HOUSING AMONG THE LOW INCOME GROUPS IN SOME PARTS OF KANO METROPOLIS

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Abstract

*T*he paper aimed at analysing the nature of informal housing development in Kadawa and Dan'bare areas of Kano metropolis based on National Minimum Housing Standards and urban environmental quality. The methods used include: Inventory of total housing units in the study area; Questionnaire Administration; Focus Group Discussion (FGD) sessions with households; In-depth interview with a house developer; and Direct Field Measurement of housing physical features, access roads and streets. The result shows that through undermining planning and environmental quality standards, the informal low income housing development has fragmented the study area and produced about 5,515 plots instead of 576 plots: thus exceeding the carrying capacity by about 9.6 times. The pattern of development is chaotic with no define access roads, drainages, children play-ground, clinics, formal schools, and refuse management system. It was concluded that low income housing development in the study area exert detrimental effects on both economic, health, social, and environmental wellbeing of the area and its immediate surroundings. It is therefore recommended that such unhealthy development should be discouraged and government should come to its expectations of controlling and regulating urban development and incorporate indigenous low-income housing process in the formal practice of land acquisition, land allocation, housing planning and design, building codes and housing construction, among others.

Key Words: Low-income, Housing, Environmental Quality, Kano Metropolis

1. Introduction

Housing is one of the basic material necessities for human survival in the contemporary world after food and clothing. It is also one of the joys of life; others are good spouse, sound means of mobility, and good neighborhood (Sahihi Muslim, Undated). Moreover, studies have indicated a very significant relationship between housing and health. Fullilove and Fullilove (2000) for example, stressed that 'housing as an object of attachment and a source of identity, has a significant relationship to psychological well-being'. As a basic necessity that provides shelter from the elements, housing also facilitates the storage of food, water,

and other essentials as well serves as the base for communal life of household. Similarly, WHO (1989) maintained that 'good housing offers protection against communicable diseases; protection against injuries, poisonings, chronic diseases; and reduces psychological and social stresses. Thiele (2002) indicated that 'affordability of housing is linked to the health and well-being of individuals and families'. He further stressed that 'when a market lacks a sufficient supply of affordable housing, lower income families are often forced to limit expenditures for food, medical care, and other necessities in order to pay rent'. This has been supported by the views of Freeman (2002) that 'the lack of affordable housing within a community can contribute to family residential instability, as families are forced to move frequently, live with other families in overcrowded conditions, or experience periods of homelessness'.

Moreover, in the context of a traditional African society, housing has both physical and spiritual connotations, to the extent that house ownership signifies the attainment of manhood and prosperity. Oduma (1995) reported that 'in Africa most people aspire to own a house as a life-time achievement and legacy for posterity'. It is also a source of employment as it is providing a basis for income generating activities. Despite the critical importance of housing to human survival in the modern world, yet inadequate housing supply is still a growing global problem. For example, in some countries of Africa, Asia and Latin America, the number of conventional dwellings constructed annually is between 2 and 4 units per 1,000 inhabitants - while the actual growth in the housing stock, including all illegal and informal housing, is between 15 and 30 units per 1,000 inhabitants (Habitat II, 1999). Thus as a result of this, Habitat II (1999) estimated that at least 600 million urban dwellers in Africa, Asia and Latin America live in "life-and-health threatening homes" and neighborhoods because of very poor housing and living conditions and lack of adequate provision for sanitation, drainage, removal of garbage and health care. An increasing number of the urban poor are also homeless in both developed and developing countries, with estimates of the homeless population being over 100 million.

In Nigeria, the magnitude of housing problem is quite alarming. For example, in the 1980s it has been estimated that the need for new housing reached 8 million units Adekoya, 2014). Despite a radical change in policy which led to the enactment of New National Housing Policy, Achunine (1993) estimated new housing need to be over 12 million units and in the year 2013, Adekoya (2014) reported an estimated shortfall of 16 million housing units. The severity of this problem, however, is mainly felt more in urban centres and by the low-income groups. Kano metropolis being the most urbanised urban centre in northern Nigeria with a population of over 4 million people is facing serious problem of housing. The current formal practice of land acquisition, land allocation, housing planning and design, housing finance, building codes and housing construction, in Kano, is not inclusive and is incompatible with the indigenous low-income housing process. Thus, the housing demand is higher than the supply thereby forcing the low income earners to improvise informal developments for housing accommodation. A study by Sani (2006) revealed that 'informal

developments are growing faster than officially approved developments at the rate of about 1:6 and private sector participation produces over 90% of the low-income housing in Kano metropolis, while public sector participation is minimal'. Indeed, this among other things made rapid growth of unplanned residential developments in areas such as Bachirawa, Chiranchi, Danbare, Dorayi, Jaen, Kadawa, Kawo, and Kurnar Asabe, among others. The aim of this study, therefore, is to analyse the nature of such informal housing development in Kadawa and Dan'bare areas of Kano metropolis based on National Minimum Housing Standards and urban environmental quality.

2. Materials and Methods

Kano metropolis is the capital city of Kano state, Nigeria. It is located between latitude $11^{\circ}59'$ to 12° 02' N and longitudes $8^{\circ}33'$ to $8^{\circ}40'$E with a total urban land area of $137Km^2$ and $499Km^2$ metropolitan area. It is made up of six Local Government Areas (Dala, Fage, Gwale, Municipal, Nasarawa, and Tarauni) and some parts of Kumbotso, Ungogo, and Tofa Local Government Areas. Kano metropolis has an estimated population of over 4 million people with a male – female ratio of about 1 to 1.32 (Maigari, 2014a). Over 70% of the adult workforces draw their livelihoods off agriculture. Kano is the biggest commercial and industrial centre in Northern Nigeria. It has 43 existing marketplaces and over 400 privately owned manufacturing industries (Maigari, 2014b). Kano metropolis is about 481 meters (or about 1580 feet) above sea level. The climate is a hot, semi-arid type with an annual average rainfall of about 690mm (27.2 in); majority of which falls from June through September. The vegetation is a savanna type, while Kano and Challawa rivers are the major water bodies that drained the metropolitan area (Maigari, 2014c).

The methods used includes: Inventory of total housing units in the study area; Questionnaire Administration; Focus Group Discussion (FGD) sessions with households; In-depth interview with house developer; and Direct Field Measurement of housing physical features and access roads and streets. The housing inventory involves house census in the newly developed areas of Kadawa and Dan'bare-B guided by the Kano State House Numbering and Street Naming project. All the developed plots in the study area both completed and un-completed housing units were counted and recorded. A total of 385 structured questionnaires were administered to randomly selected households and house developers. Background characteristic of the respondents such as household characteristics, economic status, and physical settings; Land use and housing facilities; and housing process analysis formed the focus of the questionnaire. The Focus Group Discussions were held in two sessions each with different category of respondents. The first group consists of 8 households who owned personal houses: aged between 42 to 61 years, while the second group consists of 6 households who are occupying rental houses: aged between 30 to 47 years old. Some of the issues raised include: nature and types of the occupants of the study area; means of house ownership and rent, availability and access to utilities such as potable drinking water, clinics and hospitals, schools, and market. Others are environmental health and safety issues; common diseases in the area; building and building materials;

neighbourhood and security issues; government intervention projects in the area; and relationship of the community with regulatory bodies, etc.

The in-depth interview, on the other hand, was held with a full-term house developer with about 15 years of experience, who builds houses and sells. Issues pertaining to mode of land acquisition, types of houses built, cost of housing construction, profitability of the business, and the relationship of house developers with regulatory and enforcement bodies, among others formed the focus of the interview. The field measurement involved direct field measurement and observation of housing physical features and attributed facilities in relation to the National Minimum Housing Standards in Nigeria. Some of these are: plots and street sizes; sizes of rooms, kitchen, toilet, store, and court-yard spaces; set-backs between and within housing units, and away from utilities such as water sources, main access roads, electricity transmission poles, toilets, refuse collection or disposal sites, and drainage, among others. Moreover, the existing satellite image of the area (Goggle Earth Scan) was compared with the proposed development plan of the study area, which was obtained from the Kano State Ministry of Lands and Physical Planning, in order to support and/or buttresses the field facts.

3. Result and Discussion

3.1 Site Features
The study area covers some parts of Kadawa area and Dan'bare-B with a total land area of about 0.4404 km² (440365m²). On global scale it lies between latitude 11°57'36" to 11°57'55"N and longitude 08°26'45" to 08°27'15"E and at about 508.7 metres (1526ft) above sea level. The result of field inventory revealed that there are 3,021 completed houses; 1,190 uncompleted; and 1,304 undeveloped plots at the time of the survey in the study area (5,515 plots). Result of FGD revealed that 'the site of the study area about 10 - 12 years back was mainly farmland'. Due to its proximity to Rijiyar-Zaki, Dorayi, Kabuga Housing Estate, and Yamadawa residential areas, the study site was proposed by Governor Ibrahim Shekarau administration in the year 2005 to be developed as a formal residential area. Based on that proposal, the area was planned to house only 576 plots: 563 residential plots and 13 commercial plots, with adequate provision of spaces for clinics, mosques, children playing grounds, refuse dumps, numerous streets, and access roads (See Figure 1). Government failure to implement the Kadawa/Danbare proposal for some political reasons coupled with strong pressure for urban residential needs made the individual farm owners to informally convert their farm holdings to residential plots and sell them out to either developers or land speculators. Respondents maintained that 'it was through that process that the study area in less than 10 years developed into full residential area mainly occupied by low income groups'.
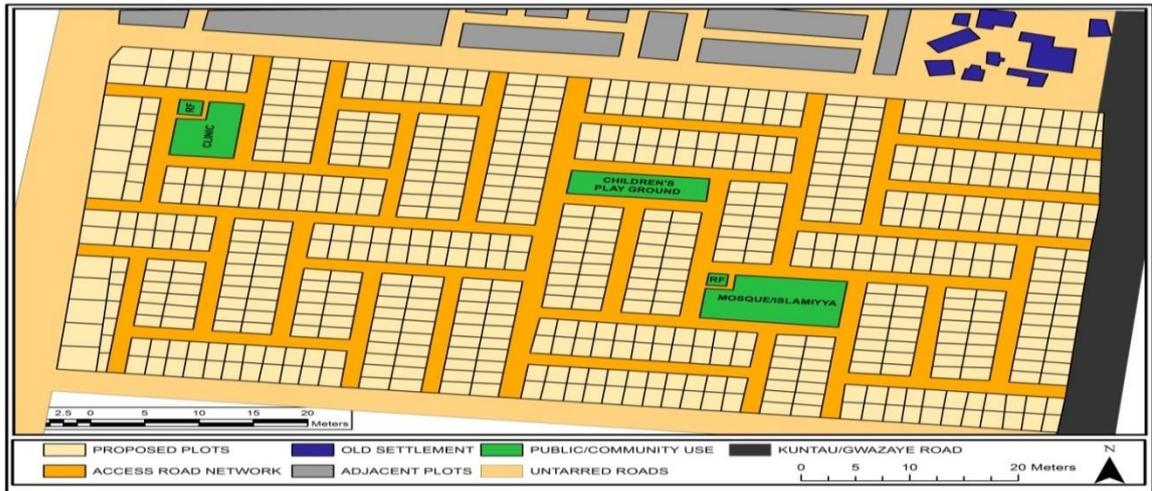
Figure 1: Proposed Kadawa/Danbare Residential Area

Source: Kano State Ministry Lands and Physical Planning (2005)

A deductive analysis based on the initial government development proposal (as seen in Figure 1) shows the carrying capacity of the study area should not exceed the scope of the proposal if adequate urban planning and environmental qualities are to be ensured. But the current realities have shown that; through undermining planning and environmental quality standards, the informal low income housing development has fragmented the study area and produced about 5,515 plots instead of 576 plots: thus exceeding the carrying capacity by about 9.6 times. Figure 2 shows the nature of housing development in the study area.
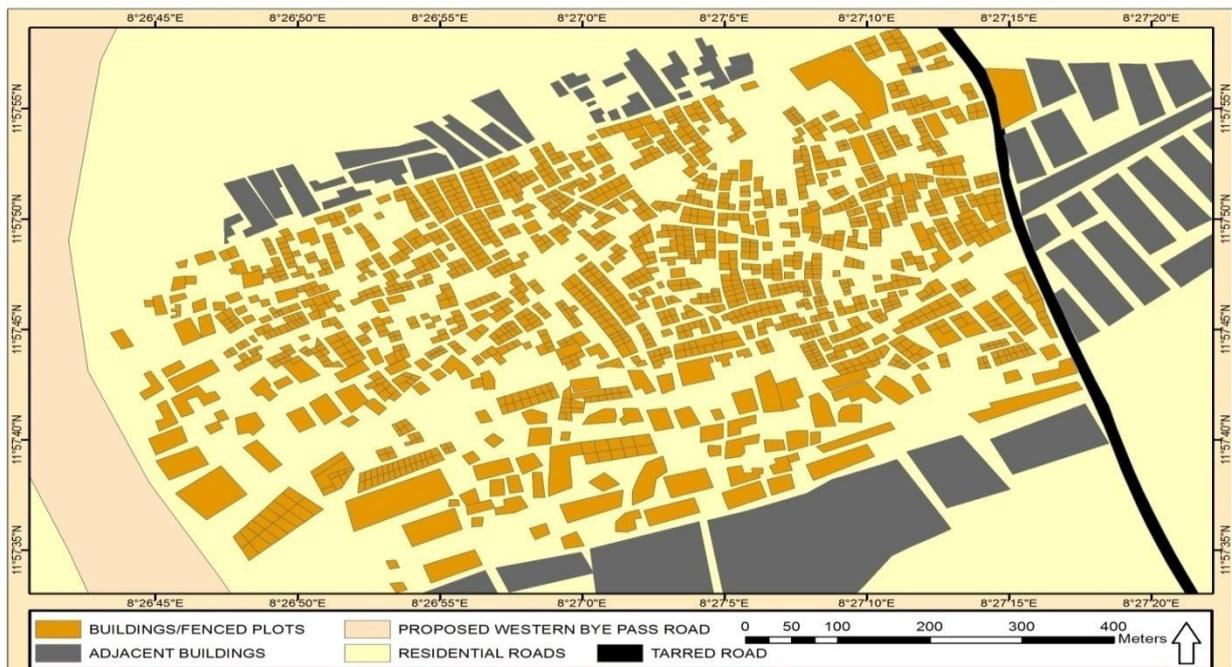

Figure 2: Existing Satellite Image of the Study Area
Source: Google Earth Map (Retrieved on 14th February, 2016)

From figure 2 above it is evidently clear that the pattern of development is chaotic with no define access roads, drainages, children play-ground, clinics, formal school, and refuse management system. Thus, going by the assertion of the United Nations Ad-Hoc Group of Experts on Housing and Urban Development (2001) that "housing is neither a mere shelter nor household facilities alone… but it is an essential need that comprises essential services and facilities, which make up a physical environment that link such individuals and his family to the community in which it evolves", the dwelling facilities in the study are incompatible with housing standards. Similarly, Aribigbola (2001) stressed that "environmental amenities like waste disposal, water supply, and road access and location services implied by the special links between necessary economic and social infrastructure like education, health and recreation are all parts of the package of services designated as housing.

Also going by the World Health Organisation (WHO, 1991) definition of housing as "residential environment which includes the physical structure used for shelter, all necessary services, facilities, equipments and devices needed or desired for the physical and mental health and social well being of the family and individuals", health and safety attributes of the study area are inadequate. This to say the least may have detrimental effects on economic, health, social, and environmental wellbeing of the area and its immediate surroundings (some of these were addressed in the subsequent part of the paper).

3.2 Plots and Streets Sizes

Plots and streets, technically referred to as 'urban grains', are very essential features of urban morphology; they are also among the indicators of measuring urban environmental quality. Based on minimum housing standard in Nigeria, residential plot should be 40 x 40ft for high density; 50 x 75ft for medium density; and 100 x 150ft and above for low density housing unit while street and access road should be at least 50 to 100ft in width (including setback). In relation to the study area, plots sizes ranges from 14 x 23ft to 25 x 30ft while street width is 8ft and 10ft in rare cases. Result of FGD shows about 20% of the developed plots are double (50 x 60ft); 40% single (25 x 30ft); 15% half plots (15 x 25ft); and 25% a quarter plot (12.5 x 15). This also goes in agreement with the result obtained from questionnaire administration (See Table 1). Thus, going by the minimum housing standard, only 20% of the plots in the study area conformed to the standard while the remaining 80% can be regarded based on planning and environmental terms as nuisance.

Table 1: Number of Responses Based on Plot Sizes

Category	Size	No. Response	%
Double	50 x 60ft	76	19.7
Single	25 x 30ft	153	39.7
Half	15 x 25ft	59	15.3
Quarter	12.5 x 15ft	97	25.2
Total	-	385	99.9

Source: Fieldwork, 2015

The implication of this is impairment of health well-being of the people in the area. Studies (such as UNHR, 1989; WHO 1989 & 1991; Schaeffer, 2010; Bello, 2002; and Olanrewaju and Akinbamijo, 2002 among others) have revealed that overcrowded and congested homes and dwelling places are vulnerable to massive disease attacks such as meningitis, cholera, and breeds contagious diseases and infections. These have also been exhibited in the study area. Result of the questionnaire administration reveled that about 86% of the respondents indicated that at least one person of their household members in the last three months (as at the period of the survey) was found seek. The result of FGD, also, revealed that the common diseases in the area are mainly water and sanitation related diseases. Table 2 gives the detail of the findings.

Table 2: Responses on Sickness and Common Diseases in the Area

Sickness			Common Diseases		
Periods	Response	%	Type	Response	%
Last 3 Months	331	86	Cholera	28	7.3
Over 6 Months	54	14	Dysentery	69	17.9
One Year	0	0	Malaria	185	48.1
None	0	0	Typhoid	103	26.7
Total	385	100	Total	385	100

Source: Fieldwork, 2015

3.3 Room Sizes

Based on the existing plot sizes in the study area, a double plot usually produces a 5 bed room house with a parlour, kitchen, store, 2 toilets and a drive in space for parking a vehicle, while a single plot produces a 3 bed room house with a parlour, kitchen, 2 toilets and drive in space for a small vehicle. In case of half and quarter plots they usually produces a 2 bed room and one bed room houses respectively with a parlour and single toilet each and a small space for cooking. Thus, on this background, room sizes in the study area ranges from 8 x 10ft to 15 x 20ft (11.16 to 27.88m^2), which going by the conventional standard should be at least 12m^2 of the floor area and cubic air space of at least 400 cubic feet (121m^3). This connotes that about 40% of the room sizes in the study area do not conformed to the standard room space. The detail is presented in Table 3 below.

Table 3: Nature of Plots and Room Sizes in Kadawa/Danbare-B

Category	Plot Size	Room/Plot	Room Size	Proportion
Double	50 x 60ft	5	27.88m^2	20%
Single	25 x 30ft	3	16.73m^2	40%
Half	15 x 25ft	2	11.16m^2	15%
Quarter	12.5 x 15ft	1	7.44m^2	25%
Total	N = 4	-	-	100

Source: Fieldwork, 2015

3.4 Nature of Housing Construction

Habitually, low income groups in Kano metropolis like most others in northern Nigeria in general, use locally made mud-bricks and sometimes modern cement blocks as building material in house construction. Omole (2010), revealed "a very low housing quality due to the low quality of the materials used for construction and the inadequate technology as well as poor planning standards of handling the building components". However, quite contrary to that, the results of direct field observation, questionnaire administration, and FGD indicated that all (100%) of the completed and uncompleted housing units in the study area are constructed with modern cement blocks and passionate fittings. Aesthetically, over 80% of the developed housing units are designed and built with modern passion that gives a good and pleasant image. Plates 1 to 4, show the common building style in the study area. Plate 1 in particular, is a two bed room house with a drive-in, single parlour, a kitchen and a toilet. Respondents maintained that, 'it is this passionate outlook of the houses in the study area and sense of ownership that portrays its 'beautiful horizon''. Direct field observation and result of FGD show, the building pattern is the reincarnation of the adjoining neighborhood of Yamadawa and Dorayi pattern. Majority of the houses (about 90%) are single bungalow type while the remaining one-story building (upstairs).

Plate 1: Front View of a Two Bedroom House   **Plate 2: Kitchen & Toilet Sharing same Wall**

**Plate 3: Open Space with a well attached   Plate 4: Interior View of a room
A room**

3.5 House Facilities

The basic essential facilities that a normal house should internally possess in order to make it functional are water supply, kitchen, and toilet. Results of both questionnaire administration and FGD revealed that all houses in the study area are built with such provisions but the nature and sizes differs according to plot sizes and individual choices. In the whole study area there is no provision of pipe born water supply, as such the residents in the area source water from hand dug wells or from water vendors. Result from questionnaire administration revealed that all the sample respondent have wells in their houses. Also the result of FGD reveals that all occupied houses in the area are made with internal provision of well and in some exceptional cases very well-to-do individuals dug boreholes for their exclusive use. As at the time of this study, only 15 houses (less than 1%) possessed boreholes out of the 3,021 completed houses in the area. The most critical issue here, however, is the set-back distance between well and toilet and between kitchen and toilet. FGD result reveals that; in about 70% of the houses in the area, kitchen and toilets share the same wall, which based on health quality assurance should be at least 5 metres apart (FME, 2005). Based on National Minimum Housing Standards (2005), the minimum set-back between a water source (well) and toilet should be 10 metres or even more (depending on the level of water table and nature of the soil type). Result of the administered questionnaire revealed that only 4% of the respondents indicated a distance of 10 metres and above as set-back between their residential toilets and water sources. While for the remaining 96% indicated below 10 metres. The detail is presented in Table 4.

Table 4: Distances Away from Toilet to Kitchen and Toilet to Well

Setback	T & K	%	Remark	T & W	%	Remark
0 – 1m	276	71.7	Risky	0	0	Risky
2 – 3m	68	17.7	Risky	49	12.7	Risky
4 – 5m	41	10.6	Relatively Safe	73	18.7	Risky
6 – 7m	0	0	Safe	134	34.8	Risky
8 – 9m	0	0	Safe	114	29.6	Relatively Safe
10 – 12m	0	0	Safe	16	4.2	Safe
Total	385	100	-	385	100	-

Source: Fieldwork, 2015

3.6 Safety and Emergency

Safety in relation to housing, according to WHO (2001) 'refers to a situation and/or condition in a dwelling place of man where all facilities, equipment, devices and structures provided are placed and manipulated to support healthful living of man and the environment'. Thus, it is in line with this that safety and emergency provisions are central in housing risk assessment as well as the basic indicators of measuring the wellbeing of dwelling places. This is because safety and emergency provisions helps in: i.) eliminating all forms of risks that have potentials for injury, disease or/death; ii) reducing, to the barest minimum, any damage or risk arising from failure of any system in the premises; iii) safeguarding the resources invested in the premises so as to maximize its utilization; and iv) enabling to have some form of alert that will help dwellers prepare or take measures against risks and dangers, among others.

In the case of health safety, adequate ventilation across room and other dwelling places are of paramount importance in order to guards against disease or even death. Therefore, based on National Minimum Housing Standard (2005); a room should have two or more windows for adequate cross ventilation. The result of questionnaire administration and FGD shows that such provision is grossly inadequate in the study area. About 87% of the respondents indicated that, rooms in their houses have a single window each (See Table 5). This entails that, greater part of the rooms in the study area are not adequately ventilated, thus their safety level is greatly low or in other words, dwelling in them is highly vulnerable to health related hazards. As reported earlier (See section 3.2), about 86% of the respondents indicated that, at least one person of their household members fell sick in the last three months. Deductively, poor air ventilated rooms could be among the causative agents.

Table 5: Number of Windows per Room per House

No. Windows	All Rooms	Some Rooms	Total	%
One/Room	320	18	338	87.8
Two/Room	31	16	47	12.2
Three/ Room	00	00	00	00
None	00	00	00	00
Total	-	-	385	100

Source: Fieldwork, 2015

As regards to emergency, however, Barry (1994) suggested that these provisions should include: means of escape; smoke alarm; internal fire spread (lining and structure); and resistance to the passage of heat. However, in relation to this study, only the means of escape is considered; because it is very critical in the study area. Direct field observation and result of questionnaire administration show that about 85% of the developed housing units in the study area have a single space for entrance and exit. Moreover, most of the doors for house entrance, bed rooms, living rooms, kitchen and toilets are metal doors (See Table 6). Going by National Housing Standards; a dwelling unit should have 3 escape routes in case of fire outbreak, and doors to bed rooms, kitchen and toilets should be wooden. This entails that, the safety level in the study area with respect to emergency (especially fire outbreak) is also greatly low.

Table 6: Number of Escape Route and Door Type

Routes	Responses	%	Door Type	Responses				Total
				Metal	%	Wooden	%	
One	328	85.2						
Two	52	13.5	Bedroom	297	77.1	88	22.9	100
Three	05	1.3	Toilet	342	88.8	43	11.2	100
Four	00	0.0	Kitchen	316	82.1	69	17.9	100
Total	385	100	N=385	-	-	-	-	-

Source: Fieldwork, 2015

3.7 Waste Disposal

Waste substances and products produced daily from consumption and production of goods and services in the study area are being disposed off with little or no health and environmental considerations. Waste water arising from domestic washing and urine from individual houses is discharged off through open gutters that flow freely along access roads and streets in the area. Result from questionnaire administration reveals that about 93% of the respondents disposed waste water from their houses through open gutters that flow along streets. This also goes in line with the result obtained from FGD 'that open gutters are the necessary evil that joints and unites houses in the area; they are as well, the indicators that portray the presence or absence of neighbours'. Plate 5 portrays the resultant outcome of such unhealthy activity.

Plate 5: Open Gutter Mixed with Refuse

Solid waste on the other hand, is also crudely disposed as there is no formal arrangement for collection and disposal in the area. Respondents maintained that, they often dumped their waste in the nearby piece of land (undeveloped plot) and uncompleted buildings; and in the event of heavy filed-up, they disposed it through burning. Conventional literature has documented the negative consequences of improper waste disposal practices, which among others include: aesthetic nuisance; unpleasant odor; breeding ground for vectors, vermin and rodents; etc (See Maigari, 2002). All these are common place realities in the study area. Result of questionnaire administration indicated that, about 43% of the respondents weekly killed at least a mouse in their compounds while about 79% maintained that they experience a damage of food items by mice. Table 7 gives the details.

Table 7: Responses on the Prevalence of Mice in the Study Area

Parameters	Weekly	%	Two weeks	%	Monthly	%	Total
Saw/Notice	385	100	0	0	0	0	100
Killed	165	42.8	100	26	120	31.2	100
Damage	304	78.9	70	18.2	11	2.9	100
Bite	0	0	0	0	6	1.6	-
Others	0	0	0	0	0	0	-

Source: Fieldwork, 2015

3.8 Public Utilities

Public utilities such as pipe borne water supply, electricity, hospital, waste collection and disposal system, schools, conventional drainages; recreational area; and open space, are all lacking in the study area. In the case of schools and hospitals, respondents maintained that their community members attend the nearby neighbouring public schools and clinics in Rijiyar-Zaki; Dorayi; Kabuga Housing Estate; and Yamadawa, and rarely attend far distance and private ones (commercial), where the efficiency level has been found to be better. FDG result shows about 85% of the people in the study area do not attain high quality educational schools and hospitals notable in Kano metropolis due to inaccessibility in terms of distance and finance. Thus, this connotes low quality of education and health care in the study area.

In terms of electric power supply, however, respondents maintained that about 60% of the inhabitants of the area patronize private electric power supply popularly known as *Maja* (Maigari, 2014d). While, the problem of open space and recreational areas are not only limited to the study area alone but also to most parts of Kano metropolis (Maiwada, 2000). Thus, the health benefits of open space and recreation such as physical, mental, community and spiritual health and wellbeing (Ananth, 2008; Regional Public Health, 2010; Pleasant, Scanlon, & Pereira-Leon, 2013), are not being attained in the study area in particular. Alternatively, however, direct field observation and FGD result show children and adult male spend most of their leisure time along the streets or main access roads; which in most cases are aligned with saturated gutters. This also portrays the precarious condition of the study area; which a respondent described as 'racing with a cripple horse...' (*sukuwa da*

gurgun doki; ba don dadi ba saide dole). Meaning that, they are spending their leisure time along streets not because of its joy but it has become necessary since they have no alternative.

3.9 Nature of the Residence

Majority of the residents of the study area are by origin, indigenes of Kano old-city, whom for reasons of choice, congestion, improvement in economic status, and proximity to working place, among others, decided to relocate to the study area. FGD result shows about 80% of residents are from Kano old-city; 95% Muslims by religion; and about 70% traders by profession. This to some extent goes in agreement with the result of the administered questionnaire; detail is presented in Table 8. Out of the 79% of the respondents who owned houses in the area, 85.4% indicated that they built the houses themselves while 12.2% and 2.4% acquired their houses through purchase and gift respectively.

Table 8: Responses on the Nature of the Residents

Origin	No.	%	Religion	No.	%
Kano-in	293	76.1	Islam	358	93.0
Kano-out	76	19.7	Christianity	27	7.0
Non indigene	16	4.2	Traditional	00	00
Total	385	100	Total	385	100
Occupation	**No.**	**%**	**Ownership**	**No.**	**%**
Trader	281	73.0	Own	304	79.0
Artisan	30	7.8	Rent	58	15.0
Civil Servant	74	19.2	Others	23	6.0
Total	385	100	Total	385	100

Source: Fieldwork, 2015

3.10 Housing Process

The housing process in the study area as a whole is based on informal arrangement; virtually with no governmental intervention. The process starts from an informal land acquisition; either through gift, purchase, or inheritance; usually attached with written agreement indicating the mode of acquisition, size of the plot, and description of the site location. An in-depth interview with a full-term house developer indicated that plots prices in the study area, as at the time of the study, ranges from =N=180,000.00 to =N=350,000.00; house rent from =N=50,000.00 to =N=200,000.00 per annum; and real estate value from =N=1.3 million to =N=2.5 million. The detail is presented in Table 9.

Table 9: Property Value in the Study Area

Plot	Amount in Thousand	Ranking	House	Amount in Million	Ranking	Rent	Amount in Thousand	Ranking
23x25ft	180	5th	2BR-a	1.3	4th	1BR&P	50	4th
25x25ft	220	3rd	2BR-b	1.5	1st	2BR	70	2nd
23x30ft	250	2nd	2BR-c	1.7	2nd	2BR&P	100	1st
25x30ft	300	1st	3BR-a	1.8	5th	2BR&P+	120	3rd
30x30ft	350	4th	3BR-b	2.0	3rd	3BR&P	150	5th
-	-	-	3BR-c	2.2	6th	3BR&P+	200	6th
-	-	-	3BR-d	2.5	7th	-	-	-

Source: Fieldwork, 2015

Key: BR = Bedroom, P = Parlour, P+ Parlour and Drive-in. Ranking Based on Availability and Patronage

Table 9, shows that type-B two bed room house is most preferred in terms of sales and two bed room and parlour in term of rent. This on its own sphere portrays the economic status of the inhabitants of the area. With just only =N=1.5 million or less (less than $6,000.00; at parallel market rate) one can own a house or one can rent a house with less than =N=100,000.00 (less than $400.00); about one dollar per day.

4. Conclusion

From the foregoing periscope on housing development among the low income group in the study area it can be concluded that low income housing development in the study area has not conform to the national minimum housing standard in Nigeria and as a result of which it has exerted detrimental effects on both economic, health, social, and environmental wellbeing of the area and its immediate surroundings. It is therefore recommended that such unhealthy development should be discouraged and government should come to its expectations of controlling and regulating urban development and incorporate indigenous low-income housing process in the formal practice of land acquisition, land allocation, housing planning and design, building codes and housing construction, among others.

REFERENCES

Adekoya K. (2014) Technical Report – Federal Ministry of Lands, Housing and Urban Development, Federal Republic of Nigeria

Achunine B.O. (1993). "National trends in housing production practices in Nigeria-, case study prepared for UNCHS (Habitat), Nairobi.

Ananth, S. (2008). Building Healing Spaces. *EXPLORE: The Journal of Science and Healing, 4*(6), 392-393.

Aribigbola, A. (2001). Housing and Nigerian Development: Assessment of Policy Measure and Direction. *African Journal of Environmental Studies*, 2(2), 117-122.

Barry, J. C, (1994), Health, Housing, and Planning. Cities; Vol.II (3) 206 - 210

Bello, A.A. (2002). *An Appraisal of Socio-Economic Effects of Slum Environment on Urban Dwellers: A case study of Osogbo in Osun State*. Unpublished B. Sc. Thesis, Obafemi Awolowo University, Ile-Ife, Nigeria.

Federal Ministry of Environment (2005), Guideline on the National Minimum Housing Standards in Nigeria. Federal Republic of Nigeria, Operation Document.

Freeman, L. (2002), America's Affordable Housing Crisis: a Contract Unfulfilled. Am J Public Health 2002; 92:709–12.

Fullilove M. T. and Fullilove, R. E. (2000), What's Housing Got to Do with it? Am J Public Health 2000; 90:183–04

Habitat, (1993), National trends in housing-production practices (Habitat) Volume 4: NIGERIA United Nations Centre for Human Settlements (Habitat) Nairobi, 1993 HS/313/93E; ISBN 92-1-13123-5; ISBN 92-1-131239-6

Habitat II (1999), '*State of the World's Cities.*' UNCHS (Habitat), Nairobi.

Habitat Debate (2001), Housing and Urban Development - Vol. 7 - No. 1 - 2001 - Five Years after Habitat II (HABITAT, 2001, 32 p.

Maigari, A. I. (2002), Introduction to Environmental Problems and Management, Wa'adallah Environmental Consults (WADEC), Kano. Pp.295

Maigari, A. I. (2014a), How Far is too Far? The Facts and Figures on Human Population in Kano State. *International Journal of Humanities and Social Science Invention ISSN (Online): 2319 – 7722, ISSN (Print): 2319 – 7714 www.ijhssi.Org Volume 3 Issue 4 || April. 2014 || Pp.61-64* www.ijhssi.Org

Maigari, A. I. (2014b), Evolutionary Trend, Spatial Distribution of, and Issues Associated with Markets in Kano Metropolis. Journal of *Research on Humanities and Social Sciences www.Iiste.Org ISSN (Paper) 2224-5766 ISSN (Online) 2225-0484 (Online)* Vol.4, No.28, 2014. P 26 – 34

Maigari, A. I. (2014c), Informal Private Sector Participation in Electric Power Supply in Some Areas of Kano Metropolis *International Journal of Engineering Science Invention ISSN (Online): 2319 – 6734, ISSN (Print): 2319 – 6726 Www.Ijesi.Org Volume 3 Issue 6|| June 2014 || Pp.44-51* Www.Ijesi.

Maiwada, A. D. (2000), Disappearing Open Spaces in Kano Metropolis, in Falola, J. A.; Ahmed K.; Liman M. A.; and Maiwada A. edited: Issues in Land Administration and Development in Northern Nigeria - Proceedings of the National Workshop on Land

Administration and Development in Northern Nigeria. Department of Geography Bayero University, Kano.

Oduma, C. O. (1995) "Adequate Shelter a Catalyst to Rural Development" *AARCHES- A Journal of the Association Architectural Educators in Nigeria,* 1 (2) 46-48

Oduma C. O. & Ibemb E. O. (2011) Securing urban land for housing among low-income earners in Sub-Saharan Africa: Case study of workers' co-operative society, Enugu, Nigeria. HUMAN GEOGRAPHIES – *Journal of Studies and Research in Human Geography* (2011) **5.1**, 61-75

Olanrewaju, D.O & Akinbamijo, O.B. (2002), Environmental Health and Target Audience: A Programmatic Panacea for Poverty Alleviation in Nigerian Cities. *African Journal of Environmental Studies*, 3(2), 82-89.

Omole, F. K (2001), Basic issues in housing development, Femobless publications, Ondo. Nigeria.

Omole K. F. (2010), An Assessment of Housing Condition and Socio-Economic Life Styles of Slum Dwellers in Akure, Nigeria. *Journal of Contemporary Management Research 281*

Onibokun, A. G. (1985) *Housing in Nigeria*, Ibadan, Nigerian Institute for Social and Economic Research

Pleasant A,, Scanlon M. M., & Pereira-Leon, M. (2013), Literature review: Environmental design and research on the human health effects of open spaces in urban areas, ResearchGate: Journal of Human Ecology *Review, Vol. 20, No. 1, 2013 © Society for Human Ecology*

Regional Public Health, (2010): Healthy Open Spaces: A summary of the impact of open spaces on health and wellbeing, Regional Public Health Information Paper March 2010, Lower Huttn Regional Public

Sahih Muslim (Undated) Vol. IV, Hadith of Rasul S. A. W: Collected Hadith of Prophet Muhammad May Peace and Blessing of Allah be Upon Him.

Sani A. S. (2006), Analysis of Low-Income Housing in Kano, Nigeria. Unpublished PhD. Thesis St Clements University TURKS & CAICOS island, British West Indies.

Schaeffer, P. (2010). Open spaces, sacred places. *Health Progress, 91*(2), 36.

Thiele B. (2002), The Human Right to Adequate Housing: a Tool for Promoting and Protecting Individual and Community Health. Am J Public Health 2002; 92: 712–5

United Nations Habitat Report (1989). *Report of the Commission on Human Settlement on the Work of Its Twelfth Session* (Forty –Fourth Session Supplement No 8 (A/44/8)). New York: United Nations General Assembly.

United Nation-HABITAT (2006), *National Trends in Housing – Production Practices Volume 4: Nigeria,* United Nations Centre for Human Settlements, Kenya.

World Health Organization (1989), Health principles of housing. Geneva, Switzerland: World Health Organization, (WHO)

World Health Organization (1991), Third International Conference on Health Promotion; Sundsvall, Sweden, 9 – 15 June, 1991

World Health Organization (2001), World Health Report: Mental Health, New Understanding – New Hope, World Health Organization, (WHO)