

# Assessment of the Degree of Dilapidation in the Housing Infrastructure in Selected Areas of Kaduna Metropolis, Kaduna State, Nigeria

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## Abstract

*Housing decay refers to the deterioration or decline of housing stock, often resulting in substandard or uninhabitable living condition. In other words, Housing dilapidation is a situation where housing conditions fall below the minimum or accepted standards due to pressure as a result of lack of maintenance, poor building materials and over usage resulting to decay. The aim of the paper is to assess the condition and quality of housing in the selected neighbourhoods. A total of 398 well-structured questionnaires was distributed to selected households in the study area. This shows that the major occupation of respondents is civil servants put at 2%. while more than three-quarters of the respondents earn roughly N60,000.00 a month and therefore falls among the low income earners which calls for government attention to create more jobs for the people. Table 3 shows that most of the buildings in the selected areas were built more than 21 years ago which accounts for 39%. Similarly, the commonest types of dwellings were compounds with shared facilities given at 65%. The roofs are both fair and bad, represented by 51% and 33% respectively. The general condition of painting is bad represented by 47%. The common building materials are by cement and mud blocks put at 51% and 46% respectively and roofing with corrugated roof sheets. The general physical condition was recorded at 94% that need either minor or major repair which is a manifestation of housing dilapidation. The findings of this research, observed that the quality of houses in the study area was far below the standard of the Sustainable Development Goals (SDG 2023) and recommends strategic housing and proper planning by the government through its agencies.*

**Keywords:** Dwelling, Housing condition, Challenge, Facility and Standard.

## 1. Introduction

Housing facility which is essential for every human being just as clothing, good health and food are imperative for the sustenance of life. Housing being a basic need is an indicator of a person's standard of living and therefore could be used by especially developed countries to assess the quality of life of their citizens. While a state of being dilapidated reduce a housing structure to decay, owing to ageing, misuse or negligence. The condition of a house speaks volumes about the financial strength of the owner and the status of the occupant in the neighbourhood. Housing decay constitutes a risk to the state of health of the occupants and the aesthetic of the surrounding environment. According to Igwe, Okeke, Onwurah, Nwafor & Umeh (2017), unsanitary, unhygienic, unsafe housing can affect the security, physical health and privacy of man. Likewise, Okafor (2016) opined that housing is the most basic human need which no doubt has a profound influence on the health, welfare and productivity of persons irrespective of their socio-economic status, colour or creed. He stressed that housing decay is manifested in overcrowding, poor and dilapidated social amenities, unsatisfactory and unwholesome environmental conditions and urban squalor. According to the Human Development Nigeria (2000), housing problems resulting from unprecedented growth of urban population gives rise to majority of urban dwellers living under sub-human conditions in squatter settlement especially those without employment and visible means of livelihood. Safe housing and comfortable living conditions are prerequisites to the quality of living that is free from diseases, robbery and assault which simplify their comfort and enjoyment, (Fabgbohun,2003). Therefore, assessing the condition of housing in some neighbourhoods in Kaduna metropolis is imperative in order to ascertain their present conditions, comfort and livability. The focus of this research is to assess causes of housing decay such as building materials, roofing, nature of walls, paint to mentioned but a few.

Kaduna Metropolis is the capital of Kaduna State which is undoubtedly an old town right from the colonial era, whose growth is driven by commercial activities, industries and therefore has continually received an influx of migrants from within and outside the state. However, the rate of population growth, far exceeds the capability of the government to provide adequate and qualitative housing facilities to all city dwellers. Some areas like Kurmin Gwari, Ungwan Gwari and Down Quarters are parts of the town where housing and living conditions are appalling. According to the Ministry of Environment and Natural Resources (2019), Kaduna State ranks amongst the most urbanized States in the country. It was projected that by the year 2025, over 75% of the population will be living in urban areas. Thus, the pace of urbanization increase has been such that maintenance of modest environmental standards has inevitably lagged behind.

The aim of the study is to assess the conditions of housing in selected neighbourhoods in Kaduna metropolis, While the objectives of the study include the assessment of the Socio-economic and demographic characteristics of the respondents with respect to their income, marital status, and the physical condition of the houses in the study area.

#### **a. Indicators of Housing Decay**

In recent times there has been a conscious awareness of people concerning the quality of the houses they live in. Good quality housing is a fundamental human need to provide shelter, security and physical health by reducing exposure to environmental hazards thereby promoting a comfortable living. However, multiple factors can induce housing decay in both developed and developing nations. For example, lack of maintenance can lead to housing decay as an aging housing facility needs constant repair. In Kaduna Metropolis, the closure of the textiles mills has contributed significantly in housing decay within Kurmin Gwari and Down Quarters as the disengaged staff have not all been compensated.

There is therefore, no money to renovate their houses nor even to build new ones. The old houses are in a state of disrepair and are collapsing. (see Figure 4,5&6). The factors of housing decay have been rightly captured by Aseyan, Babalola, Ayoola, and Olugbesan (2023), to include rustic roofs, open ridges, loose doors, peeling walls, cracking walls, and fading paints. They uphold that these pointers did not occur overnight, but went through a gradual process which agrees with the theory of broken window of urban decay given by Mitchell (2003), who opined that when minor faults develop and are not repaired, they gradually develop to major faults.

Furthermore, Isah, (2006), assessed the impact of building decay on the urban environment in Minna, Nigeria and blamed it on the poor economic status of the occupants who were mainly retired civil servants who were owed several months of their retirement benefits. Thus, poverty is a factor that quickens environmental degradation as poor urban people are vulnerable to poor housing because they cannot afford to repair their dilapidated houses or to move to comfortable areas that are less polluted. To buttress the poverty factor as it affects housing decay, Lauer and Lauer (2008) described poverty as a state in which income is insufficient to provide such basic necessities as food, good shelter and clothing. This was further supported by Knox and McCarthy (2005), who opined that the spiral of poverty begins with low income, poor housing and overcrowded conditions which contribute to housing decay.

In addition, Aseyan *et al* (2023), stressed that housing decay in developing countries like Nigeria, is the misuse or change of property usage. Many buildings are used for entirely different purposes from which they were built and therefore, contradict the purpose for which the buildings were designed and as a result, misuse of the building may exacerbate decay and quicken dilapidation. From observation, it's a common scene to see a residential room being converted to a shop, business center, drinking parlour or restaurant which have a negative impact on the

building. The above assertion was corroborated by Igwe, Okeke, Onwuarah, Nwoye and Umeh (2017) who stressed that urban housing with the growth of population, leads to the transformation of dwellings into business commodities thereby inducing a sharp deterioration in people's living conditions.

Increase in family size can also induce housing decay in the sense that indoor activities are taken outside to create enough space for living. For example, cooking activities are shifted to the corridors or veranda as kitchen, stores and balconies are being converted to living rooms or bedrooms due to increase in family size which will impact negatively on the quality of the house due to overcrowding and congestion

### **Review of Related Literatur**

Housing infrastructure is the physical environment in which human beings desire to live. Housing conditions especially in developing countries are constantly exposed to changes due to decaying facilities, over usage or neglect triggered by the pressure of urbanization. Mutuli (2012), conducted a study on the assessment of urban decay in Residential neighbourhoods in Jerusalem, Eastland Nairobi, Kenyan and opined that high population in urban areas exerts very powerful forces on the residents making them to undergo internal deterioration as poor maintenance, over usage can lead to housing decay. Omole (2010) carried out a study on housing condition and Socio-Economic Life Styles of Slum Dwellers in Akure, Nigeria and expressed the notion that the area was characterized by poor quality houses, where crime, prostitution, hooliganism and drugs- taking were very common. The above scenario gave a graphic picture of housing decay alongside social decay. Aseyan,; Babalola.; Ayoola.; & Olugbesan (2023, .evaluated the causes of Housing Decay in Ibadan Core Settlements and opined that housing decay occurs in different ways, common in most parts of old cities, but more evident in the slum and other densely populated areas of the city. They Furthermore, stressed that

housing decay has the potency to turn beautiful houses into dangerous and inhabitable spaces, leaving the occupants to pack out which leads to demolition when decay become obvious. In addition, they stressed that other problems with housing decay in Nigeria is the misuse or change of the uses that many buildings are subjected to, which contradicts the initial purpose for building them. Thus, the change of using a house as against what it was designed for, may exacerbate the structure and induce dilapidation. Bobadoye & Fakere (2013) studied Slum Prevalence in Nigeria and associated housing decay in Nigeria to rapid urbanization and poor maintenance of housing infrastructure orchestrated by over usage. In addition, Aseyan, Babalola, Ayoola and Olugbesan (2023), asserted that other problems with housing in Nigeria is the misuse or change of use as many buildings are used wholly for different purposes from which the building was designed and as a result misuse of the building may exacerbate the building and induce dilapidation. Furthermore, Lekwot, Kwoesaba and Sahabo (2015), analyzed inner city decay in selected slums in Jos Plateau State Nigeria and the findings showed high occupancy rate where housing structures and facilities such as toilets , walls and roofs were considered to be in bad conditions. In addition, Oltuah (2006), examined the physical characteristics of buildings and factors that impact the condition of the buildings in Akure and pointed out that most of the buildings were in bad state and dilapidated, requiring major repairs to make them sound

### **Aim and Objectives**

The aim of this paper is to analyze the causes of Housing decay in three neighbourhoods in Kaduna Metropolis. The objectives of the study are as given;

- i. To examine the Socio Economic characteristics of Respondents
- ii. To examine the condition of housing in the study areas.

- iii. To identify factors responsible for housing dilapidation in the study area.

### 3. Study Area

Kaduna Metropolis is the largest town in Kaduna State and it is the state capital located between Latitude  $10^{\circ}28^1$  and  $10^{\circ}37^1$  North and Longitude  $07^{\circ}19^1$  and  $07^{\circ}31^1$  East (See fig 1.). It occupies an area of about  $260\text{km}^2$ ; while the distance between the eastern and western limits of the city is approximately 13.7km (Ajibuah, 2013). More than half of the metropolis is domicile in Kaduna North and Kaduna South, adjoining parts of Igabi and Chikun Local Government Areas. With the establishment of Kaduna as a Capital City, there was the tendency for people from different parts of the country to move to Kaduna in search of better opportunities. The pull-factor-potential of the Kaduna metropolitan area, received further impetus by the sudden shift in policy emphasis from agricultural to industrial development, when petroleum was discovered in 1956. According to James, (2015), the city of Kaduna developed in the dual capacity of a garrison town and an administrative headquarters of the Colonial rule. The city was established in 1913. Because of this dual role of Kaduna, it triggered the establishment of the early textiles industries which sooner or later, made Kaduna as *aka Manchester city* of Nigeria which was the largest employer of labour after the state government. Other opportunities that enhanced the growth and development of the city was the establishment of the New Nigerian Development Company (NNDC), the largest development company in Northern Nigeria. The establishment of Zonal office of the Corporate Agricultural and Rural Development Bank(NIDB), also attracted some business outfits in that vicinity. Other pull-factors to the metropolis included the establishment of the Peugeot Automobile Assembling Plant. (PAN). Even though it is now

comatose, it still renders services to the public such as car services and sale of motor parts. In addition to other commercial outfits, is the establishment of factories for different soft drinks, fertilizer producing company, and the central market that is a beehive of activities. In addition to these, are the presence of military security establishments and educational institutions such as the Nigerian, Defense Academy (NDA), Air Force Institute of Science and technology and the Nigerian Army Defense Headquarters (1Div) which played a pivotal role in the growth and development of the study area. Also present in Kaduna Metropolis are educational institutions such as Kaduna State University, Kaduna Polytechnic and many government and private secondary and primary schools. Furthermore, the tourism and hospitality industries are on the increase in all nooks and crannies of the metropolis. All the aforementioned and many more have contributed to the growth and development of the metropolis faced with inadequate housing facilities such as housing and others.

## **2. Research Methodology**

A reconnaissance survey was carried out in order to identify the neighbourhoods that are in deplorable conditions in the Kaduna Metropolis. There are many neighbourhoods in bad conditions, but purposive sampling was used to pick Kurmin Gwari, Down Quarters and Ungwan Gwari for this study because they are parts of the early settlements in the history and growth of Kaduna town that predate Nigeria's Independence. Questionnaire, observations and pictures were the tools used to collect data. To arrive at the sample size, the population of the selected neighbourhoods was obtained from the National Population Commission Census of 2006 which was projected using 3% growth rate. The Yamani Statistics (1967) formula was applied as shown in Table 1 which gave a total of 398 as an adequate sample size for the study on which copies of questionnaire were administered, while, a systematic sampling technique was employed to select the households. Data collected

laid emphasis on the socio-economic characteristics of the respondents such as occupation, and income were used to address objective one. This was followed by the physical condition of housing in table2 which was used to analyze housing condition such as the age of dwelling in years, types of dwelling, condition of roof, type of building materials and the physical condition of the buildings. To complement the data collected to address the second and third objective, a handset Camera was used to take pictures of the present conditions of the buildings and recorded and presented as pictures because they can convey stories more effectively than texts to show the extent of housing dilapidation in the respective areas of the study. Furthermore, the quantitative data collected from the questionnaire was descriptively analyzed and the result presented in tables, figures and pictures to give a visual interpretation of dilapidation and decay.

**Table 1 Sample Frame showing the list of population in the study area**

<b>Neighbourhood</b>	<b>2006 Census</b>	<b>Projected Population</b>	<b>Sample size</b>
Kurmin Gwari	26,252	37,352	193
Down Quarters	11,623	16,537	86
Ungwan Gwari	16,195	22,044	119
Total	54,070	76,970	398

## **5. Results and Discussions**

This section deals with the presentation and analysis of the data collected from the field. Two variables: occupation and income were used to analyze the socio economic characteristics of the respondents while age, types of dwelling, roof conditions, types of building materials and the physical conditions, were used to examine the present condition of housing in the study areas.

**Table 2: Socio-Economic Characteristics of Respondents**

Parameters	Kurmin Gwari	Ungwan Gwari	Down Quarters	Total	%
<b>Occupation</b>					
Civil service	50	48	19	117	29
Farming	17	9	5	31	8
Trading	45	15	20	80	20
Artisanship	19	18	2	39	10
Unemployed	43	20	35	98	25
Others	19	9	5	33	8
<b>Monthly Income</b>					
₦30,000	116	54	49	219	55
₦31-60	57	48	35	140	35
₦61-90	9	12	2	23	6
>90	11	5	0	16	4

**Source:** Field Work 2024

From the data in table 2 above, it shows that the occupational characteristics in the study area revealed that most of the respondents are civil servants accounting for 29%, as the topmost economic activity of the respondents therefore portraying high rate of unemployment which by implication calls for government attention to create more job opportunists for the citizens. Furthermore, civil servants are found here not because of comfort but affordability as the rents are most likely to be cheaper compared to high browse areas. Income distribution at the time of survey shows that about 90% households in the study area earned up to ₦60,000.00. Money can certainly make life easier, more

comfortable and more secure, but this group falls among the low income earners who do not have a living wage. By implication, low income indicates economic vulnerability which directly impacts on housing condition. Low income restricts households from maintaining or improving their living environments, often leading to housing decay and overcrowding. Poor living conditions make families to resort to makeshift shelter using wood (Figure 2&3), and furthermore encourages alternative income generating activities, such as petty trading and misuse of house as given by Aseyan *etal* (2023) who expressed that housing misuse or change of usage is a situation where buildings are used for an entirely different purpose for which they were built which induces damage and decay as seen in (Figure 1.tailor\provision shop) gives a clear picture of change in use of a building to make more money to supplement household earnings (Mshelia, 2007). This fact was supported by Isah (2008) who asserted that poverty was the main cause of housing decay in Minna. He stressed that poverty quickens environmental degradation as the poor people are often more exposed to environmental hazards because they cannot afford to live in comfortable areas that are less polluted. In other words, insufficient income hinders the urban poor from acquiring and living in good houses. With poor living conditions, families could resort to makeshift accommodation and engage in alternative income generation activities such as petty trading, poultry keeping and fish farming in residential areas, to supplement housing earnings (Mshelia 2007). The findings in this paper are similar to the work of Lekwot *etal* (2015) and that of Oguntimehin *etal* (2017) which maintained that the housing conditions in their study areas were in a state of decay

**Table 3 Assessment of housing conditions in the Study Area.**

<b>Parameters</b>	<b>Kurmin Gwari</b>	<b>Ungwan Gwari</b>	<b>Down Quarters</b>	<b>Total</b>	<b>%</b>
<b>Age of dwelling (years)</b>					
<b>1-5</b>	13	10	0	23	6
<b>6-10</b>	22	6	10	38	10
<b>11-15</b>	31	29	14	74	19
<b>16-20</b>	49	31	27	107	27
<b>21+</b>	78	43	35	156	39
<b>Type of dwelling</b>					
<b>Compound with shared facilities</b>	121	72	67	260	65
<b>Semi-detached</b>	42	24	12	78	19.54
<b>Detached</b>	19	13	2	34	8.54
<b>Others</b>	11	10	5	26	6.53
<b>Roof Condition</b>					
<b>Good</b>	32	23	10	65	16
<b>Fair</b>	89	58	56	203	51
<b>Bad</b>	72	38	20	130	33
<b>Painting</b>					
<b>Good</b>	23	19	7	49	12
<b>Fair</b>	67	52	42	161	40
<b>Bad</b>	103	48	37	188	47
<b>Type of building materials</b>					

<b>Cement</b>	103	65	36	204	51
<b>Mud blocks</b>	83	52	48	183	46
<b>Stones</b>	7	1	0	8	2
<b>Others</b>	0	1	2	3	1
<b>Physical condition of houses</b>					
<b>Sound need no repair (Good)</b>	9	9	5	23	6
<b>Needs minor repair (Fair)</b>	52	47	19	118	30
<b>Needs major repair (Bad)</b>	132	63	62	257	64

**Source:** Field Work 2024

Information in table 3 shows that most of the houses in the selected areas were built more than 21 years ago which accounted for 39%. It can then be deduced that the brownish rustic roofs are the indication of duration and therefore not out of place to see roofs with patches here and there showing the level of decay. The widespread dwelling type in the study areas are compound houses with shared facilities as seen in (fig11), is represented by 65% which is similar to the situation described by Lekwot *etal* (2015) that the predominant dwelling type in selected slums of Jos town, is the compound type with shared facilities like toilets, kitchens and bathrooms which reflect the situation captured in the areas in Kaduna Metropolis. This finding agrees with the National Bureau of Statistics NBS (2018/2019) report that 42% of the households in Nigeria reside in compounds and also share facilities.

The roof conditions are fairly good as shown to be represented by 51%. However, the presence of rustic roofs is very noticeable. It was common to see different types of sheets on one house, which signifies insufficient funds to replace worn- out sheets or to upgrade the roof. The painting of most dwellings are bad

accounting for 47% while 40% is representing houses with fair paint. Lack of painting reduces the quality of a house to a mere naked structure and more often seen as a low quality facility that reflects decay. The condition of the roof is drastically in contrast with that of the paint which is viewed to be bad and contributes to housing decay which reduces the beauty of the building and could affect its financial value. With respect to building materials, the information in table 3 shows that cement block constituted the major building material accounting for 51% which is fairly good. The choice indicates an attempt to keep up with modern construction trends. In many cases, a combination of cement and mud blocks was used, creating a unique mosaic pattern in the construction of houses. However, it was noticed that different materials were used in place of walls as already shown in figure 2&3. Isah (2008) and Igwe *etal* (2017), are of contrary view that high demand for housing in turn increases the cost of building material. Thus, the urban poor have little or no choice than to use any available material to put shelter over their heads.

On a general note, the physical condition of the houses shows that many houses accounting to 64% need major repairs and are therefore considered to be in bad condition. A lot of old and dilapidated houses are noticed in several locations in the whole study area and captured in the photos. Observation shows that any remaining part of a dilapidated building has occupants. This is similar to the findings of Adeniyi (2022) whose study on the impact of housing on health in Nigeria confirmed the structural defect of houses to include cracked walls, leaking roofs, broken windows and doors. This also agrees with Garba (2008) and Osumanu, Kosoe and Dapila (2016), who opined that conditions of housing in Low residential areas of Kpakungu and Ghana are in a state of decay.

## **1. Conclusion**

The study identified housing dilapidation in all the selected areas. Thus, the appalling state of the selected neighbourhoods require immediate government attention to enhance the unhealthy condition of housing in order to improve the quality of life of the

affected people. A way forward is to create more job opportunities, establish skill acquisition centers and economic empowerment of the urban poor. There is an urgent need to develop the slum areas through proper planning with streets to create accessibility in crowded/congested neighbourhoods.

### **1. Recommendation**

The study identified diverse problems as the cause of housing decay in the study areas ranging from poverty of the respondents, poor building that degenerated to poor physical condition of the houses. To mitigate the menace of housing decay in Kaduna Metropolis, the following measures are hereby recommended:

The government should emphasis on social justice to spread her action on urban renewal and proper planning in the neglected parts of the Metropolis.

The Federal and State governments in collaboration with manufacturers, should subsidize the cost of building materials so that the low income earners can afford to buy materials and build good and qualitative houses.

The State and Local governments should encourage public/private partnerships in the housing provisions in and around the Kaduna Metropolis

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