabitants of the households and as such well-experienced and knowledgeable to provide useful insight. These participants were selected based on their ability to provide relevant information regarding housing affordability, housing quality, living conditions and commonly experienced health concerns.

The oral interview was deemed appropriate because a substantial number of residents have relatively low literacy levels, making oral interviews more suitable. The community is socially diverse and some residents being graduates of institutions of higher learning continue to reside due to financial constraints. Therefore, conducting interviews orally enabled respondents to express their experiences and perceptions in a manner that was appropriate to their level of understanding.

A total of ten (10) households were interviewed. This was considered appropriate due to the exploratory nature of the research which was aimed to obtain in-depth contextual findings. Households were mostly family oriented with many residents living in inherited family homes. This pattern of housing was considered in understanding the continued residence of the households.

Data Analysis

Due to the nature of the interview, the data gotten from respondents will be analyzed thematically. The responses from the oral interview would be reviewed and organized according to issues related to housing affordability, physical housing conditions, environmental conditions and residents' reported health outcomes.

The major themes are:

Housing Affordability

- Low rent.
- Constrained household financial capacity.

Physical Housing and Living Conditions

- Aging/ dilapidated buildings.
- Inadequate ventilation.
- Overcrowding.
- Inadequate sanitation and cooking facilities.

Environmental and Sanitation Conditions

- Inadequate drainage.
- Improper waste disposal.
- Presence of stagnant water and poor hygiene.

Reported Health Outcomes

- Residents' reports of sickness such as malaria, fever, typhoid and cholera.
- Lack of healthcare access due to financial constraint.

Subsequently, findings from the field observation checklist would be analyzed descriptively to complement the oral interview findings.

RESULTS

Demographic Information

The oral interview featured ten households which included both male and female heads ranging from residents in their 30s to their 60s. The respondents were from family-oriented households of varying sizes which showed the family/communal living arrangement within the community.

Most of the houses being occupied were inherited family homes and this contributed to residents' long-term attachment to the community which limited the need to seek accommodation elsewhere. Although some respondents had higher educational qualifications such as graduates of institutions of higher learning, but financial constraints made it difficult to consider better accommodation elsewhere. As a result, some residents continued to live in these homes despite poor housing and environmental conditions.

Physical Housing and Living Conditions

The dominant building types were largely residential, with both health and worship centres. The houses ranged from bungalows to storey buildings. The physical conditions of the buildings include aging structures, dilapidation and rust-brown roofs. Building materials used include concrete, sandcrete blocks and adobe bricks. The level of maintenance of the buildings were fairly average.

Residents mostly experience unbearable heat conditions with a respondent describing it as “very high heat”. This could be attributed to poor house planning and a compact pattern of housing development. In some cases, houses were built very close to each other, limiting air flow and reducing the effectiveness of natural ventilation. Some respondent also noted that certain spaces received better ventilation than others depending on the spacing and arrangement of buildings.

The presence of narrow windows that do not allow proper airflow within spaces contributing to poor ventilation. This is worsened by the inadequate electricity supply which makes active cooling difficult, especially during

period of excessive heat. According to a resident, “lack of electricity affect the use of fans for cooling”. This results in poor indoor comfort in some households. The combined effects of close spacing, narrow windows and inconsistent electricity negatively affect thermal conditions in those buildings.

There were instances of overcrowding because residents prioritized lower rents over adequate spacing and ventilation. Some residents reported cooking in passageways, resulting to smoke within shared living space which contributed to poor indoor air.

Also, access to sanitation facilities varied across households. Some houses had toilets and bathrooms within them, while some had their independently erected at the exterior side. Sources of water include boreholes (which is sometimes paid for) and well water.



Fig. 2: Image showing the housing condition and building material



Fig. 3: Image showing the aging housing infrastructure



Fig. 4: Image showing the dilapidating condition of housing



Fig. 5: Image showing the dilapidating condition of housing

Housing Affordability

The findings reveal that housing in Beere is relatively affordable with rent varying considerably depending on the type and quality of accommodation. Rent ranged from N700 to N1,200 per month, while others report N1,000 to N2,500 per month. In addition, some occupants annual rent for accommodation is up to the sum of Sixty Thousand naira (N60,000).

The variation in rent is largely associated with difference in housing quality and availability of facilities such as toilets, bathrooms and kitchens. The price range in ascending order, indicated “better housing”: cheaper housing lacked toilets, whereas pricier housing had toilets and kitchens. Most houses lack built-in toilets, kitchens and

cooking in rooms contribute to poor indoor air quality. A resident explained that, “rent is dependent on quality of the house, especially whether the house has a toilet inside or outside the building”. This suggests that residents face a tradeoff between paying lower rent and accessing more decent housing.

Residents associate improved housing conditions with greater financial capacity. This suggests that constrained income influences housing choice of households in Beere. Also, inherited family housing is an important characteristic of the community with tenants sometimes exceeding the intended number of people living in such homes.

Also, a resident explained that “housing decency depend on financial capacity”. The lack of financial capacity places a strain on residents' ability to move out to find better housing. In conclusion, housing is both cheap and affordable, but living conditions are poor.



Fig. 6: Image showing the living condition of residents



Fig 7: Image showing the dumping ground for refuse

Environmental and Sanitation Conditions

The findings revealed significant environmental and sanitation challenges. The sanitary conditions of some households were good because their houses were consistently kept clean, whereas in other places they were dirty and unkempt.

Waste disposal was a frequently reported concern with some respondent indicating that the government was responsible for waste disposal in certain locations. Others reported that refuse was dumped into canals. Waste was improperly disposed of with the canal serving as the refuse site for both organic and inorganic materials; resulting in the presence of rodents and flies.

There is an absence of proper drainage facilities, coupled with exposed and collapsed drains which breed flies and mosquitoes and could potentially expose residents to illness. Lack of proper waste disposal also lead to unpleasant odour, which makes it uncomfortable for residents. The field observation also documented stagnant and dirty water with poor drainage. The presence of stagnant water in some areas facilitates mosquito breeding. A particular respondent reported that “sanitary inspectors do not visit frequently”. This inadequacy does not allow consistent enforcement of sanitation practices.

Additionally, access to water varied across households. Sources of water include public boreholes, private boreholes, wells and rainwater. Some residents were required to pay for access to the borehole as well. The findings show that access to reliable and affordable water was not consistent across households.

Despite this, residents reported that transportation within and around was relatively easy. The presence of a government hospital and private health care facilities nearby were also mentioned. However, environmental conditions relating to waste, drainage, sanitation and water remained significant concerns.



Fig. 8: Image showing dirty and stagnant water due to lack of drainage



Fig. 9: Image showing refuse dumping in a canal

Reported Health Outcomes

According to the residents' self-reported experiences, commonly mentioned illnesses include malaria, fever, typhoid, and cholera. These were directly reported by the residents during the interview and were not clinically verified through medical records. Residents frequently associated mosquito presence with stagnant water, poor drainage and sanitation issues while also reporting the use of mosquito nets (provided by the government) and insecticides.

Residents acknowledge that limited financial resources also hinder their ability to access high-quality health care. This suggests the potential interaction between housing choice, environmental conditions, low-income households and residents' capacity to respond to health concerns.

Coping Strategies

Residents report using insecticides and government-provided mosquito nets to combat mosquitoes and prevent malaria among other measures they can take. However, these methods are insufficient to address the underlying issues. It also requires proactive measures by both government and philanthropic organization or individuals in the change process. A respondent stated that, "government needs to do better, kindly appeal to them on our behalf".

Assessment of Finding within the Healthy Cities Framework

The findings were interpreted against selected principles of the WHO healthy cities framework especially in terms of adequate housing, clean environment, access to basic sanitation, water and overall conditions that support health and quality of life.

The interview indicated that several conditions hinder the achievement of these principles. Although housing is relatively affordable, while the community benefit from accessible transportation, commercial activity, presence of healthcare facilities. These positive attributes co-exist with significant housing and environmental challenges.

Observed conditions such as aging buildings, inadequate ventilation, overcrowding, exposed drainage, stagnant water and improper waste disposal highlight gaps between housing conditions in Beere and WHO healthy cities principles. While some households practiced good sanitation, the overall environmental deficiencies remained evident. These findings help provide the basis for housing/environmental management and public health recommendations proposed in this study.

DISCUSSION

This study investigated the relationship between housing affordability, housing quality and health outcomes in Beere, Ibadan, within the framework of the WHO "Healthy Cities" concept. The findings show that although housing in Beere appears financially affordable, such affordability is achieved largely at the detriment of housing quality, environmental safety and residents' health. This pattern corroborates existing literature that frames housing affordability as a multifaceted issue rather than a purely economic one.

Housing Affordability and Quality Trade-offs

The results show that rental cost in Beere is relatively low. However, lower rent is strongly associated with poor and inadequate housing conditions, including the absence of in-built sanitation facilities, poor ventilation, overcrowding and environmental degradation. This finding corroborates the findings of Ezennia et al. (2021), who argued that affordability should be evaluated in relation to households' capacity to maintain decent living conditions without compromising health and well-being.

Consistent with Ozabor et al. (2025), this study found out that low-income households prioritize affordability over housing quality, often living in substandard conditions due to limited income and a lack of better housing options. In this context, affordability does not equate to adequacy. Instead, it reflects a constrained housing choice environment in which residents accept unhealthy living conditions as a survival strategy. This situation

contradicts the “Healthy Cities principle” of ensuring the safety and provision of supportive shelter for all urban resident.

Housing Quality, Environmental Conditions, and Health Outcomes

Observations indicated extensive structural deterioration, aging and dilapidated buildings in Beere, along with poor ventilation and spatial planning. These result align with previous research in Ibadan's core areas, such as studies by Oladimeji et al. (2017) and Ojo et al. (017), which highlighted ongoing housing decay and weak maintenance practices. The continued existence of these issues suggests systemic neglect rather than isolated housing problems.

Inadequate ventilation and overcrowding contribute to excessive indoor heat, poor air quality and discomfort. These issues align with WHO Housing and Health Guidelines, which cite poor ventilation and heat stress as key risk factors for respiratory and cardiovascular diseases. Richards et al. (2025) also reported similar links, emphasizing how indoor conditions influence health outcomes in urban environments.

The observed environmental conditions such as stagnant water, blocked and exposed drains, improper waste disposal, inadequate sanitation may contribute to increased health risks and is consistent with residents’ reported experience of malaria, typhoid, cholera and other illnesses. However, due to lack of clinical records to back up the claims, these observations should be interpreted as perceived associations rather than evidence of direct causation. This support Popoola et al. (2015), who found a strong link between poor environmental sanitation and high malaria rate in Ibadan North local government area. These conditions hinder the Healthy Cities’s goal of a clean, safe and sustainable environment.

Housing Affordability and Perceived Health Implications

The findings of the study suggest that housing affordability may have indirect implications on residents’ health by reducing access to quality healthcare, nutritious food and better housing. Many respondents noted that financial limitations prevented them from seeking healthcare promptly, which contributes to a cycle of poor housing, health problems and poverty.

This finding is consistent with WHO Housing and Health Guidelines, which highlight that high housing costs can compel households to cut back on essential expenses, thereby increasing their vulnerability to health problems. Akinsulire et al. (2024) also noted that affordability issues in low-income urban areas worsen health disparities by limiting household resilience and adaptive capacity.

Tenure insecurity and low income also discourage residents from upgrading their homes, even if these dwellings are unsafe. This aligns with Haffner et al. (2021) statement that housing affordability is closely linked to larger patterns of urban inequality and social exclusion.

Coping Strategies and Institutional Limitations

Residents’ reliance on insecticide-treated nets, household sanitation practices and informal coping strategies reflects adaptive responses to persistent environmental risk. However, these measures were widely acknowledged as insufficient to address structural determinants of ill health, including poor drainage, overcrowding and weak waste management systems.

This finding supports the “Healthy Cities” view that individual efforts cannot replace systemic urban governance and infrastructure. Without coordinated government actions in areas such as housing regulation, environmental management and the provision of affordable housing, health outcomes in inner-city neighborhoods like Beere are unlikely to improve substantially.

Implications for Healthy City Development

Overall, this study's findings reinforce existing research highlighting housing affordability and quality as key determinants of urban health. Beere illustrates how inner-city neighborhoods in rapidly growing Nigerian cities

fail to meet Healthy City standards due to persistent infrastructure issues, economic hardship and inadequate policy enforcement.

The study highlights the importance of integrating housing and health efforts, including upgrading housing, enhancing ventilation, ensuring effective drainage and waste management, providing access to safe water and implementing affordable housing policies. Recognizing housing as a central component of developing healthy cities is crucial for improving public health outcomes and reducing urban health disparities in Ibadan and comparable urban settings.

CONCLUSION AND RECOMMENDATION

Conclusion

This study explored the relationship between housing affordability, quality and health outcomes in Beere, Ibadan, employing the Healthy Cities framework. Results indicate that housing affordability in the area is largely illusory, with low rent often associated with poor housing conditions and environmental degradation. As a result, affordable housing does not necessarily provide residents with healthy living environment.

The findings suggest that sub-standard housing conditions including poor ventilation, overcrowding, aging buildings and poor sanitation systems are perceived by residents to be associated with negative health outcomes such as malaria and cholera. Because these health conditions were self-reported and not clinically verified, the study does not establish direct causation. Moreover, low household income places financial strain on families, reducing their ability to improve housing conditions and making healthcare less accessible, thereby perpetuating a cycle of inadequate housing and health issues.

From a Healthy Cities perspective, Beere does not meet key benchmarks related to safe housing, environmental sustainability and quality of life. These ongoing issues reveal the shortcomings of current housing and urban management strategies in serving inner-city communities. The study emphasizes that housing should be regarded not merely as shelter but as a vital component of public health and urban development.

By providing localized data from Beere, this research contributes to the growing body of literature linking housing affordability and quality to urban health outcomes in Nigerian cities. It also provides a basis for policy-focused interventions to improve housing conditions and promote healthy urban development in Ibadan.

Recommendations

Based on the findings of this study and guided by the Healthy Cities framework, the following recommendations are proposed:

- **Housing Upgrading and Rehabilitation:** government through urban development agencies should prioritize upgrading aging houses in Beere via targeted programs. This initiative should aim to enhance ventilation, fix structural issues and improve sanitation facilities within existing homes.
- **Integrated Environmental Infrastructure Improvement:** improving drainage systems, ensuring regular waste collection and enforcing environmental sanitation are essential. Tackling issues like stagnant water, uncovered drains and indiscriminate waste disposal will greatly decrease the spread of vector-borne and waterborne diseases.
- **Affordable Housing with Minimum Health Standards:** housing affordability policies need to include minimum health and quality standards to prevent low-cost housing from jeopardizing residents' health. Affordable housing initiatives should ensure access to essential amenities such as safe water, toilets, kitchens and proper ventilation.
- **Strengthening Urban Governance and Planning Control:** planning authorities must enforce regulations on building setbacks, air spaces and occupancy limits to prevent overcrowding, enhance indoor air quality and environmental quality in inner-city neighborhoods.

- Community-Based Health and Environmental Education: public health education initiatives need to be enhanced to increase residents' awareness of hygiene, waste management and disease prevention. Additionally, encouraging community participation can foster a sense of ownership and ensure the sustainability of environmental improvements.
- Improved Access to Healthcare Services: affordable and accessible primary healthcare services should be expanded within or near inner-city communities such as Beere to reduce barriers to seeking timely healthcare services, especially for low-income household.
- Policy Integration of Housing and Health: housing policies at local and state levels need to align with public health goals, emphasizing housing as a crucial social determinant of health. Collaboration across housing, health and environmental sectors is vital to create healthier city environment.

Limitations

The study has some limitations that should be considered when interpreting its findings. Firstly, it was based on purposively selected participants from ten households. Therefore, the findings cannot be statistically generalized to all resident of Beere. Secondly, the reported health outcomes were based on respondents' self-reported health experiences and were not clinically verified. Thirdly, the study relied on field observations and residents' perceptions which may be influenced by individual experiences. However, despite all these, the study provides useful, localized insights into the perceived links between housing affordability, housing quality and health outcomes in Beere.

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