

## Quality and Perception of Public Housing Provision in Nigeria and Implications for Low-Income Earners

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### Abstracts

This study critically evaluates the quality of public housing provisions for low-income earners in Abuja, Nigeria, aiming to enhance housing policies and delivery outcomes. Employing a descriptive survey approach, data were collected from 150 residents using structured questionnaires focusing on housing quality and occupant preferences. The findings reveal a significant mismatch between the housing options provided and the disposable incomes of low-income residents, leading to widespread unaffordability. Despite increases in housing supply, the needs of low-income earners remain unmet, adversely affecting their living conditions, health, and well-being. The study highlights that current housing policies inadequately address the economic realities of low-income households. It recommends a thorough review of housing provision policies to better align with residents' financial capacities. Furthermore, the research advocates for a collaborative approach among housing designers, developers, and government agencies to promote the development of high-quality, affordable housing. By addressing these issues, the study seeks to contribute to policy amendments that ensure sustainable housing solutions for low-income populations, ultimately improving their quality of life and social inclusion.

**Keywords:** Housing quality in Abuja; Housing preferences; Housing provision for low-income earners; Nigeria.

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### 1. Introduction

The demand for quality public housing is beginning to outweigh the quantity of public housing in developing and developed countries. This is a concern because housing is viewed as an essential for providing shelter and supporting stable, long-term living conditions (Towry-Coker, 2009; Agbola, 2005). This raises questions on the quality of housing provisions and whether housing supply or provisions align with the disposable income of low-income residents. Housing encompasses more than mere habitation; Rapoport (2000)

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describes it as a system facilitating various activities, making neighborhood and environmental quality crucial aspects. Three key components define housing quality: neighborhood, location, and structural quality (Aluko, 2000; Rapoport, 2000). These qualities influence among other variables, the comfort, and social connections of city residents which are essential for a healthy urban living. Animashaun (2010) noted that housing quality affects residents socially, psychologically, environmentally, and culturally. Addressing these require a critical evaluation of the status quo. Discussions in the housing literature tend to focus more on the industry efforts in housing provision. However, investigations that examine the quality of public housing provisions that aligns with low-income earners in developing economies is limited. This study aims to critically evaluate the quality of public housing provision for low-income earners in Abuja, Nigeria, with specific objectives: 1) to examine the factors that affect the housing preferences for low-income earners, 2) to evaluate housing quality's role in enhancing occupant well-being, and 3) to determine the critical sustainability indices or considerations on housing quality for low-income earners. This study contributes to existing literature on housing quality and suggests potential review of government policies on real estate development in order to improve supply to align with the disposable income of residents.

## 2. Literature Review

Housing has been described as a vital economic asset and a fundamental component of human life that is crucial for social inclusion and stable communities (Oladapo, 2006). According to Konadu *et al.*, (1994), there is a strong link between housing, well-being, productivity, and socioeconomic growth. This is because housing conditions significantly affects the physical and mental health (Ambrose *et al.*, 2018). Housing extends beyond mere shelter to include employment, security, and infrastructure such as roads, electricity, and potable water (Idrus & Ho, 2008). Inadequate housing negatively impacts living standards and economic development, making housing provision a governmental priority. Industrialized countries often engage in long-term housing planning, including new development and maintenance of existing structures. Proper and affordable housing positively influences the economy, security, health, and quality of life. Historically, housing efforts were government-driven, but since the late 20th century, there has been a shift towards an enabling approach supported by Western countries and international organizations like the UN, IMF, World Bank, and UN-HABITAT (Daniel, 2014a). Programs such as Agenda 21, the Millennium Development Goals (MDG), and the Sustainable Development Goals (SDG) aim to address global housing challenges (Olugbenga *et al.*, 2017).

### 2.1 Housing Provision and Quality

The concept of housing quality is intricate and encompasses the social, cultural, and economic dimensions, making it challenging to define universally. Housing quality is typically evaluated through three aspects: neighborhood, home, and location (Rapoport, 2001; Aluko, 2000). The intrinsic aspects of a house relate to its dwelling quality, positional features reflect its location quality, and extrinsic aspects are tied to the neighborhood quality. Research shows that residential characteristics influence home values (Aluko, 2000). Quality housing fulfills biological, physiological, emotional, social, and economic needs while offering shelter. Housing quality impacts well-being by influencing living conditions that can expose residents to health risks like typhoid, malaria, and diarrhea (Bonney, 2007). Poor housing quality can jeopardize health and mental well-being as opined by Akande *et al* (2023a) and as seen in incidents of building collapses in Lagos, Nigeria. Quality housing includes structural stability, basic services, accessibility, security of tenure, choice, and reduced overcrowding (Agbola, 2005).

Financial status significantly affects housing quality and overall well-being, linking poverty with substandard housing (Dewilde & De Keulenaer, 2003). Socioeconomic status ultimately determines housing quality and living conditions. Housing quality, which includes comfort, practicality, and aesthetic appeal, is essential for social welfare (So & Leung, 2004). Adequate housing provision is an indicator of a country's developmental level (Alao, 2009) and is essential for national health (Coolen, 2006). Housing quality includes the physical condition of structures and the availability of facilities and services, meeting basic health and living standards while remaining affordable (Okewole & Aribigbola, 2006). However, housing quality is contentious and varies across different racial and ethnic groups, as geographic and cultural contexts define quality standards (Rapoport, 2001). In this paper, housing quality is assessed based on six indicators: use value, location, living convenience, neighborhood prestige, structural design, and mobility control.

Neighborhood prestige includes factors like cleanliness, safety, peace, drainage, sanitation, and waste disposal. Living convenience is determined by proximity to markets and childcare facilities. Location quality is characterized by proximity to the CBD, friends, workplaces, and public transport access. Use value of the dwelling is measured by the number of rooms, bathrooms, kitchens, and availability of light and water. Structural quality involves age, style, lot size, security, and maintenance aspects. Mobility control factors include tenure type, rent, vacancy, and maintenance costs, which can restrict housing options. Well-being

is broadly defined as a state of good health and happiness, encompassing emotional, psychological, and physiological states. Human endeavors should aim to improve livability and wellness, which includes providing quality housing (Mabogunje et al., 1978).

## 2.2 Housing Quality and Its Impact on The Occupants

Poor housing conditions can severely impact the physical and emotional health of low-income individuals. Issues such as dampness, inadequate heating, and overcrowding can lead to respiratory problems, stress, and overall poor health (Evans, 2003; Akande et al., 2024). Evans' study highlighted a strong correlation between these poor living conditions and an increased risk of respiratory illnesses and discomfort among low-income earners. These health issues not only cause physical discomfort but also negatively affect overall well-being. Children in substandard housing often experience poor educational outcomes due to a lack of adequate study space and unstable living conditions, which can hinder their school performance (Littleton & Freisthler, 2023). The author's study indicated that children living in low-quality housing face challenges and the instability of their home environments, underscoring the broader impact of housing quality on low-income families' opportunities and achievements. Low-quality housing also increases residents' exposure to crime and accidents because of inadequate security features, leading to feelings of insecurity and fear (Ramsey-Musolf, 2018). The study showed that substandard housing often lacks proper security measures, putting residents, particularly low-income earners, at higher risk of crime and accidents. The resulting fear and sense of inadequacy can significantly affect their overall well-being and quality of life.

Financial stability of low-income individuals is also influenced by housing quality. Poor housing can lead to financial strain and limit economic opportunities. For instance, inadequate insulation or heating in low-quality housing can result in high energy bills, forcing low-income households to spend a large portion of their income on housing-related expenses. Additionally, poorly maintained housing often requires frequent repairs, further straining the financial resources of low-income families. This economic insecurity can prevent individuals from pursuing better job opportunities or investing in potential ventures. Housing quality also affects social well-being and community cohesion. Overcrowding, lack of living space, and absence of public areas in substandard housing can lead to social exclusion and poor communication among residents (Coates et al., 2021). Individuals and families unable to host visitors or participate in community events due to housing constraints may feel socially isolated, impacting their overall well-being and sense of community belonging. Stable housing is crucial for maintaining community stability, as it reduces the risk of displacement. Safe, high-quality housing is associated with fewer instances of forced relocation and eviction, thereby ensuring continuity in social networks and community stability (Desmond, 2016). As posited by Akinola et al., (2024) partnerships between financial institutions and housing developments in form of public and private partnership in housing provision could provide low-income individuals with affordable financing options for home purchases or renovations, promoting homeownership and wealth building.

## 2.3 Benefits of Improving Housing Quality for Low-Income Earners

Several studies and authors (Jacobs et al., 2009; Akande et al., 2018a; Akande et al., 2018b; Akande 2021; Akande et al., 2023b) has established that improving housing quality for low-income earners can significantly enhance health outcomes by reducing the prevalence of allergies, respiratory diseases, and other health issues through better ventilation and reduced exposure to environmental hazards. This leads to lower medical costs and improved overall well-being. Financial stability for low-income households is also positively impacted by sustainable housing solutions, which reduce operational and utility costs, freeing up funds for investments, savings, and education (Grey, 2017). Promoting eco-friendly housing benefits both low-income households and the environment. Sustainable practices, such as using energy-efficient designs and materials, help reduce energy consumption and greenhouse gas emissions, aligning with global environmental goals (Stern, 2007; Akande et al., 2021; Akande et al., 2023c). Enhancing the sustainability and quality of housing also boosts community development by stimulating local economies, creating jobs, and fostering safer, more vibrant neighborhoods (Rohe et al., 2013). Thriving communities provide better access to opportunities and services for low-income earners.

Implementing sustainable housing practices, such as climate-resilient construction, helps low-income communities better withstand severe weather and climate change impacts, reducing displacement risks and disaster relief costs (Cutter et al., 2010; Akande et al., 2023d). High-quality, sustainable housing fosters community cohesion and social inclusion by providing a safe, stable environment that enhances the sense of community. This reduces social isolation and promotes social relationships. Innovative technologies in sustainable housing, such as improved indoor air quality and intelligent energy management, enhance living conditions for low-income earners. Sustainable housing initiatives also contribute to community resilience by providing secure housing during and after disasters, protecting low-income individuals from

displacement due to natural or economic crises. This stability supports the overall well-being of communities. Better and more sustainable housing improves the quality of life for low-income earners and families by providing safe, secure, and energy-efficient homes, which enhance daily experiences and future prospects (Smith, 2003). Promoting sustainable housing practices leads to the creation of sustainable communities that are resource-efficient and resilient, ensuring long-term well-being for their residents (Mohanty & Agarwal, 2014).

## 2.4 Challenges and Barriers Influencing Housing Quality of Low-Income Earners

Affordability is a significant barrier to sustainable, high-quality housing for low-income individuals, who often struggle to access good housing due to limited financial resources (Schwartz, 2021). Sustainable features such as eco-friendly materials and energy-efficient technologies are often prohibitively expensive for low-income households, perpetuating poor living conditions. Inadequate housing policies and lax enforcement of regulations further hinder efforts to improve housing quality for low-income communities. According to Sharpe *et al.* (2018), weak legislation and enforcement can prevent holding property owners accountable for maintaining quality standards, thereby perpetuating substandard living conditions. Addressing these legislative and regulatory challenges is essential to ensuring low-income earners have access to safe and sustainable housing.

Discrimination in the housing market also poses a major obstacle for low-income individuals seeking decent, long-term housing. Discriminatory practices based on race, ethnicity, and socioeconomic status can prevent them from obtaining homes in desirable areas (Aratani *et al.*, 2019). Combatting discrimination through legal measures and awareness campaigns is crucial to improving housing prospects for this demographic. The scarcity of affordable housing further impedes the ability of low-income individuals to secure high-quality, sustainable housing. This includes the physical accessibility of homes for people with disabilities and proximity to employment opportunities and essential services (Kent & Thompson, 2019). The lack of accessible housing options exacerbates the challenges faced by this group in finding suitable and sustainable homes.

Housing instability, characterized by frequent moves and lack of a stable living situation, is a common issue for low-income populations. According to Fowler *et al.* (2015), this instability can lead to homelessness, stress, and disrupted education for children, making it difficult to find and maintain better housing options. Marginalization and discrimination based on racial, ethnic, and socioeconomic backgrounds further hinder access to sustainable housing (Desmond, 2016). Eliminating these barriers is crucial for achieving equitable housing opportunities. The affordability crisis in urban areas significantly limits the housing options available to low-income earners. Rising housing costs and stagnant wages leave this group with few options for high-quality, sustainable housing (Desmond, 2016).

Addressing the affordability gap and providing sustainable, affordable housing options is essential to improving living conditions for low-income communities. Current housing policies often fail to address the specific needs of low-income communities adequately. Smith (2003) argues that policy gaps can lead to disparities in the sustainability and quality of housing. Urban redevelopment and gentrification can exacerbate these issues by displacing low-income residents and reducing the availability of affordable housing (Saiz, 2010). Increasing the housing stock and ensuring it meets quality and sustainability standards are critical to addressing these challenges (Mohanty & Agarwal, 2014).

## 2.5 Indicators for Evaluating Housing Quality

To evaluate the quality of a house, one must first understand the concept of quality. Afon, (2000) described quality as "a mental or moral attribute of a thing that can be used to describe the nature, condition, or property of that particular thing. Jiboye, (2004) argues that quality depends not only on the consumer's desires but also on the product itself. Essentially, quality is subjectively assessed based on what individuals deem significant at any given time (Olayiwola, 2006). Various indicators for assessing housing quality and its impact on occupants' well-being have been discussed in literature (Ebong, 1983; Akande *et al.*, 2024). Hanmer *et al.* (2000) describes quality housing to include infrastructural services that foster long-term growth and improved living conditions.

Neilson (2004) outlines five criteria for determining residential quality: meeting tolerable standards, being free of serious disrepair, being energy efficient, having modern facilities and services, and ensuring health, safety, and security. Hall and Meng (2006) identified four criteria for creating a meaningful Housing Quality Indicator: managerial, social and cultural, scientific/technical, and objective. Other important characteristics include access to basic housing and community facilities, the quality of infrastructure, spatial adequacy, design quality, fixtures and fittings, building layout, landscaping, noise and pollution management, and security (Jiboye, 2004). However, it can be seen from the above studies that no single variable can comprehensively assess the qualitative nature of residential development. Thus, a holistic evaluation that

considers construction type, materials used, services, spatial arrangements, functions, and aesthetics is necessary.

## 2.6 Nigeria's Housing Quality Situation

Nigeria's rapid rural-urban migration has not been matched by housing supply that aligns with the disposable income of residents. The implication is that the quality housing is insufficient and the urban poor have limited housing opportunities, reflecting social and financial disparities, leading to uneven and racially divided housing quality (UNCHS, 2001; Meng et al., 2006). Slum communities on the outskirts of Nigerian cities, populated by recent immigrants and low-income groups, often lack political and financial support (UN-HABITAT, 2003). High population densities, substandard housing, lack of services, pollution, and limited access to jobs, education, and healthcare create a cycle of poverty that impacts health and well-being (Andersen, 2003). Effective housing policies are needed to address these issues, particularly promoting affordable, minimum-quality housing for those below the poverty line.

In Nigeria, housing faces both qualitative and quantitative deficiencies (Oladapo, 2006; Olubajo *et al.* 2017; Akande *et al.*, 2024). While qualitative issues are complex, quantitative problems can be addressed by increasing housing stock. Despite government efforts, Nigeria meets only 4.2% of its annual housing needs, forcing low-income households into substandard, crowded homes in deteriorating urban areas or informal settlements (Meng, Hall, & Roberts, 2006). Over 50% of urban residents in developing countries are affected by inadequate housing (World Bank, 2000). These areas often lack land rights, urban infrastructure, and services, and face poor environmental conditions.

The quality of housing encompasses various elements, including the building's physical state and additional amenities and services that contribute to a desirable living environment. However, providing adequate housing remains a major challenge in Nigeria and other developing countries, with many urban residents struggling to secure suitable housing (Jiboye, 2010). Housing quality is measured by factors such as housing type, design, age, aesthetics, lot size, window sizes, spatial arrangements, and the number of rooms (Aderamo & Ayobolu, 2010; Treimikiene, 2014; Amao, 2012). Building procedures, materials, and aesthetics are also indicators of home quality (Bradley & Putnick, 2012).

Neighborhood quality is influenced by its physical surroundings, including the condition of houses, roadways, open spaces, and overall settings (Clark & Huang, 2003; El Din et al., 2013). In Abuja's peri-urban settlements, neighborhood quality is low, with limited access to amenities and inadequate sanitation (Boamah, 2015; Allen, 2010). Waste disposal is often indiscriminate, and toilet facilities are insufficient (Allen, 2003; Puttal & Ravadi, 2014). Access to drinking water varies based on income, with middle-income neighborhoods having better housing quality and separation from indigenous residents and immigrants (Simon, 2008; Ibem & Aduwo, 2015). Community participation can enhance neighborhood quality, supported by government, developers, or community associations (Lawanson et al., 2012; Binns, Maconachie, & Tanko, 2003; Obeng & Whittal, 2014). Housing should meet acceptable living and health standards and be affordable for all households (Okewole & Aribigbola, 2006; Akande *et al.*, 2023b).

## 2.7 Housing Quality and What Is Sustainable for Low-Income Earners in Nigeria

The Nigerian National Housing Policy defines the low-income category as individuals with annual incomes of N100,000 or less, which includes employees and independent contractors within salary grade levels 01-06 in the civil service (Alamu, 2018). Interestingly, the national minimum wage stands at N44,000 annually. Approximately 57% of the Nigerian population lives below the poverty line of around US\$1 per day. Many Nigerians working outside the public or organized business sectors, including numerous independent contractors, earn significantly less than the minimum wage. This suggests that over 70% of Nigerians fall into this low-income group, which forms the backbone of the national economy.

The policy proposes several measures to improve living conditions for low-income populations. These include substantial public and private sector investments in housing, support for forming cooperative societies to facilitate construction and distribution of building materials, and incentives from the federal government to mortgage and financial institutions for effectively financing low-income housing. However, the current development trend is profit-driven, with private developers focusing on commercial housing for the affluent minority, often financed by short-term loans requiring quick repayment (Alamu, 2018). Housing quality and sustainability significantly impact low-income earners' lives, influencing personal well-being, societal dynamics, cultural and environmental conditions.

According to Haruna *et al.*, (2023) housing is regarded as critical to sustainable development since it is one of the essential socioeconomic factors that influence not only the quality of life and welfare of individuals, but also the welfare of communities. As a result, the location of homes, their design and construction quality, and their integration into the social, cultural, and economic fabric of communities all have a substantial impact on people's everyday lives, health, security, and overall well-being. Therefore, access to safe, comfortable, and eco-friendly housing is crucial. This study considers the quality of housing

provisions and whether they are sustainable for low-income earners, highlighting the challenges they face and the potential benefits of improved living conditions.

### 3. Research Methodology

#### 3.1 Research design

This study employed a questionnaire survey to evaluate the quality of public housing provision for low-income earners in Abuja, Nigeria and whether they are sustainable for low-income earners. This approach was chosen for its ability to collect extensive data, facilitating a thorough and in-depth examination of the phenomena under study. Data was gathered via a questionnaire, which enhances objectivity and reduces respondent bias. This method also yields better response rates than qualitative approaches, particularly for geographically dispersed research like this study. A quantitative approach was used, combining data from a stratified random sampling of low-income individuals and families and key stakeholders, including government officials, housing experts, and representatives from low-income neighborhoods.

#### 3.2 Study Area and Population

Abuja, located in Nigeria's geographical center between latitudes 6° 45' and longitudes 7° 39' north of the equator, serves as the Federal Capital Territory (FCT). The FCT occupied approximately 250 square kilometres with its population rising to 3,840,000, with less than half of the city developed. Abuja is a rapidly expanding city, driven by its role as the Federal Capital Territory. The study population includes all individuals sharing specific traits of interest to the study. This study's target group consists of low-income earners, private real estate developers, government officials, housing experts, and representatives from low-income neighborhoods in Abuja.

#### 3.3 Sample and Frame Size

The Taro Yamane method (1967) was employed to determine the sample size for the survey. The formula used is

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

where n= sample size, N= population size e= margin of error.

Given the population of 1000. The calculated sample size is 100 housing units. Basic random selection strategy was utilized for this study as it allows each sampling element to be chosen.

#### 3.4 Instrument for Data Collection

Questionnaires were utilized in this study to gather the necessary information to address the research objectives. A structured set of questions was administered to the research population, including government officials, housing experts, and representatives from low-income neighborhoods. The questions were designed to be simple, engaging, and directly related to the study's objectives. The questionnaire comprised three parts: the first part focused on the personal details of the respondents, the second part addressed objective one using a five-point Likert scale, and the third part addressed objective two also using a five-point Likert scale. The researcher included a list of identified factors from the literature review in the questionnaire, presented in a structured five-point Likert scale. The identified factors were incorporated into the questionnaire with questions specifically targeting data on factors associated with housing quality performance in the study area.

#### 3.5 Data Analysis Techniques

Data obtained from the questionnaire survey on the respondent's characteristics was analyzed using frequency and percentages. Data obtained from the questionnaire survey on the factors affecting housing preferences was analyzed using Standard Deviation and Mean Item Score (MIS) that was ranked. Data obtained from the questionnaire survey on housing quality's role in enhancing occupant well-being for low-income earners was analyzed using the Relative Importance Index (RII) that was ranked. Data obtained from the questionnaire survey on the critical indicators or considerations of low-income housing was analyzed using the Mean Item Score (MIS) that was ranked.

The Relative Importance Index was employed using a structured scale. The Relative Importance Index (RII) and Mean Item Score (MIS) are used for data analysis, with decision rules outlined in Table 1. RII values range from 0.00 to 1.00, while MIS values range from 1.00 to 5.00. The formula for the Relative Importance Index (RII) is as follows:

$$RII = \frac{\sum W}{A \times N} \text{-----} (3.1)$$

Where:  $\Sigma$  = Summation, W = the weights of every one of the factors given by respondents and it was in the range of (1 - 5), (A=5) the largest value of weight (i.e., Highest factor) and finally N refers to the Total of number respondents.

Mean Item Score is being ranked from 1.00 to 5.00 and they all have their decision rule as shown in Table 1. The formula for Mean item score (MIS) is as follows:

$$MIS = \frac{\sum W}{N} \text{-----} (3.2)$$

Where:  $\Sigma$  = Summation, W = Weight, and N = Total

The decision rule adopted for the RII and MIS are summarized in Table 1.

**Table 1:** Decision Rule for Data Analysis

SCALE	Cut-Off Point		Level of agreement	Interpretation	
	RII	MIS		Level of importance	Level of Effectiveness
5	0.81 - 1.00	4.51 - 5.00	Strongly Agree	Very important	Very Effective
4	0.61 - 0.80	3.51 - 4.50	Agree	important	Effective
3	0.41 - 0.60	2.51 - 3.50	Undecided	Fairly important	Fairly Effective
2	0.21 - 0.40	1.51 - 2.50	Disagree	Less important	Less Effective
1	0.00 - 0.20	1.00 - 1.50	Strongly Disagree	Not important	Least Effective

#### 4. Results and Discussion

A total of 158 questionnaires were distributed to respondents, with 150 completed and returned, yielding a response rate of 95%. A 95% response rate is significantly high, suggesting that the data collected is reliable and can be considered valid for drawing conclusions about the population. This high response rate reduces the likelihood of response bias, ensuring that the sample is representative of the broader population of low-income earners in Abuja. This high response rate also indicates strong engagement and reliability in the data collected, as it closely matches the calculated sample size needed for the study. In addition, with almost the entire sample size accounted for, the statistical analysis conducted will have a higher degree of accuracy. The robust dataset enhances the credibility of the findings and supports the generalizability of the results to the wider population. Furthermore, the high participation rate indicates a strong interest and willingness among respondents to provide their input on the quality of public housing. This suggests that housing issues are of significant concern to the respondents, reflecting the importance of the study's subject matter. In summary, the 95% response rate achieved in the study underscores the reliability and relevance of the data, providing a solid basis for analysis and subsequent recommendations. This high level of participation emphasizes the importance of addressing housing quality and affordability issues and supports the formulation of effective policies and interventions to improve living conditions for low-income earners in Abuja. The respondents' profiles, as detailed in Tables 2 to 8, provide a comprehensive demographic and socio-economic background necessary for analyzing the study's findings.

##### 4.1. General profile of respondents

The age distribution of respondents, as shown in Table 2, indicates a relatively balanced representation across different age groups.

###### 4.1.1 Information on the respondents age group

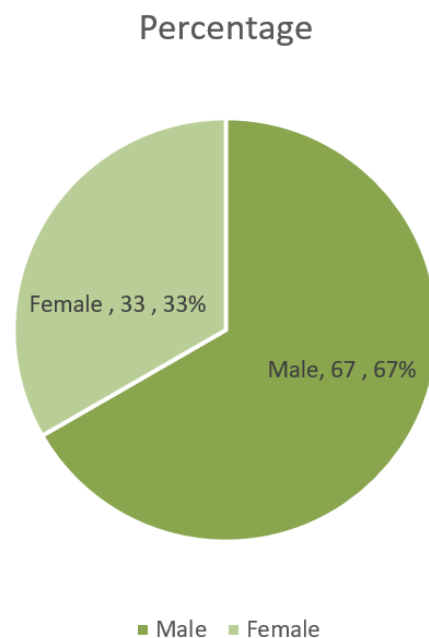
There are notable concentrations in the 26 – 35 years and 36 – 45 years age groups, which together constitute 68% of the total respondents. This implies that the majority of the participants fall within the working-age demographic, suggesting that the findings of the study may be particularly relevant to individuals in their prime working years.

**Table 2: Respondents' Age Group**

Designation of Respondents	Frequency	Percentage (%)
18 – 25years	27	18
26 – 35 years	60	40
36 – 45 years	42	28
46 – 55 years	18	12
above 55 years	2	1
Total	150	100

#### 4.1.2 Gender distribution of respondents

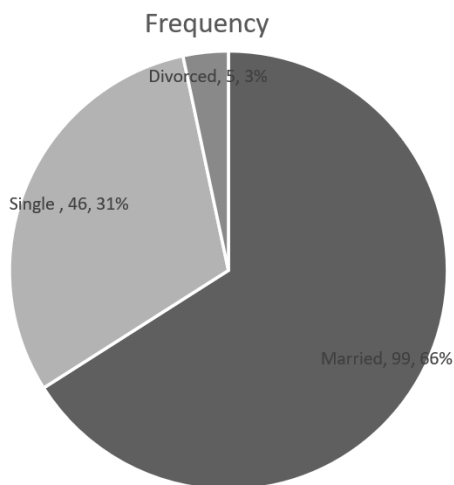
Figure 4.1 presents the gender distribution of respondents, showing that 67% of the respondents are male, while 33% are female. This indicates a significant male predominance in the surveyed population which has important implications for the representativeness and comprehensiveness of the study. The overrepresentation of males (67%) compared to females (33%) suggests a potential gender imbalance in the sample. This imbalance might reflect broader socio-economic trends, such as a higher proportion of male-headed households among low-income earners or gender-specific access to housing. The predominance of male respondents could also indicate that men are more likely to be the primary decision-makers regarding housing within low-income households. This dynamic should be explored further to understand the socio-economic factors influencing housing decisions and how they vary between genders. This finding suggests the need for more balanced gender representation in future housing studies and indicates that policymakers should consider gender-specific housing needs and challenges when designing interventions for low-income earners.

**Figure 1: Gender Distribution of Respondents.**

#### 4.1.3 Respondents marital status

Figure 4.2 illustrates the marital status distribution among respondents, showing that 66% are married, while 31% are single. This highlights that the majority of respondents are in marital unions, with a significant minority being single. The predominance of married respondents (66%) suggests that many respondents may belong to family households, which could influence their housing needs and preferences, such as the requirement for larger living spaces or proximity to schools and family services. Single respondents (31%) may have different housing priorities, such as affordability, accessibility to work or social amenities, and smaller living spaces. Married individuals may benefit from combined incomes and shared responsibilities, which could affect their ability to secure and maintain housing compared to single individuals who may face more financial constraints. Understanding these dynamics is crucial for designing housing policies that cater to the varying needs of different household types.





**Figure 2:** Information on the Respondents Marital Status.

Housing programs and policies should consider the specific needs of both married and single individuals to ensure inclusivity and effectiveness. For married couples, policies might focus on family-friendly housing units and community services, whereas for single individuals, the focus might be on affordable and flexible housing options. Marital status can impact economic stability, with married couples potentially having dual incomes, which may influence their housing affordability and stability. Social variables, such as the need for community and support networks, may differ between married and single respondents, affecting their housing preferences and satisfaction. The presence of a sizable single population (31%) indicates diversity in the life stages of respondents, which can provide a broader understanding of housing needs across different demographic groups. This diversity can enrich the study by highlighting varied housing issues and solutions applicable to different segments of the population.

**4.1.4 Respondents educational qualifications**

Table 3 details the educational qualifications of respondents, showing that none attended only a Qur’anic school or completed only primary school. 12% (18 respondents) completed their education at the secondary school level. A significant majority, 88% (132 respondents), pursued tertiary education. The overwhelming majority of respondents (88%) have tertiary education, indicating a highly educated sample. This suggests that the respondents likely have better employment opportunities and higher income levels, which could affect their housing preferences and capabilities. Meanwhile, the absence of respondents with only primary or Qur’anic school education might indicate either a sampling bias or reflect the demographic characteristics of the area surveyed. It could also mean the study may not capture the perspectives of those with lower educational attainment, who might have different housing needs and challenges. In addition, it could be argued that higher educational qualifications typically correlate with better job prospects and higher incomes. This can influence the ability of respondents to afford better quality housing and their sensitivity to housing costs. It may also imply that respondents have better access to financial services, such as loans, which can impact their housing choices and stability.

**Table 3:** Respondents’ educational qualification

Educational Qualification	Frequency	Percentage (%)
Qur’anic school	00	00
Primary School	00	00
Secondary School	18	12
Tertiary Education	132	88
Total	150	100

Furthermore, the high level of education among respondents might suggest a bias towards preferences and opinions that reflect the priorities of more educated individuals. This could include a greater emphasis on housing quality, safety, and amenities, potentially overlooking more fundamental housing issues faced by less educated individuals. The high education level of respondents suggests they might be more

engaged and vocal about their housing needs and community issues. This could lead to more active participation in housing improvement initiatives and advocacy for better housing policies. Thus, policymakers should consider that the needs of less educated populations might be underrepresented in this study. Programs designed to improve housing conditions should include strategies to reach and support individuals with lower educational attainment, who may face different economic and social challenges. Housing policies could be tailored to ensure that educational programs and job training opportunities are available to help those with lower education levels improve their economic standing and housing conditions.

#### 4.1.5 Respondents yearly/annual income

Table 4 details the distribution of respondents' annual income across five income brackets: (i) 30k - 50k represented by a specific portion of the respondents (ii) 50k - 70k is another segment of respondents falls into this income bracket. (iii) 70k - 90k constitute the largest group, with 39 respondents (26% of the total). (iv) 90k - 120k represented by another segment of respondents and (v) 120k and above is a significant representation with 35 respondents (23% of the total). The highest frequency of respondents falls in the 70k - 90k bracket, indicating a middle-income predominance. This group may have specific housing needs and preferences that differ from lower or higher income groups. This distribution suggests a relatively balanced economic profile, without an extreme skew towards either lower or higher income brackets. The presence of respondents across all income brackets shows economic diversity within the sample. This can provide a comprehensive understanding of housing preferences and challenges faced by different income groups. The notable representation of the highest income bracket (120k and above) indicates that the sample includes individuals with substantial financial means, which may influence their housing choices and priorities differently compared to lower-income respondents. The income distribution suggests that respondents are likely to have varied financial stability and capacity to handle housing costs.

**Table 4:** Respondent's Yearly/annual income

Yearly/Annual Income	Frequency	Percentage (%)
30- 50k	12	8
50k – 70k	24	16
70k-90k	39	26
90k-120k	22	15
120k and above	35	23
Total	150	100

This is crucial for understanding the economic pressures faced by different segments of the population. Higher income respondents (120k and above) might have greater access to better housing options, loans, and financial products, which can affect their housing satisfaction and choices. The income diversity within the sample suggests that the findings of the study can reflect a wide range of economic experiences and perspectives regarding housing quality and affordability. Researchers need to account for the varied financial capabilities when analyzing housing satisfaction and preferences, as these factors are closely linked to income levels. The data can inform the development of housing programs and policies that consider the diverse economic backgrounds of the population. For instance, subsidies or financial assistance programs might be targeted towards lower-income brackets. Programs aimed at improving housing affordability and quality can be designed to ensure inclusivity across all income levels, addressing the specific needs of each group.

#### 4.1.6 Respondents house hold population size

Table 5 presents the distribution of respondents' household population sizes in the following manner: 1 to 3 members (35 households) representing a specific portion of the sample. 3 to 6 members (90 households) making up 60% of the total, indicating the majority. 6 to 9 members (25 households) accounting for 17% of the sample. 10 and above members (No respondents fall into this category) suggesting an absence of very large households in the study. The majority of respondents (60%) have households with 3 to 6 members. This indicates a predominance of medium-sized families in the sample, which could influence housing needs and preferences. Policies and housing programs should consider that most households fall within this size range, potentially focusing on providing housing units that can comfortably accommodate medium-sized families. The lack of respondents with households of 10 or more members suggests that the study population predominantly consists of smaller to medium-sized households. This might indicate that the surveyed population lives in urban or semi-urban areas where large households are less common due to

space constraints or lifestyle choices. The data provides insights into the demographic composition of the surveyed population. Smaller household sizes might indicate a trend towards nuclear families, which is common in urban settings.

**Table 5:** Respondents house hold population size

House-Hold Population Size	Frequency	Percentage (%)
1-3	35	23
3-6	90	60
6-9	25	17
10 and above	00	00
Total	150	100

The demographic trend can also influence cultural and social services planning, ensuring that the community's needs are met effectively. The predominance of medium-sized households underscores the need for affordable housing units that can accommodate 3-6 members. This can inform government and private sector initiatives to build suitable housing. The absence of very large households suggests less demand for large, multi-bedroom units, allowing for a focus on smaller, more economical housing solutions. Policymakers can use this information to develop housing policies that cater to the predominant household sizes. This includes designing housing units, community facilities, and services that match the needs of the majority. Policies related to family welfare, such as child care and education, can be better tailored when the typical household size is considered. Urban planners can use household size data to design neighborhoods that are suited to the most common family sizes. This includes planning for adequate schooling, parks, and recreational facilities. Infrastructure such as roads, public transportation, and utilities can be scaled appropriately to meet the demands of households with 3-6 members.

#### 4.1.7 Respondents house type

Table 6 provides information about the distribution of respondents based on their house types. Single Room: There are 11 respondents (7% of the total) living in single room houses. Two Bedroom: The majority of respondents, 82 individuals (55% of the total), live in two-bedroom houses.

**Table 6:** Respondents house type

House Type	Frequency	Percentage (%)
Single room	11	7
Two bedrooms	82	55
Three bedrooms	43	29
Four bedrooms	14	9
Total	150	100

Three Bedroom: 43 respondents (29% of the total) reside in three-bedroom houses. Four Bedroom: The smallest group comprises 14 respondents (9% of the total) living in four-bedroom houses. The table provides a clear breakdown of how respondents are distributed across different house types, indicating that two-bedroom houses are the most common among the surveyed population. This information can be valuable for various purposes. For example, it can help urban planners, real estate developers, or researchers understand the prevalent housing structures in the surveyed area. Additionally, it may inform decisions related to housing policies, infrastructure development, or market demand for different types of housing. Implications: The high percentage of respondents living in two-bedroom houses might suggest a certain trend in the housing market or a common preference among the surveyed population. Understanding such patterns can be crucial for making informed decisions in the fields of urban development, housing planning, and real estate.

#### 4.1.8. Respondents house years existence

Table 7 provides information about the number of respondents and the percentage distribution based on the number of years their houses have existed. 0 - 5 years: No respondents reported having houses in existence for 0 - 5 years. 5 - 10 years: 32 respondents, constituting 21% of the total, have houses that have

existed for 5 - 10 years. 10-15 years: 64 respondents, representing 43% of the total, reported houses in existence for 10-15 years, 15-20 years: 45 respondents, accounting for 30% of the total, have houses in existence for 15-20 years, 20 years and above: 9 respondents, making up 6% of the total, have houses that have existed for 20 years or more. This information can be useful for various purposes such as urban planning, housing policy development, or understanding the demographics and longevity of housing in a particular area.

**Table 7:** Respondents house existence years

Respondents house existence years	Frequency	Percentage (%)
5 years	00	00
5-10 years	32	21
10-15 years	64	43
15-20 years	45	30
20 years and above	9	6
Total	150	100

#### 4.1.9. Respondents house years existence

Table 8 presents information about the professional designations of respondents and the. Total Number of Respondents: Architects: 21% of the respondents were architects (12 individuals). Builders: 26% of the respondents were builders (15 individuals). Engineers: 12% of the respondents were engineers (7 individuals). Developers: 5% of the respondents were developers (individuals). Quantity Surveyors: 16% of the respondents were quantity surveyors (9 individuals). Urban and Regional Planners: 9% of the respondents were urban and regional planners (5 individuals). Estate Valuers: 11% of the respondents were estate valuers (7 individuals). In summary, the table provides a snapshot of the distribution of respondents among different professional designations, offering a foundation for further exploration and analysis in the context of the study's objectives.

**Table 8:** Respondents professional designation

Professional designation	Frequency	Percentage (%)
Architect	12	21
Builder	15	26
Engineer	7	12
Developer	3	5
Quantity Surveyor	9	16
Urban and Regional Planner	5	9
Estate Valuers	7	11
Total	58	100

## 4.2 Results and discussion on income factors that align with housing preferences

The results of the study on income factors that align with the housing preferences reveal several important insights as presented in Table 9. Firstly, respondents generally express satisfaction with the quality of the houses they currently inhabit, as indicated by a mean score of 2.89. This suggests that the quality of their current housing is of moderate importance in influencing their housing preferences. Secondly, the health impact of the house is considered less important, with a mean score of 2.51 and a relatively high standard deviation of 1.32, indicating diverse opinions or experiences among respondents. Thirdly, safety and security due to housing quality are perceived as more important, with a mean score of 2.97 and a moderate standard deviation of 1.23. Fourthly, the financial aspect, such as paying higher utility bills due to the house's condition, is considered less important, with a mean score of 2.36. This aligns with the findings of previous research, suggesting that poorly maintained housing can strain low-income families' financial resources. Fifthly, the impact of housing quality on children's educational learning is moderately important, with a mean score of 2.95 and a relatively high standard deviation of 1.38, indicating diverse opinions. Sixthly, the influence of housing quality on social lifestyle is ranked lower in importance, with a mean score of 2.30 and a moderate standard deviation of 1.09, suggesting that respondents generally disagree that housing quality significantly enhances their social activities.

**Table 9:** Results of income factors that align with housing preferences

Income factors that align with housing preferences	MIS	Rank	STD	Decision
I am happy and convenient with the quality of the house I am living in	2.89	4	1.13	Indifferent
The quality of the house where I live affects my health.	2.51	5	1.32	Indifferent
I feel safe and secured because of the quality of the way my house is built.	2.97	2	1.23	Indifferent
Paying the utility bills (NEPA bill and water bill) of my house is higher because of the condition of the house I live in.	2.36	6	1.08	Indifferent
The quality of the house I live in affects my children's educational learning	2.95	3	1.38	Indifferent
The quality of my house enhances my social life style such as sporting activities and recreational activities.	2.30	7	1.09	Disagree
The quality of my house is not good enough to give access to get loans from the banks or cooperative society	3.64	1	1.22	Agree
Average MIS	2.80	4.	1.21	Indifferent

Lastly, the perceived impact of housing quality on access to loans receives the highest mean score of 3.64, indicating that respondents agree that housing quality affects access to loans. This finding underscores the financial implications of housing quality for low-income individuals. Overall, the study's average Mean Importance Score (MIS) of 2.80 suggests a moderate level of importance collectively across the factors. Respondents generally agree that housing quality affects access to loans and safety and security, while they may be indifferent or disagree on other factors such as social lifestyle and utility bills. The standard deviations indicate some diversity in opinions across these factors, highlighting the complexity of housing preferences among low-income earners.

#### 4.3 Results and discussion on housing quality that enhances wellbeing of the occupants

The analysis using the Relative Importance Index (RII) as presented in Table 10 provides several insights into how various indices of housing quality align with the wellbeing of occupants. The detailed breakdown and its implications of the findings are (i) Access to Clean Water (RII = 0.60, Rank 3) - A majority of respondents agree that they have access to clean and potable water, indicating that water quality is a moderately important factor for their wellbeing. This suggests that while water access is relatively satisfactory, it still leaves room for improvement to ensure consistent access for all residents. (ii) Financial Comfort (RII = 0.57, Rank 4) - Respondents show indifference towards their financial comfort in paying for housing costs. This neutrality might indicate that while housing costs are not excessively burdensome, they are not entirely comfortable either.

**Table 10:** Results of housing quality indices that align with an occupant's wellbeing

Indices of housing quality that align with occupant's well-being	RII	Rank	Decision
The house I stay in gives me access to a clean and portable water supply.	0.60	3	Indifferent
It is comfortable for me financially, to pay for the cost of my house.	0.57	4	Indifferent
The house I stay in does not have proper sewage disposal such as soak away and inspection chambers.	0.57	5	Indifferent
The noise disturbance from the neighbourhood in the house where I live is unbearable.	0.75	1	Agree
My neighbourhood keeps a good and clean sanitation practice such as garbage collection, cleaning of gutter and picking of littered papers and dirt.	0.43	8	Indifferent
There is no provision in the neighbourhood where my house is situated for proper waste water and rainwater disposal.	0.73	2	Agree
The quality of the housing design I live in is poor and lacks proper sanitary(toilet).	0.56	6	Indifferent
There is inadequate natural ventilation provision and natural lighting in the house I live in.	0.51	7	Indifferent
Average RII	0.59		Indifferent

It highlights the need for more affordable housing solutions to improve financial comfort. (iii) Sewage Disposal (RII = 0.57, Rank 5) - Indifference towards sewage disposal points to a significant issue that is not being adequately addressed. Proper sewage disposal is crucial for maintaining hygiene and preventing

diseases, suggesting an area requiring immediate attention and improvement. (iv) Noise Disturbance (RII = 0.75, Rank 1) - A significant number of respondents find neighborhood noise disturbance unbearable, marking it as the highest concern. This high RII value indicates that noise pollution is a critical issue affecting occupants' wellbeing and requires urgent mitigation measures. (v) Sanitation Practices (RII = 0.43, Rank 8) - Indifference towards neighborhood sanitation practices suggests that sanitation is not a primary concern for most respondents, possibly because the existing practices are deemed adequate or because other issues overshadow sanitation concerns. (vi) Waste and Rainwater Disposal (RII = 0.73, Rank 2) - The lack of proper waste and rainwater disposal facilities is a significant concern, second only to noise disturbance. This high RII value indicates that inadequate waste management is a prominent issue, impacting the health and environment of the occupants. (vii) Housing Design Quality (RII = 0.56, Rank 6) - Indifference towards housing design quality and sanitary facilities reflects that these aspects, while important, do not dominate the concerns of respondents. This could imply that while housing design is not perceived as poor, it is not considered excellent either. (viii) Natural Ventilation and Lighting (RII = 0.51, Rank 7) - Indifference towards natural ventilation and lighting suggests that these factors are not major concerns, but their improvement could enhance overall wellbeing. Adequate ventilation and lighting are essential for a healthy living environment. (ix) Overall Assessment (Average RII = 0.59) - The overall indifferent sentiment with an average RII of 0.59 indicates a moderate level of satisfaction with housing quality. However, the significant issues like noise disturbance and waste disposal highlight areas that need urgent attention. Decision Summary is Agree: Noise disturbance and lack of proper waste disposal are significant concerns that need immediate intervention and Indifferent: Factors like sanitation practices, housing design, and natural ventilation do not elicit strong responses, suggesting moderate satisfaction but potential areas for improvement.

#### **4.4 Results and discussion of critical sustainability indices on housing quality for low-income earners.**

Table 11 present the analysis of critical sustainability indices for quality housing designed for low-income earners, based on Mean Item Score (MIS) and Relative Importance Index (RII). It provides a comprehensive view of the key factors from environmental, economic, social, and cultural dimensions. The detailed breakdown and implications of the findings are as follows:

A. Environmental dimension – (i) Attention to Environmental Conditions (MIS 4.28, Rank 5,) There is strong agreement that environmental conditions such as wind direction and climatic factors are crucial. This underscores the importance of incorporating environmental considerations into housing design to ensure comfort and safety. (ii) Quality of Neighborhood Environment (MIS 4.17, Rank 8) - Respondents agree that the overall quality of the neighborhood environment is important. This indicates that the surroundings and communal spaces significantly impact the desirability and livability of housing projects. (iii) Coordination in Construction (MIS 4.19, Rank 7) - Effective coordination in construction is valued, reflecting the need for systematic and well-planned development processes to ensure quality and efficiency in housing projects. (iv) Use of Quality Materials (MIS 4.62, Rank 1) - The highest agreement on using quality materials highlights the priority for durable and safe housing, ensuring long-term satisfaction and reducing maintenance costs. (v) Proper Drainage Systems (MIS 4.33) - The emphasis on designing proper drainage systems indicates a strong concern for mitigating water-related issues, such as flooding, which is crucial for maintaining hygienic living conditions.

B. Economic dimension (i) Cost Relative to Economic Status (MIS 3.19, Rank 15) - The low priority and disagreement regarding the cost relative to the economic status of occupants suggest challenges in making housing both affordable and of high quality. This reflects a potential area of improvement to balance affordability with quality. (ii) Acquisition Process Transparency (MIS 4.47, Rank 3) - High agreement on transparent and stress-free acquisition processes highlights the importance of clear and straightforward procedures for obtaining housing, which can reduce barriers and increase accessibility for low-income earners. (iii) Adaptability to Changing Needs (MIS 4.59, Rank 2) –The strong emphasis on adaptability indicates that housing must be flexible to meet the evolving needs of occupants, ensuring long-term suitability and satisfaction.

C. Social dimension – (i) Social Networks and Social Capital (MIS 4.05, Rank 9) - The importance of social networks and social capital generation reflects the role of housing in fostering community ties and support systems, which are vital for social wellbeing. (ii) Facilities Like Green Areas and Sporting Centers (MIS 3.98, Rank 10) - Agreement on the need for facilities such as green areas and sporting centers underscores the value of recreational and communal spaces in enhancing the quality of life. (iii) Safety and Security (MIS 4.24, Rank 6) - Safety and security are critical concerns, emphasizing the necessity of secure

environments for fostering peace of mind and stability among residents. (iv) Internal Spacing Quality (MIS 3.55, Rank 13) - While important, the quality of internal spacing receives moderate agreement, indicating room for improvement in designing spacious and comfortable living areas.

**Table 11:** Results of critical sustainability indices on housing quality for low-income earners

Critical Sustainability Indices on housing quality	MIS	Rank	Decision
<b>Environmental Dimensions</b>			
When designing for the occupant of a building I take into cognizance the environmental condition such as wind direction, and other climatic factors.	4.28	5	Strongly Agree
I bear in mind the neighbourhood quality of the environment when designing/building public housing	4.17	8	Agree
I consider the type of building and number of housing units to be constructed for proper coordination	4.19	7	Agree
I insist on using quality materials for designing and constructing a house.	4.62	1	Strongly Agree
I bear in mind to design and build a proper drainage system for rainwater/stormwater when building houses.	4.33	4	Agree
<b>Economic Dimension</b>			
I consider the cost of the house on the economic status of the occupants when designing or building a house.	3.19	15	Disagree
The acquisition process to obtaining the houses I build are transparent and stress-free	4.47	3	Agree
When providing housing I make the houses in design/build adapts to changing needs for the occupants.	4.59	2	Strongly Agree
<b>Social Dimension</b>			
Are social networks with social capital generation capabilities important to you when constructing housing.	4.05	9	Agree
I consider facilities (e.g., green area, sporting centres, play areas etc.) important when constructing public housing	3.98	10	Agree
The Safety and security of the occupants are considered by me when designing/building public housing	4.24	6	Agree
I consider the internal spacing quality of housing when designing/building a house.	3.55	13	Agree
I prioritize the privacy level of the dwelling units of the occupants when designing/building housing.	2.33	16	Indifferent
<b>Cultural Dimension</b>			
When designing public housing accessibility to social infrastructure (e.g., Hospitals, parks, schools, leisure enters) is necessary	3.88	12	Agree
The housing that is been provided musts fit the natural lifestyle of its occupants	3.43	14	Agree
The planning and construction of housing must consider the distinct historical and cultural traits of low-income earners. when constructing public housing.	3.98	10	Agree
<b>Average MIS</b>	<b>3.95</b>		<b>Agree</b>

(v) Privacy Level (MIS 2.33, Rank 16) - Indifference towards privacy levels suggests that it is a lower priority for respondents, possibly due to other more pressing concerns.

D. Cultural Dimension – (i) Accessibility to Social Infrastructure (MIS 3.88, Rank 12) - Agreement on the importance of access to social infrastructure indicates the need for housing to be integrated with essential services and amenities to support daily living. (ii) Fitting the Natural Lifestyle of Occupants (MIS 3.43, Rank 14) - Moderate agreement on fitting housing to the natural lifestyle of occupants suggests that cultural appropriateness is considered, but may not be a primary concern. (iii) Consideration of Historical and Cultural Traits (MIS 3.98, Rank 10) - The recognition of historical and cultural traits highlights the importance of culturally sensitive housing designs that respect and incorporate local heritage and traditions.

## 5. Conclusion

This study aimed at evaluating the quality of public housing provisions for low-income earners in Abuja. The objectives of the study were to examine factors that affect the housing preferences of low-income earners; to evaluate housing quality's role in enhancing occupant well-being, and to determine the critical sustainability indices or considerations on housing quality for low-income earners. A questionnaire survey approach was adopted and the findings revealed four key points: (i) Overall Satisfaction and Economic Concerns: Most low-income earners are dissatisfied with their residences, finding affordable housing economically burdensome to procure and maintain. These factors are categorized as "Indifferent," indicating a moderate collective importance (ii) Impact on Loans, Safety, and Security: Respondents generally agree that housing quality affects their access to loans, safety, and security. There is indifference or disagreement regarding the impact on social lifestyle and utility bills (iii) Housing Quality Concerns: Specific aspects like noise disturbance and waste disposal are significant concerns. There is a general indifference towards sanitation practices, housing design, and natural ventilation (iv) Economic Considerations: The cost of housing relative to the economic status of occupants is less prioritized, highlighting challenges in balancing affordability with quality.

The study argues that there is a need for a synergistic approach between housing designers, developers, and government agencies to enhance and promote qualitative housing for low-income earners. The study contributes to existing literature on housing quality and a review of government policies on real estate development in order to improve supply to align with the disposable income of residents. One key implication for policymakers and housing authorities is that making limited provision for low-income households reduces their living conditions, health, and well-being. Based on the findings, the study recommends specific scrutiny into housing provision policy amendments to ensure that provision and disposable income are aligned.

The study also recommends that policymakers and housing authorities improve living conditions and support the well-being of low-income individuals: The study further recommends that policymakers should address the economic challenges of procuring and maintaining affordable housing. Improving aspects such as noise disturbance and waste disposal is crucial. Further study or research should investigate the long-term social and economic impacts of improved public housing. The effectiveness of innovative technology solutions in optimizing public housing for low-income individuals should be also be investigated in future research. These suggestions and recommendations aim to inform and guide future initiatives to enhance the quality of housing for low-income earners, ensuring better living conditions and overall well-being.

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## Conflicts of interest

The Authors declare that there is no conflict of interest.

## References

- Afon, A. O. (2000). The use of residents' Environmental Quality Indicator (EQI) data in the core residential housing improvement. In *Effective housing in the 21st century Nigeria* (pp. 115-122). University of Ibadan.
- Agbola, S. B. (2005). The housing debacle. *Inaugural Lecture*, University of Ibadan.
- Akande, O. K. (2021). Urbanization, housing quality and health: Towards a redirection for housing provision in Nigeria. *Journal of Contemporary Urban Affairs*, 5(1), 35-46. <https://doi.org/10.25034/ijcua.2021.v5n1-3>
- Akande, O., Akor, S., Francis, B., Odekina, S., Eyigege, E., & Abdulsalam, M. (2021). Assessing the potentials of low impact materials for low energy housing provision in Nigeria. *Journal of sustainable construction Materials and Technologies*, 6(4), 156-167. <https://doi.org/10.14744/jscmt.2021.04>
- Akande, O. K., Anikor, E. M., Akeremale, I. D., & Adesina, D. O. (2023a). Relationship between indoor air quality and the incidence of health complaints by residents of residential buildings in Nigeria. *Environment-Behaviour Proceedings Journal*, 8(26), 317-326. <https://doi.org/10.21834/e-bpj.v8i26.5173>
- Akande, O. K., King, M. F., & Noakes, C. J. (2018a). Indoor air quality and health in naturally ventilated residential buildings in Nigeria. In *Proceedings on Roomvent & Ventilation 2018. Track 4-Applications: Natural Ventilation (NV2) International Conference*, 10-12 June 2018, Espoo, Finland (pp. 631-636).
- Akande, O. K., King, M. F., & Noakes, C. J. (2018b). Health Risk Assessment of Residential Characteristics and Indoor Air Quality of Naturally Ventilated Buildings in Nigeria. In *IA 2018 Proceedings of conference of International Society of Indoor Air Quality and Climate*. 22 -27 July 2018, Philadelphia, PA.
- Akande, O. K., Obi-George, L. C., Lembi, J. J., Umar, I. A., Tarni, A. M., Nwokorie, A. J., & Baba, P. H. (2024). Public housing project delivery in Nigeria: Quality versus quantity. *Journal of Contemporary Urban Affairs*, 8(1), 37-56. <https://doi.org/10.25034/ijcua.2024.v8n1-3>



- Akande, O. K., Obi-George, L. C., Makun, C. Y., Ekeke, C. O., & Basil, A. M. (2023b). Minimising health risks and enhancing residential building occupants' safety in Nigeria. *Journal of Research in Architecture & Planning*, 33(2), 1-18. [https://doi.org/10.53700/jrap\\_neduet](https://doi.org/10.53700/jrap_neduet)
- Akande, O.K., Obi-George, L.C., Lembi, J.J. and Nwokorie, A. J. (2023c). Energy Demand Reduction for Nigeria Housing Stock through Innovative Materials, Methods and Technologies. *Journal of Sustainable Construction Materials and Technologies* Vol. 8 Issue 3, pp.1-17. <https://doi.org/10.47481/jscmt.1184338>
- Akande, O. K., Obi-George, L.C., Ahmed, S., Nwokorie, A.J. and Makun, C.Y. (2023d) Flood vulnerability and adaptation practices in residential areas in Abuja, Nigeria. *Khulna Univ. Stud. Vol. 20. No.1. pp. 111–129*. <https://doi.org/10.53808/KUS.2023.20.01.2225-se>
- Akinola, M. H., Adedire, F. M., & Akande, O. K. (2024). Optimizing public–private partnership adoption for housing delivery in Oyo State, Nigeria: A narrative review. *Journal of Sustainable Social Change*, 16, 73–94. <https://doi.org/10.5590/JOSC.2024.16.1.06>
- Alamu, O. I. (2018). Effect of National Housing Policy Thrust on Service Delivery in The Federal Capital Territory, Abuja, Nigeria: An Empirical Perspective. *International Journal of Policies and Good Governance*, 9(9.2), 1-16.
- Aluko, O. E. (2000). Urban market segmentation and house values in metropolitan Lagos. *The Nigerian Geographical Journal*, 3, 148-168.
- Ambrose, A., Bashir, N., Foden, M., Gilbertson, J., Green, G., & Stafford, B. (2018). Better housing, better health in London Lambeth: The Lambeth Housing Standard health impact assessment and cost-benefit analysis. *Unpublished Report*, Sheffield Hallam University, UK.
- Aratani, Y., Lazzeroni, S., Brooks-Gunn, J., & Hernández, D. (2019). Housing subsidies and early childhood development: A comprehensive review of policies and demonstration projects. *Housing Policy Debate*, 29(2), 319-342. <https://doi.org/10.1080/10511482.2018.1515099>
- Bonnefoy, X. (2007). Inadequate housing and health: An overview. *International Journal of Environment and Pollution*, 30(3-4), 411-429. <https://doi.org/10.1504/IJEP.2007.014819>
- Cirman, A. (2006). Housing tenure preferences in the post-privatisation period: The case of Slovenia. *Housing Studies*, 21(1), 113-134. <https://doi.org/10.1080/02673030500391213>
- Coates, D. P., Anand, P., & Norris, M. (2021). A review essay on housing, subjective well-being and the capabilities approach. *Economics Literature*, 3(2), 1-33. <https://doi.org/10.22440/ELIT.3.2.1>
- Cutter, S. L., Burton, C. G., & Emrich, C. T. (2010). Disaster resilience indicators for benchmarking baseline conditions. *Journal of Homeland Security and Emergency Management*, 7(1). <https://doi.org/10.2202/1547-7355.1732>
- Desmond, M. (2016). *Evicted: Poverty and profit in the American city*. Crown Publishing Group.
- Dewilde, C., & De Keulenaer, F. (2003). Housing and poverty: The 'missing link'. *European Journal of Housing Policy*, 3(2), 127-153. <https://doi.org/10.1080/14616710303621>
- Ebong, M. O. (1983). The perception of residential quality: A case study of Calabar, Nigeria. *Third World Planning Review*, 5(3), 273-282. <https://doi.org/10.3828/twpr.5.3.d788q6x8m180t4h8>
- Evans, G. W. (2003). The built environment and mental health. *Journal of Urban Health*, 80, 536-555. <https://doi.org/10.1093/jurban/jtg063>
- Fowler, P. J., Henry, D. B., Schoeny, M., Landsverk, J., Chavira, D., & Taylor, J. J. (2013). Inadequate housing among families under investigation for child abuse and neglect: Prevalence from a national probability sample. *American Journal of Community Psychology*, 52, 106-114. <https://doi.org/10.1007/s10464-013-9580-8>
- Grey, C. N., Schmieder-Gaite, T., Jiang, S., Nascimento, C., & Poortinga, W. (2017). Cold homes, fuel poverty and energy efficiency improvements: A longitudinal focus group approach. *Indoor and Built Environment*, 26(7), 902-913. <https://doi.org/10.1177/1420326X17703450>
- Hanmer, L., Booth, D., & Lovell, E. (2000). Poverty and transport. A report prepared for the World Bank in collaboration with DFID, Overseas Development Institute.
- Haruna, P. B., Zubairu, S., Olagunju, R. E., & Akande, O. K. (2023). Liveability considerations: Towards designing sustainable public housing in Niger State, Nigeria. *Journal of Contemporary Urban Affairs*, 7(2), 262–278. <https://doi.org/10.25034/ijcua.2023.v7n2-16>
- Jacobs, D. E., Wilson, J., Dixon, S. L., Smith, J., & Evens, A. (2009). The relationship of housing and population health: A 30-year retrospective analysis. *Environmental Health Perspectives*, 117(4), 597-604. <https://doi.org/10.1289/ehp.0800086>
- Jiboye, A. (2004). The socio-cultural responsiveness of household size on housing quality in Osogbo, Nigeria. *The Anthropologist*, 6(3), 169-174. <https://doi.org/10.1080/09720073.2004.11890849>
- Kent, J., & Thompson, S. (2019). *Planning Australia's healthy built environments*. Routledge. <https://doi.org/10.4324/9781315524573>
- Littleton, T., & Freisthler, B. (2023). Affordable housing and neighborhood child maltreatment reports. *Child Maltreatment*, 10775595231218177. <https://doi.org/10.1177/10775595231218177>

- Meng, G., Hall, G. B., & Roberts, S. (2006). Multi-group segregation indices for measuring ordinal classes. *Computers, Environment and Urban Systems*, 30(3), 275-299. <https://doi.org/10.1016/j.compenvurbsys.2005.06.005>
- Neilson, M. (2004). Scottish housing quality standard (SHQS). *Scottish Executive Development Department*.
- Okewole, I. A., & Aribigbola, A. (2006). Innovations and sustainability in housing policy conception and implementation in Nigeria. In *The Built Environment: Innovation Policy and Sustainable Development* (pp. 414-420). Obafemi Awolowo University.
- Oladapo, A. A. (2006). A study of tenants' maintenance awareness, responsibility and satisfaction in institutional housing in Nigeria. *International Journal of Strategic Property Management*, 10(4), 217-231. <https://doi.org/10.3846/1648715X.2006.9637554>
- Olayiwola, L. M., Adeleye, A., & Jiboye, A. D. (2006, January). Effect of socio-cultural factors on housing quality in Osogbo, Nigeria. In *International Symposium on Construction in Developing Economies: New Issues and Challenges* (pp. 18-29). Santiago, Chile.
- Olubajo, O. O., Babatunde, J. O., & Williams, F. N. (2017). Dynamics in the adoption of offsite construction in the Federal Capital Territory, Abuja. In *Proceedings of the NIBBRI International Conference*.
- Osuide, S. O., & Dimuna, K. O. (2005). Effects of population growth on urbanization and the environment in Nigeria. In *Proceedings of Year 2000 National Seminar on Population, Growth, Architecture and the Environment*. Rasjel Publishers.
- Ramsey-Musolf, D. (2018). Accessory dwelling units as low-income housing: California's Faustian bargain. *Urban Science*, 2(3), 89. <https://doi.org/10.3390/urbansci2030089>
- Rapoport, A. (2000). Theory, culture and housing. *Housing, Theory and Society*, 17(4), 145-165. <https://doi.org/10.1080/140360900300108573>
- Rohe, W. M., Van Zandt, S., & McCarthy, G. (2013). The social benefits and costs of homeownership: A critical assessment of the research. In *The Affordable Housing Reader* (pp. 40-192).
- Saiz, A. (2010). The geographic determinants of housing supply. *The Quarterly Journal of Economics*, 125(3), 1253-1296. <https://doi.org/10.1162/qjec.2010.125.3.1253>
- Schwartz, A. F. (2021). *Housing policy in the United States* (3rd ed.). Routledge. <https://doi.org/10.4324/9781003097501>
- Sharpe, R. A., Taylor, T., Fleming, L. E., Morrissey, K., Morris, G., & Wigglesworth, R. (2018). Making the case for "whole system" approaches: Integrating public health and housing. *International Journal of Environmental Research and Public Health*, 15(11), 2345. <https://doi.org/10.3390/ijerph15112345>
- Smith, S. J. (2003). Residential segregation: A geography of English racism?. In *Race and Racism* (pp. 30-49). Routledge. <https://doi.org/10.4324/9780203166499>
- Stren, P. C. (2000). Toward a coherent theory of environmentally significant behaviour. *Journal of Social Issues*, 56(3), 407-424. <https://doi.org/10.1111/0022-4537.00175>
- Towry-Coker, L. (2009). *Housing policy and dynamics of housing delivery in Nigeria: A case study of Lagos* (Unpublished PhD dissertation). Lagos State University, Ojo, Lagos.
- UN-Habitat. (2004). The challenge of slums: Global report on human settlements 2003. *Management of Environmental Quality*, 15(3), 337-338. <https://doi.org/10.1108/meq.2004.15.3.337.3>