

**THE IMPLICATION OF OWNER INITIATIVE
TRANSFORMATION OF KUNDILA ZOO ROAD HOUSING
ESTATE KANO STATE, NIGERIA**

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Declaration

“I hereby declare that this work is the product of my research efforts undertaken under the supervision of Professor Julius Afolabi Falola and has not been presented anywhere for the award of degree of MASTER IN LAND RESOURCES ADMINISTRATION. All sources have been acknowledged.”

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Certification

This is to certify that the research work for this dissertation and subsequent write-up by Hadiza Sani Gadanya SPS/13/MGE/00058 was carried out under my supervision.

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Dedication

I dedicated this research work to all the people that are affected in one way or the other by Boko Haram insurgency in Kano, may the souls of those who lost their lives continue to rest in peace amen.

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Abstract

The study investigated the implication of owner initiative transformation of Kundila Zoo Road Housing Estate in Kano Nigeria with the aim of analyzing the types, causes and implications of owner initiative transformation in the estate. A cross section survey design method was employed using questionnaires. 234 respondents were selected from 950 respondents using stratified random sampling. In addition, in-depth interview was conducted with the officials of the Kano State Housing Corporation; photographs were also taken formed from housing visitation. The data collected were analyzed using frequency, percentages and mean. The results revealed that, the estate has changed from initial uniform to different design and character internally and externally. Observed changes were found to be linked to increase in income and family size, need for more space for business, needs to add aesthetic beautification and dissatisfaction with housing structure. The implications of the changes noted were on the increase in crime rate, effect on road and path ways, effect on sewage system, water and electricity, over population, encroachment of open spaces and violation of privacy. The lessons to learn among others are that future housing schemes should have the impact of expected beneficiaries while there should be a signed agreement barring any forms of transformation once allocated.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In recent time population and economic growth has been the causative agent of rapid rate of urbanization and subsequent expansion of cities throughout the world. As more economic opportunities opened more people especially from countryside are attracted to urban centers. The increasing demand for land and its product to cater for the increasing population led to land use crises in which each use is competing to dominate or encroach the other. These crises can never be solved unless each use could expand without consuming land needed for the other purposes. (Abdullahi 2000).

Global struggle to provide decent basic shelter for those in need of it, particularly the low income groups, has been one of the greatest challenges to any government in modern times. Throughout the world, particularly in the third world countries government are battling with the problem of providing shelter for the homeless, and are doing so under trying conditions ranging from the problem of continuous economic survival that is sometimes hampered by political, economic and socio cultural conflicts to the rapid population growth coupled with uncontrolled urbanization. All these factors impede government to match the demand for decent affordable housing units, with adequate and regular supply. No developing country has been spared this trauma, only relatively wealthy city states such as China and Singapore have done well, but majority are still faced with this challenges. (Salim1998).

Spatial arrangement of buildings cannot be isolated from the impact of physical environment. However, the relationship between the duas is reinforced by the social atmosphere underlying its

existence. This is in agreement with the paradigm of environmental determinism, which acknowledges physical environment to affect user behavior (Vischer 2008). Thus, contextually; public housing domain as a physical entity significantly responds to social adjustments in fulfilling both functionality role and satisfying users' desire. Additionally, earlier studies have associated the ineffectiveness witnessed in Nigerian physical development to financial incapability, weak organizational structure and poor public enlightenment, Alabi (2010).

Kundila Housing Estate is among the housing estate that was established by federal government in order to solve housing crises among Kano state government workers. After some years of rental arrangement between the two, the State government introduced the "owner occupier schemes" which allow for Kano State indigenes to buy-off the property as individual property right. The aftermath of the implementation of the owner occupier scheme resulted into a change in the tenure system and hence, translated into the owners using their initiatives to effect changes on the physical structures within the estate.

1.2 Statement of the Research Problem

Housing is one of the basic needs of people; most government believes that all families should be able to obtain a safe, decent and sanitized housing (Suleiman, 2013). Economically, it represents a major portion of the family budget or that of an establishment (Kinyungu, 2004). Housing constitutes the first major capital investment and life ambitions of individuals, (Bello, 2003). While the desire to own a house constitutes one of the strongest incentives for savings and capital formation (Ozo, 1990). Housing plays an important role in safeguarding the self-esteem and worth of human existence. In spite of its importance however, inadequacy in supply is evident and prevalent in most developing countries. In Nigeria, the issue of housing supply inadequacy has given rise to calls on the various tiers of government to give greater priority to

the inherent housing problems. Relatively, little continues to be done in improving housing supply in comparison with overall needs. (UN-HABITAT 2006).

In 1975, the Federal Government in its attempt to solve housing problem in Nigeria started construction of many low income housing estates, which Kundila housing estate in Kano is among them. However, as a result of the non-completion of the project, the then Kano State government took over the construction work in 1977 and by early 80s the estate was completed and commissioned. The houses were then distributed to the state civil servants for rent at a subsidized amount. By 1986 Kano State government introduced the “owner occupier scheme” which allow for Kano State indigenes to buy-off the property as individual property right.

The aftermath of the implementation of the owner occupier scheme resulted into a change in the tenure system and hence, translated into the owners using their initiatives to effect changes on the physical structures within the estate. This development has over the years, transformed the estate landscape from homogeneous to heterogeneous forms of housing structures with likely implications on planning.

Studies have shown that, changing housing structures from the initial conception by residents in low income housing takes place due to various reasons. For instance, Ibrahim (2002), examined the physical changes and their causes on physical development in Kundila Zaria road, the study was however, silent on the cultural causes in relation to transformation process. On the other hand, Suleiman (2002), who studied owner occupier scheme in public housing estate in Kano centered on the reason of owner occupier scheme and the situation of the houses after the scheme as well as the benefits of the scheme, in terms of beautification, remodeling, reconstruction etc, without mentioning their implications after the scheme.

Huba, (2003), based research findings on, people's attitudes and responses towards housing modernization, changes, alteration and transformation without looking at problems associated with the modernization process or changes. Odeh, (2011), held the view that, the ineffectiveness witnessed in Nigerian housing development is due to financial incapability, weak organizational structure and poor public enlightenment. The investigation revealed issues on the condition of the existing low income residential houses in Makurdi, making mention of several changes that have taken place in the study area, without mentioning the causes and the implication of those changes. Another study carried out in Malali low cost, Kaduna, (Suleiman 2013) focused on the kind of transformation that happened over the years (renovation, reconstruction e.t.c) without mentioning the implication of these changes or alterations.

This research is imperative given the fact that the issue of housing transformation of low-income housing has not sufficiently engaged the expected attention of intellectuals in this part of the world. However, recent trends in the construction of housing estates especially here in Kano State have drawn attention to the need to critically look at transformation and its impact on the houses, the households and most importantly the estate in general. Much of physical changes especially to individual houses and around the estates which cannot go unnoticed could be seen as being outside the scope of development control and on the long run, has significant environmental implications on the estate.

It seems to have become a norm that households find pleasure in or consider it necessary to change or transform their living places just to add up aesthetic beautification or provide shelter for some new activities, which in most cases were not part of the initial design and may not even be suitable for the area in addition to these some are considered to be a violation of privacy. Such transformation is highly pronounced in government housing estates where little or no

consideration was given to the user preferences and lifestyle during the developmental stages Ibrahim (2002).

Kundila Housing Estate is a planned government housing estate, but with the introduction of owner occupier scheme, there have been serious distortion and alteration due to unguided housing adjustment. Consequently, unrestrained developmental schemes are common and will continue to exist, with Fresh cases springing up around the estates. The impacts of these developments on the physical environment in most situations are devoid of professional guidance. Remarkably, these actions are viewed as violations, and little or no research exists in addressing the issue. This study will attempt to fill a significant gap in knowledge on the implication of these changes, alteration as well as transformation that have taken place in physical forms in the study area.

1.3 Research Questions

The aim of this research is to investigate and analyzed the implications of owner initiative transformation in the housing estate. To achieve this, the following question where drawn:

- i. What are the types of physical changes that have occurred in the estate?
- ii. What are the factors that caused the changes in this low cost housing estate?
- iii. What are the implications of these changes to owners and to the estate?
- iv. What are the possible measures to adopt in mitigating the adverse effect of the changes?

1.4 Aim and Objectives of the Research

The main aim of this research is to examine and analyzed the implication of physical development changes that have taken place in the housing estate by owner's initiative from inception to date.

The objectives of the research are to:

- i. to describe the various kinds of physical transformation that have taken place in the housing estate.
- ii. Account for the major causes of transformation of the houses and space in the study area.
- iii. Examine the implication of transformation on the household as well as environment of the estate.
- iv. Propose measures to adopt in mitigating the adverse effect of the changes.

1.5 Scope of the Study

This research focused only on the physical transformation that took place in the estate and their implications, as they affected and change the original plan of the estate: extension of houses beyond boundaries, total change of housing structure and design, encroaching open spaces, curve outs, additional corner shops, reduction or blockage of access roads, tampering with other infrastructures in Kundila Zoo road housing estate from inception to date.

1.6 Justification of the Study

The dynamics of transformation need to be recognized and fully understood before the policy related to low cost housing can be addressed effectively. Thus research on low cost housing

estate, especially on housing transformation like this one may contribute to an understanding of the way people intervene in the process and the impact of these transformation processes on the community. It is assumed that transformation is affecting the lifestyle of the people involved. Equally their change of lifestyle affects the transformation process.

The study is also important as it will avail the users the opportunity of giving their opinion, providing an avenue for a better understanding underlying the evolution of housing and the way urban dwellers act in shaping their living environment or condition. With the recent evolution and construction of new generation housing estates in Kano like Kwankwasiyya, Bandarawo. The results could be used to guide government in developing appropriate housing policies for the design and provision of low-income housing estates that will conform to the socio-economic characteristics and lifestyles of the target group, which will culminate in reducing the negative effects of housing transformation in future.

1.7 The Study Area

1.7.1 Brief History

Kundila Zoo Road housing estate was created in 1975 about 40 years ago with a view to solve housing problems in Kano State by Federal Government of Nigeria, at the cost of N8, 000, 000, 00. The federal government through the Federal Housing Cooperation embarked upon the construction of 800 housing units at the initial stage at Kundila estate. As a result of non completion, the state government took over the construction work in 1977 and by early 80s the estate was completed and commissioned. At the beginning the estate was managed by the Kano State Housing Corporation and Kano State Investment and Properties, later on with the introduction of owner occupier schemes by government in 1986 the estate came under owners' control with government supervision (K.S.H.C Hand Book 2002).

1.7.2 Location

Kundila Zoo Road Housing Estate is located in Municipal and Tarauni Local Government, suited along arterial road leading to the Kano Zoological Garden. The estate is located between latitude $11^{\circ}58'7''\text{N}$ to $11^{\circ}59'9''\text{N}$ and longitude $8^{\circ}31'47''\text{E}$ to $8^{\circ}32'12''\text{E}$. It is bounded to the west and north by Gandun Albasa quarters to the east by Trade Fair Complex, to the south by Hausawa layouts in Tarauni local Government. The estate is considered to be the largest estate in the state built on an area of 50 hectare (K.S.H.C Hand Book 2002).

1.7.3 Land Use Type

The study area is residential with 954 units of houses on 50 hectares of land, made of 2bedrooms, 3bedrooms and 4 bedrooms (respectively). Several economic activities surrounding the area are the trade fair complex, Sahad Stores, Ado Bayero Shopping mall, Jifatu departmental store, and so many corner shops banks and some filling stations along zoo road, (K.S.H.C Hand Book 2002).

1.7.4 Layout and Design at the Time of Creation

The estate is divided into phase I, II and II.

PHASE I: Phase I of the estate has 290 houses, characterized by number of high rise flats and terraced houses which are particularly identified by their single alphabetical numbers, A,B, to W. which were made of up 2bedrooms identical houses, 3bedrooms identical houses and 4bedrooms identical houses. With a spatial alternate arrangement of 4 bedrooms terraced and 3bedrooms houses on a row.

PHASE II: Phase II is the largest phase in the estate and comprises of 385 housing units which are characterized by terraced houses and are particularly identified by dual alphabetical numbers,



Source: Modified from Min. of land & Phycl. Planning Kano State, Nigeria

Plate 1.1 Kundila Zoo Road Housing Estate at Inception

AA, BA, CA, DA.....YA, with alternate arrangement of 3bedrooms and 2bedrooms houses on a row and also alternate arrangement of 3bedrooms and 4bedrooms houses.

PHASE III: Phase III is made up of 279 high terrace houses separated from the main estate by Zoo Road, starting from high rise terrace houses at court road junction (present Bayero University Court Road Quarters) extending down toward Hausawa layout. The area is accessible from the New Court Road, Gyadi Gyadi and New Hausawa layout. The houses are terraced houses particularly identified with dual alphabets of ZA, QA, GH e.t.c with arrangement of 3bedrooms and 2bedrooms houses. There are also 3 storey blocks of houses which are differentiated by their colors and blocks number. (K.S.H.C Hand Book 2002)

1.7.5 People and Population

The area has an estimated population of 200,000 people (Census 2006) at present the area is projected to have an estimated population of 800,000 people which are predominantly Hausa Fulani from Kano and Jigawa States. The people are mostly government workers in various government agencies, ministries and other parastatal in Kano and Jigawa state (K.S.H.C Hand Book 2002).

1.7.6 Estate Services

The estate electricity and water are connected to the main township system; domestic sewage is connected to a central sewage treatment plant design particularly for the estate at Tukuntawa sewage treatment plant, and tarred roads are provided within the estate. Open spaces were created within the estate at the inception, which are now build up areas. At the inception of the estate in the 80s there was a large buffer garden serving as a green belt to the estate. This has now been converted into different kind of development structures, from Court Road junction down to Kano Zoological Garden. Structures found on this buffer garden include Hadiza House,

VVF Hospital, Sahad Stores, M.T.N office and First Bank Plc among others. Other services found in the estate include shops, schools, restaurants, salons, boutiques, police post, mosque, refuse disposal site etc (K.S.H.C Hand Book 2002).

CHAPTER TWO

LITERATURE REVIEW

2.1 Housing Transformation

Housing transformation is a situation where households carry out far-reaching alterations, extension, modification or addition to the original forms, extent and patterns of their buildings including their immediate environment. It also means a complete or partial change, usually into something with an improved or disfigured appearance or usefulness (Egidero2011). Tipple (1991), define transformation of a dwelling as the alteration or extension involving construction activity using locally available materials and technology. Kim, Yang, Yeo and Kim (2005), described transformation as the modeling of completed buildings resulting to a change in the appearance or character of building envelope components. Popkin, Rich, Hendey, Hayes and Galster (2012), also described housing transformations to include activities ranging from the re arrangement of internal furniture and painting a room to structural amendments like addition of more rooms or even demolition of some housing units. Putting the definitions into context, housing transformations can be said to be the changing of the original form and spatial configurations of a dwelling unit by the occupants in order to meet current needs and expectation.

According to Schlyter (2003), the term ‘housing transformation’ refer to informal, extra-legal and unplanned processes through which home-owners extend their houses, erect additional rooms or convert part of their homesteads into rental accommodation. It is similar to ‘rooming’ or multi-habitation – that is, “a situation in which people who do not define themselves as one households share a living space that is clearly not designed for multi-family purposes. Transformation is synonymous with words like alteration, adjustment, modification and

improvement as well as change in the context of housing. According to Morris and Winter (1975), people generally judge their housing conditions based on specific family and cultural norms. Mirmoghataee (2009), explained that settlements are naturally designed and built to meet the needs, social norms and lifestyles of people. Norms in this context refer to rules and regulations that determine the way of life and conduct of people in the family or society. Therefore, when a household's current housing conditions do not conform with the established norms and lifestyle as a result of changing needs over time, family life cycle such as increase in household size (e.g. arrival of new babies, elderly relatives) and income, there is bound to be what is called "housing deficit" which Mohit, Ibrahim and Rashid (2010), argued can manifest in housing dissatisfaction. This may eventually trigger housing stress, shocks and demand for adjustment actions by the household Seek (1983). People always crave to overcome stress by adjusting and re-adjusting their levels of tolerance, but Carmon (1987), noted that when this reaches a critical point and in order to cope with the stress, people will have to improve their housing condition.

Manalang, Munemoto, Yoshida and Espina (2002) suggest that in developing countries, housing transformation is largely accomplished through spontaneous private initiative. It is thus common for owner occupiers, through their own initiatives and efforts to alter or extend their houses so as to improve their housing conditions and at the same time meet the growing needs of their households (Salim 1998). Tipple (2000), noted that housing transformations in developing countries are often illegal and involved extensions of the external and internal parts of dwelling units or both. He asserted that most transformations in these countries are done by small scale contractors and single artisans using locally available materials and labor, and are so extensive to the extent that the original units could hardly be recognized. This implies that housing

transformations are most often the initiative of house owners and seek to improve housing conditions by providing more spaces to accommodate household needs.

According to Adegbehingbe, (2012), housing transformations are common in government housing estates in many developing countries, including Nigeria. Rapoport (1989), opined that people transform their houses as a way of communicating some aspects of themselves to others, while Tripple (2000), argued that transformation was common in public housing because potential residents are rarely involved in the planning and designing of such housing estates, and as such the dwelling units are neither in tune with their socio-economic, religious and demographic characteristics nor a reflection of their expectations and aspirations. In this situation, the residents find their housing units inappropriate to their household needs and way of life, and thus explore avenues of physically adjusting the units to suit their needs and lifestyle. In support of Rapoport's submission, Tames (2004), also noted that transformations are pronounced in public housing because public housing estates are often uniform and monotonous and offer limited opportunities for self-expression by the residents. On the other hand, Salim (1998), was of the view that the need to have an extra space for the household and for income generations are the key motivation for transformation.

2.2 Definition of Terms

2.2.1 Low-Income Housing

Low income housing is housing that is affordable, According to the U.S. Department of Housing and Urban Development, for either home ownership or rental, and that is occupied, reserved, or marketed for occupancy by households with a gross household income that does not exceed 50 percent of the median gross household income for households of the same size within which the housing is located. (Suleiman, 2002).

2.2.2 Conversion of Houses

Mean a change in a residential rental development or a mixed-use development that includes rental dwelling units to a development that contains only owner-occupied individual dwelling units or a change in a development that contains owner-occupied individual units to a residential rental development or mixed-use development.(Bndungu, 2013).

2.2.3 Affordable Housing

Mean housing with a sales price or rental amount within the means of a household that may occupy moderate- and low-income housing. Housing is one of the three basic needs of mankind and it is the most important for the physical survival of man after the provision of food. Adequate housing contributes to the attainment of physical and moral health of a nation and stimulates the social stability, the work efficiency and the development of the individuals. It is also one of the best indicators of a person's standard of living and of his place in the society. Housing, both in units or multiple forms is a significant component of the physical form and structure of a community, while the human and family contents of the house is part of the very spirit of life and prosperity of the society. (Chokor, 2005).

2.3 Process of Housing Transformation

In developing countries like Nigeria, where an effective formal housing delivery system is lacking, majority of urban population resorted to informal settlements to secure accommodation. Danladi (2015), affirms that 75% of the dwelling units in Nigeria's urban centers are squatter dwellings. The United Nation Development Program (UNDP), through a series of its Human Development Reports shows that, the proportion of Nigerians dwellings poorly ranged from 34.7% in 1992 to 47% in (UNDP 1997).

Research in Malali low cost Kaduna shows that, three types of dwelling units experience a lot of changes by the occupant of the estate. The changes include addition of some elements within the house, renovation of the initial building and complete demolition where by new design and structures sprung up. Most of the transformed houses are characterized with some of the following features; open and closed garage, indoor and outdoor kitchen, indoor and outdoor toilets, boys' quarters, guardsmen room and engine room. In the initial plan of the estate, large commercial shops were not provided and only some corner shops in each dwelling unit which will not take care of the teaming population. So the space that is suppose to serve as an open space in the estate is later on distributed to serve as a large commercial shops. (Suleiman, 2013). Ibrahim (2002), reported a remarkable transformation in the estate, where over 60 percent of the houses in the estate have change from their original plan to a new design. The housing units have been extended beyond their original plot to create additional rooms, open garage, house fencing, e.t.c.

Research conducted in Sabon Gari Zaria by Ariyo (1995) shows that, according to the official plan the size of individual residential plots in Sabon Gari was set at 15m by 30m. Each plot was to be used for construction of single nuclear family dwelling unit, whose ground coverage was not to exceed 33percent of the plot. The plots were arranged in blocks separated by 15m space from the centre of the street, 3m from each of the right and left limits of each plot, and 4m from the back limit. The building lines were set in order to provide ample room for sanitary services and free access around the buildings in case of fire. Each residential unit was to be a one storey structure built of bricks, cement blocks or stones and roofed with tiles and galvanized iron sheets. In spite of this land use specification the area has become very crowded and now features a townscape of uncomplimentary functions which make it highly inefficient and aesthetically

unappealing. Sabon Gari therefore cries out for vigorous urban renewal measures which would transform it into a more livable environment.

Another study conducted by Mai and Shamsuddeen (2006), on housing transformation in Karu shows that, the magnitude of transformation in the community is remarkable. Out of 204 sampled compounds, about 75% have been transformed in one way or another. Modification of different housing types ranged from minor alterations to major extensions, thereby increasing the supply of dwelling spaces. These transformations have greatly increased the number of dwelling space in terms of both housing units as well as rooms for renting. Socially, the twenty-one in-depth surveyed compounds indicated cumulative occupancy of about 205 people, made up of 43 families, at the incipient stage (1976-1986). Due to the relocation of the Presidency to Abuja the population jacked up to 463 inhabitants, made up of 82 families. As at 2005/2006, the sampled population raised to 111 households, with over 700 members.

Lagos, one of the fastest growing megacities in sub-Saharan Africa and where there is an intractable housing challenge and with its teeming population has led to a high concentration of public housing schemes. Ilesanmi (2010) observed that, the residents of the housing estate found in the state are most satisfied with the building design features but least satisfied with the physical environment of their estates. Across the different categories of public housing estates, satisfaction is however least among residents of low-cost housing schemes; suggesting that the consequences of housing dissatisfaction are most likely to be more pronounced in low than medium or high income housing estates in the city. Mohit, Ibrahim and Rashid, (2010) noted that, where dissatisfaction with housing is reported, some forms of housing adjustments, which seek to reconcile the disparity between what the residents expected and what they have in their current residences may exist. These adjustments may take different forms, including the revision

of housing needs and aspirations or improvement of housing conditions through housing transformation or movement to another place that brings housing into conformity with users' aspirations or needs. This simply means that households can react to residential dissatisfaction in three basic ways: adaptation, transformation or mobility. Among these behavior, Kim, Yang, Yeo and Kim (2005), however suggest that remodeling or modification or transformation of the dwelling units is tangible and measurable, and thus has far reaching implications for policy and practice.

Globally, housing transformation is not limited to developing countries like Nigeria; even developed societies adjust their residences to meet changing needs, or simply to make a mark or stamp on the environment. Stamping the environment or setting usually aims at personalization.

Research findings on housing transformation in some parts of Africa indicate the application of different approaches to developing or changing built structures in striving to meet increasing housing demands (Mirmoghtadaee, 2009). Researches by Tipple (1991 and 2000), Kellet and Haramota, (1993) and Tarekegn, (2000) indicate that transformation has led to an increase in size and quality of houses, for instance, the housing transformations used non-conventional building materials, identified as "shack". "Shacks-only transformers are householders who have made no other extension to the house than building one or more wooden sectional sheds which are normally rented out to separate households"(Tipple, 2000). In South Africa and Zimbabwe, transformation takes place through construction of backyard dwellings or shacks Lemanski, (2009). The shacks are structures often built by occupiers on land belonging to other people. The shack occupiers pay rent to the land owners with whom they share consumption costs for electricity, water, sanitation and refuse collection. The shacks are often "constructed from corrugated iron, metal sheets and wooden planks with most comprising a single room in which

residents cook, eat, sleep, wash and live”. He also noted that as of 1990 “nearly 60% of Gauteng’s township properties hosted backyard dwellings, housing almost half (44%) of Gauteng’s Black African population. By the late-1990s, virtually every backyard in Soweto Township hosted an informal shack.” According to Schylter (2003), 60% of all residential plots in unit N, Chitungwiza Township, Harare, had an illegal outbuilding accommodating lodgers.

The most spectacular example of transformation is in Egypt, particularly in workers city of Helwen. In the 1960s, the Nasser government built large numbers of 1, 2 and 3 bedrooms in five storey blocks for workers in the growing industrial areas around Cairo, ownership was transferred to tenants after 15 years of occupying a house, an event which triggered off comprehensive extension activity among the residents. Initially, the houses were of the same type in terms of the exterior and the interior design. However during the 1980s, groups of households living in vertical line have cooperated in planning extension engaging a contractor, and erecting a five storey concrete frame attached to the original building and typically, allowing each flat area to be increased by 40 to 60percent. Those on the top floors are adding another storey, those at the end of the blocks are now extending round side and some blocks are completely encased in new additions. (Tipple, 1999).

2.4 Benefits of Housing Transformation

With regard to the benefits of housing transformation Salama (1995), found that transformation activities initiated by residents in public housing in Egypt not only increased the range of useful spaces within the dwelling units, but also created dynamic multi-functional estates that responded better to the changing needs of households. Secondly, it is believed that transformation activities increase housing supply for low-income households and their tenants and contribute to improving housing quality in a neighborhood Salim (1998). Thirdly, housing

transformations can bring families together, reduce commuting within the city, enhance employment avenues within residential area and rejuvenate social and economic life of housing estates that are at the end of their useful life Tipple (2000). In addition, Manalang and Munemota (2002), has also indicated that transformation activities can enhance residents' sense of pride, confidence and feeling of attachment to their dwelling units. As they put it, 'residents could feel at home and secured when they gradually improve and maximize the space within and around their residences'. It is perhaps on this premise that, Turner, Popkin and Rawling (2009), concluded that housing transformations are beneficial in improving the value of housing, increasing the housing stock within a locality and attracting more residents into the neighborhood.

2.5 Housing Transformation and Urbanization

Housing and neighborhood transformation patterns of forms and structure cannot be fully discussed without some references and related understanding of globalization and urbanization and their processes. Urbanization has visibly been given highly contested terms and definition with a voluminous literature devoted to both clarification and obfuscation. Landman (2006) view urbanization as it denotes the expanding scale, growing magnitude, speeding up and deepening impact of regional of interregional flows and patterns of social interaction. It refers to a shift in or transformation in the scale of human social organization that links distant communities and expands the reach of power relations across the world's major regions and continents. The advent of globalization as an idea to be considered in the way one looks at things has in no small measure caused a demographic shift from one place to the other and in all societies, shifts in population structure are a primary pressure on housing systems and are certain to become more marked and pressing in the nearest future. Pre-existing housing systems and

housing stocks have to accommodate rapid demographic transformations associated with shift in social and behavioral norms or in some cases large scale in or out migration. Indeed, the pace of demographic change need not be that dynamic to outpace the capacity of markets or states to provide appropriate dwellings in appropriate locations. Kingsley and Pettit, (2007) viewed urbanization as a process that can produce divergence as well as convergence, disharmony as well as harmony.

2.6 Land Policy in Nigeria

Land policy in Nigeria is intricately tied to urban planning and development. Land policy has had a significant impact on housing production; the ability of urban areas to expand into rural areas; and the ability to use land more effectively (Doeble, 1987). All previous land policies up until the enactment of the Land Use Decree of 1978 and the subsequent Land Use Law of 1980 was restricted to specific areas, mainly North and South.

In traditional society, land was not owned by any individual but was vested in the group, which is the extended family, the village or the community. Land assignment was on a freehold basis by the Community Chief (Sule, 1982). During the colonial period, individual ownership was introduced, particularly in Lagos, and hence, two different forms of land ownership emerged: individual and communal land tenure. With the Land Use Decree of 1978, individual ownership was disallowed, and the State Governor replaced the Community Chief, with the Family Head or Emir as the controlling force behind the land. This was done in theory at least so that land acquisition by government would be made easier for urban expansion: so that ethnicity would be less of a factor in land ownership in urban areas as indigenous groups often controlled land in the older urban areas; to encourage the non-indigenous population in the city, greater accessibility to

land, and to curtail land speculation by limiting the amount of land owned by individuals (Awotona, 1994).

The Decree provided that a Land Allocation Committees would be created which would dispense the land through the granting of Certificates of Occupancy (Mohammed 1985).

While the Land Use Decree sought in theory, to break up large land holdings, and hence facilitate the transfer of land for housing development and to encourage rehabilitation of older indigenous areas in prime commercial locations in city centers, in reality, it has not accomplished these ends. The traditional authorities still exert influence over the land and generally refuse to relinquish their control over it, and the Decree has not stopped land speculation or land hoarding. While the Decree looks good on paper, Okolocha states that “the powerful have manipulated the system: the State lacks the will to implement it; and generally the principles have not been upheld”.

The Nigerian urban planners and geographers believe that the following policies would establish an agenda for planned and orderly urban growth within a framework of social justice (Omotola, 1983p45).

- i. The need for coordination of urban planning between various levels of government and between agencies of government;
- ii. The creation of a national urban plan which would relate economic planning to regional balance and physical planning;
- iii. The need to encourage the development of small and medium-sized cities as a way to reduce regional inequalities and the trend towards primary dominance;

- iv. The need to encourage more indigenous housing designs which utilize local building materials, meshed with cultural traditions, and adhere to the environmental restraints of a tropical climate;
- v. To utilize a site-and-services policy, whereby government provides physical infrastructure services to low-income housing residents who rehabilitate or improve existing housing rather than rely exclusively on public housing;
- vi. To enforce the existing Land Use Decree of 1978 (Land Use Act of 1980) which would facilitate the alienation of land for development, would reduce the restrictions of traditional ownership which inhibits urban rehabilitation and peripheral urban development and produce a more efficient land system.

2.7 Housing Policy in Nigeria

Ajanlekoko (2001) asserts that, it has become common all over the world that governments, in order to become popular and acceptable amongst its citizenry usually place as top priority housing development in their national development plan (NDP) and further affirmed that the center piece of all human endeavors particularly in developing countries is the passionate ambition to own a house of his own and ultimately bequeath a lasting legacy to his family when the inevitable time comes. House is generally considered to be the ultimate reward or outcome of a successful life accomplishment. A man who has not built or acquired a house is regarded as a non starter in the society. Being a landlord in some quarters is part of the criteria required to be accepted in some social gathering. This is why globally and Nigeria in particular, the zeal to own a house, no matter the quality, is pursued with great determination.

The government has over the years, realized the importance of ensuring that its citizens are housed reasonably well and for this reason, has at one point or the other come up with policies to

buttress its interest in the housing sector. Moreover, as expressed in available literature, a vigorous and buoyant housing sector is an indication of a strong program of national investment and is indeed the foundation of and the first step to future economic growth and social development. Several and diverse efforts have been made to arrest the imbalance between population growth and absolute housing shortage/affordability problems.

Housing policy, in this research, defines all the appropriate institutional frameworks at both the central and local levels and all that it entails to make housing available to the people with limited stress, therefore the route towards fulfilling that ambitious housing program for a nation are couched in what is referred to as the National Housing Policy. It helps in determining the level of shortage as well as creates standards in the housing sector. The involvement of government in most parts of the world is channeled through direct provision of houses for the low and medium-income sector as well the provision of staff quarters for its principal officers. This may not have yielded the desired result as observed by Hasan (2006) because majority of technocrats who make policies and give shape to political thinking are from the high class group and have not only a very poor understanding of the urban poor but look upon them with suspicion and hostility. He noted that government policy on housing has for this reason, catered for the needs of the high class at the expense of the poor.

In Nigeria and most developing nations, housing strategy heavily depends on the government because government's direct intervention in housing strategies are desirable in the provision of affordable housing for the low-income household since they command more resources and authority in its executive capacity (Ajanlekoko, 2001). The involvement of the Nigerian government in housing delivery can be traced far back in history and be subsequently examined in three distinct phases; the colonial period, the independence period and the second republic.

1. The Colonial Period: During the early colonial period, housing activities and policies of government focused essentially on provision of quarters for expatriates staff and selected indigenous staff in specialized occupations like the railway, the police, schools, hospitals etc . This period saw the establishment of government residential areas (GRAs) as well as few “African quarters”. No effort was made by government to build houses either for sale or rent to the general public. In the early 1920, Lagos was ravaged by the bubonic plague and this prompted the colonial authorities to establish the Lagos Executive Development Board (LEDB), which was charged with the responsibility of effective planning and development of Lagos. In 1956, the Commonwealth Development Corporation in association with the colonial government and the eastern Nigeria government established the Nigeria Building Society (NBS) and charged it with the responsibility of providing loans to civil servants, for building houses. The Society continued its function until 1977, when it was converted to what is now known as the Federal Mortgage Bank (FMBN). However, its achievements during the period were modest as its activities were handicapped by paucity of funds.
2. The post independence period (1960-1979): During the period immediately after the independence, emphasis was placed on the five- yearly Development Plans as the vehicle for economic development. The housing sector however, suffered near complete neglect in the first two plans. In this period, more housing corporations were established in the newly created states. However, their contributions were rather insignificant as their impact within the medium and high income budget remained low. In 1971, the National Council on housing, consisting of all States' Commissioners responsible for housing was

established. This marks the first significant and direct attempt by the Federal Government to intervene positively in the area of housing.

3. The Second Republic (1980-1983): This marks the on-set of civilian administration when the government embarked on elaborate housing programmed. The annual target was to construct 40,000 units nationwide with 2,000 in each of the then twelve (12) State capitals. Monies were budgeted and expended but at the end of 1983, only 10,000 houses were constructed. This figure represents 25% achievement rate. The low achievement was due primarily due to:
 - i. The adoption of single architectural design for the entire country, irrespective of the various cultures and climates.
 - ii. The distribution and choice of sites which have little or no relationship with the effective demand for housing.

The National Housing Policy which had as its major task, the provision of decent housing to all Nigerians, at affordable cost by the year 2000 AD was inaugurated in 1991 as a determined response to the housing problem. Its major trust includes the following objectives which are to:

- i. encourage and promote active participation in housing delivery by all tiers of government;
- ii. strengthen institutions within the system, to render their operations more responsive to demand;
- iii. emphasize housing investment which satisfy basic needs;
- iv. encourage greater participation by the private sector in housing development

2.8 Transformation and the Need for Increase in Housing Space

Studies have revealed that one of the main factors contributing to transformation in housing forms is likely to be the shortage of accommodation and the desire for an increase in the space under their control (Abdullahi, 2000). This can be further buttressed in the developing countries like Nigeria, Ghana, and Zimbabwe to express itself in the need for more space. Housing transformation is therefore seen as the effective way to achieve this desire for more space within and around a household. It can also be said that the space being highly needed in this drive for expansion is what can be referred to as habitable space.

Habitable space within a dwelling by definition “is that which is used as living dining and bedroom accommodation, this does not include spaces like the kitchen, bathrooms toilets, balconies, storerooms etc (Chokar, 2005). Recent development though have shown that transformation in housing now takes place more prominently in economically vibrant aspects of a dwelling and this include places like the frontal, rear and most importantly sides that border on roads. Recent data reveals that the bug of indiscriminate transformation has eaten up most perimeter fence line of the built environment within cities.

2.9 Transformation in relation to Lifestyle and Use of Domestic Space

The way and manner spaces are put into use is determined by the lifestyle of a people. Therefore there is certainly a link between lifestyle and how people manipulate space to suit themselves. This observation consequently expresses meanings attached to the design of a home. It is worthy of note that meanings attached to a space do change over time because our homes keep serving new purposes. In various perspectives and even sociology, „lifestyles“ are seen as sets of shared values, practices and attitudes that make sense in particular contexts, such as pattern of social relations and consumption activities (Sule,1982).The concept of lifestyle explains what people

do, why they do it, and what doing it means to them. Lifestyle reflects how people use what they have (Salama, 1995) and the different ways of using goods, places and times. It creates bonds or distinctions among people (Huba, 2003).

In other words how we use domestic space in our daily lives expresses our lifestyle. It is true that what we do in our everyday life regulates our ways of using space. Rituals are attempts to maintain a particular culture or a particular underlying assumption by enacting them visibly, and therefore a ritualized activity such as cooking is to be seen as a cultural expression (Mai and Shamsudden, 2012). Indeed, „even when physical possibilities are numerous, the actual chores may be severely limited by the cultural matrix“, such as social conventions and taboos (Rapoport, 1989). Seen this way, how we use our living space to carry out our rituals in our everyday life is a key to understanding the meanings we attach to our homes. As Bello (2003) explains, if we are to understand the meanings inscribed in the design of „homes“, we would need to analyze how our behaviors and activities are regulated by codes and norms. Rituals therefore have a central role in exploring use of domestic space. For these reasons people generally find it quite convenient to transform what they have or can afford at the moment to suit their life style and needs so that life can go on.

Housing generally is seen as one the most common building types in the built environment and as a result it commands a fundamental and complex phenomenon. It has different meaning for different cultures, different groups and different individuals particularly in countries having major housing problem where it is necessary to study the various aspects of housing like neighborhood layout and plan organization of the dwelling types (Salim, 1998). In such cases, it becomes pertinent that a look into the modalities and motives behind what happens within dwelling units in public housing estates.

CHAPTER THREE

RESEARCH METHODS

3.1 Introduction

This chapter discusses the research materials and presents the procedure that were adopted in carrying out this research work, in order to achieve the main aim and objectives of the study. The chapter consists of sections which looked at the type of research, population, sample and sampling method, sources of data and method of data analysis.

3.2 Reconnaissance Survey

Armed with the original layout plan of the Kundila housing estate, the physical inspection of the estate was carried out in order to make an on - the - spot assessment of the neighborhoods, given attention to the number of transformed and non transformed houses. This was to facilitate the choice of sample for the study.

3.3 Data Type and Sources

This study was conducted using two types of data; primary and secondary data.

3.3.1 Primary data

To obtain primary data, instruments used were a structured questionnaire, interview and photographs.

In-depth interview were conducted with estate officers and government officials in Kano State Housing Corporation. The interview sessions were guided by a detailed interview schedule targeted at capturing issues that are related to the transformation taking place in the estate. Particular attention was given to the corner shops, ventilation, carve out and encroachment of open spaces.

The questionnaire was designed to determine the reasons behind transformation of houses in the estate and its impact on the occupants. The instruments have a list of structured questions covering information on respondent's age, household size, socio economic class, level of education, types of transformation, reason of transformation and their understanding of the implications of transformation. The questionnaire was administered to household heads or in their absence their representatives. Photographs were also taken to document the extent of, and observed problems caused by the transformation in the estate.

3.3.1.1 Administration of the instruments

The data collection was undertaken for duration of seven weeks (from 15th May to 30 June 2016). In compliance with data collection requirements, 234 copies of questionnaires were distributed to the respondents. Where the household heads are required to take their time and filled appropriately, and the researcher collected them back. From this number, only 216 were retrieved out of which four were discarded because they have incomplete information. Thus a total of 216 respondents constituted the sample size

An In depth interview schedules was conducted at 4 different occasions at the Kano State Housing Corporation between May and June 2016 with the officials of the housing corporation among them were the Director as well as the Deputy Director of estate. The photographs were taken during the administration of the questionnaire as well as during field survey around the estate with the deputy director of estate and the estate liaison officer. They are the officers assigned by the corporation to give maximum support to the researcher so that the occupants will not be threaten by the photo short

3.3.2 Secondary Data

Cadastral map of the study area was sourced from Kano State Ministry of Lands and Physical Planning. The map was scanned and imported into GIS software ARC GIS version 10.1. Georeferencing of the map was performed using the quick bird image of 2012 which was sourced from the Department of Geography Bayero University Kano. Digitization (extraction of features) was done by differentiating the built-up areas in the estate from 1975-2012.

3.4 Population, Sample and Sampling Methods

The target population of this study was the housing units under owner occupier scheme that makes total changes or alterations, whether the changes are to the exterior or to the interior of the houses. The 954 housing units in phase I, II and III formed the population frame. However only houses that were under owner occupier (houses that completed the payment of the scheme) were considered as they are the only houses that can be altered by the owners and the houses were 950 housing units with 1, 2, 3 and 4 bedrooms. Out of the 950 housing units, 631(66%) houses had undergone one form of transformation or another. The 631 housing units was the population from which 234 housing units were sampled using Krejcie and Morgan (1970).

Since the estate is divided into 3 phase with an uneven number of housing units, each phase is considered as a stratum through which the sample was drawn using proportionate stratified random sampling method. To perform a stratified random sampling, number of transformed housing unit in each stratum (phase) was determined during reconnaissance survey. Using the formula below, the number of sample in each phase or stratum was determined proportionately (Table 3.1).

$$n_h = (N_h / N) n$$

Where n_h = sample size for stratum

N_h = population size for stratum

N = total population size

n = total sample size

After obtaining the sample size in each phase, simple random sampling using crude balloting method was applied where all the housing units in each phase were coded using their housing numbers. The numbers were written on smaller pieces of papers, folded and were kept inside 3 different bowls (the numbers in each bowl represent the total number of population in each of the 3 phases) randomly the papers were picked among the mixed papers from each bowl, which ever house number emerges serves as a sample, until all the desired number in each phase was determined.

Table 3.1 Number of Transformed Houses and Sample Size

S/N	Phase	Number Of Transformed Houses	Sample Size
1.	Phase i	233	86
2.	Phase ii	337	125
3.	Phase iii	61	23
	TOTAL	631	234

3.5 Test of Reliability of the Instrument

The instrument for data collection was piloted at Kundila Zaria Road Housing Estate which share similar attributes with the Housing Estate to be studied. Swenson and Wretman (1992) argued that two to ten percent of a population is sufficient to pilot- test questionnaires on the basis of this 20 respondents were chosen using convenience sampling. The purpose of the pilot was to

test the validity and reliability of the instrument. Based on the result of the analysis of the pilot data, all the questions in the instruments were found to be reliable and valid.

3.6 Method of Data Analysis

The data collection was undertaken for duration of seven weeks (from 15th May to 30 June 2016). In compliance with data collection requirements, 234 copies of questionnaires were distributed to the respondents. From this number, only 216 copies were retrieved out of which four were discarded because they have incomplete information. The total usable responses that remained for further analysis were 212, representing 91% of the total questionnaires. Descriptive statistical techniques using frequency counts and percentages were used to analyze the socio-economic characteristics of the respondents. Such as; gender, age, religion, marital status, education level, present occupation and duration of tenure rights of the respondents. The result obtained was tabulated using frequency distribution tables, bar charts and also pie chart. A cross tabulation was carried out to explore relationship between different variables such as the socio-economic variables of respondents, income classification and tenure status.

CHAPTER FOUR

RESULT AND DISCUSSION

4.1 Introduction

This chapter presents the findings in relation to the types of physical changes and the factors responsible for the changes in the low cost housing estate. It also discussed the implication of the changes to house owners as well as the entire estate. It concluded with the measures to adopt in mitigating the adverse effects of the existing changes.

4.2 Demographic characteristics of the Respondents

Table 4.1 gives the details of the attributes presented here covering age, sex, marital status, occupation, religion, education, ethnicity and income. More than half of the 212 respondents were between the ages of 45-64 which are the adults and the older adults. The elderly and the youth are very few. Also more than half of the respondents were male only few respondents were females. In terms of marital status more than half of the respondents were married men and women, were only 2.5% were single males and females, and very few were widows and divorcees (were all the widows were females).

At the inception of the estate the houses were meant for residence and allocated to government workers i.e the civil servant. The picture at the time of this research had changed as less than half of the 212 respondents were still civil servants working in various government parastatal and agencies. While about one quarter were self employed and a few others were retirees and private sector employees. Interview conducted with the housing officials, revealed that (39%) of the initial allottees sold their houses after allocation because they could not raise the amount of

money demanded as the initial deposit of the houses. This brought the transfer of ownership of many houses to the self employed and private sector workers.

There was a high literacy rate among the respondents with Bachelors Degree, Higher Diploma and Postgraduate qualification being more than half (52.9%), followed by ND/NCE while only few were products of secondary schools. In relation to ethnic group more than 90% of the people living in the estate are Hausa/Fulani, the rest were Yoruba, Epira, Babur and Kanuri. Since inception the estate's targets were low and middle income earners; This mix has changed little as the people living in the estate are average income earners. Thus more than 80% of the respondents were middle income earners while few were low income earners made up of laborers, messengers and drivers in different government agencies

4.3 Forms of Housing Acquisition and Tenure Status

Methods of acquisition and tenure status in Table 4.2 show that, 28% of the current occupants were not the original allottee. This means that there have been transfers by purchase from government allottees (39%), inheritance or gift. Few allottees acquired the houses through other means such as pledging and mortgage, while some acquired it not as individual house belonging to one person but a house belonging to a large family through gift or inheritance (multiple ownerships).

With this changing acquisition and tenure arrangement, it cannot be said that the original aim of owner occupier scheme; to provide affordable housing for the low income earners has been achieved, as most of the housing units ended up in some other people hands.

Table 4:1 Demographic Characteristics of the Respondents

<i>VARIABLE</i>		<i>N</i>	<i>%</i>	
Age	25-34	17	8.0	
	35-44	42	21.7	
	45-54	60	28.3	
	55-64	58	27.4	
	65 and above	31	14.6	
	Total	212	100	
Sex	Male	181	85.4	
	Female	31	14.6	
	Total	212	100	
Marital Status	Married	187	88.2	
	Single	5	2.4	
	Divorcee	7	3.3	
	Widower	13	6.1	
	Total	212	100	
Occupation	Civil servants	98	46.2	
	Self employed	58	27.4	
	Retiree	30	14.2	
	Private sector employee	15	7.1	
	Others	11	5.2	
	Total	212	100	
Religion	Islam	212	100	
	Total	212	100	
Level of Education	Secondary school	18	8.5	
	ND/NCE	69	32.5	
	First degree and above	115	54.2	
	Quranic	6	2.8	
	Certificates	4	1.9	
	Total	212	100	
	Ethnic Group	Hausa	201	94.8
		Yoruba	1	.5
Others		10	4.7	
Total		212	100	
Income Status	Lower Income	40	18.9	
	Middle Income	172	81.1	
	Total	212	100	

Source: Field work 2017.

Table 4.2 Tenure Status and Form of Acquisition of the Houses

Form of Acquisition	Tenure Status					Total
	Original allotees	Transfer of ownership	Bought from an allottee	Others	Large family	
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
Government Allocation	59 (27.8)	0	0	0	0	59(27.8)
Purchase	0	0	83(39.2)	0	0	83(39.2)
Inheritance	0	24(11.32)	0	1(0.47)	5(2.35)	30(14.2)
Gift	0	31(14.62)	0	0	2(0.94)	33(15.6)
Others	0	0	0	5(2.35)	2(0.94)	7(3.3)
Total	59(27.8)	55(25.9)	83(39.2)	6(2.8)	9(4.2)	212(100)

Source: Field work 2017.

F= frequency

4.4 Nature of the Physical Transformation in the Estate

Three types of transformation have been carried out in the estate namely, transformation on the whole house, transformation of the interior and transformation of the exterior

4.4.1 Transformation on the Whole House

Transformation of the whole houses involved, total demolishing, restructuring, expansion, curve out and other types:-

Total demolishing of the house meant the complete change of the old structure to a new house that is totally different from the old. The new house has a new look, more rooms, new toilet and kitchen with a drive in or garage. Majority of the houses that were totally demolished were those found around the street corners, a process facilitated by ample space around the units.

Majority of the housing units have undergone restructuring in the form of flats housing became one storey, change of the wall paints and change to the kitchen and toilets.

Expansion of the houses involved making the housing units bigger. To achieve these occupants appropriated whatever small space surrounding the house, to create more space in the toilets or even increase the number of toilets and kitchens as well as creation of parking spaces.

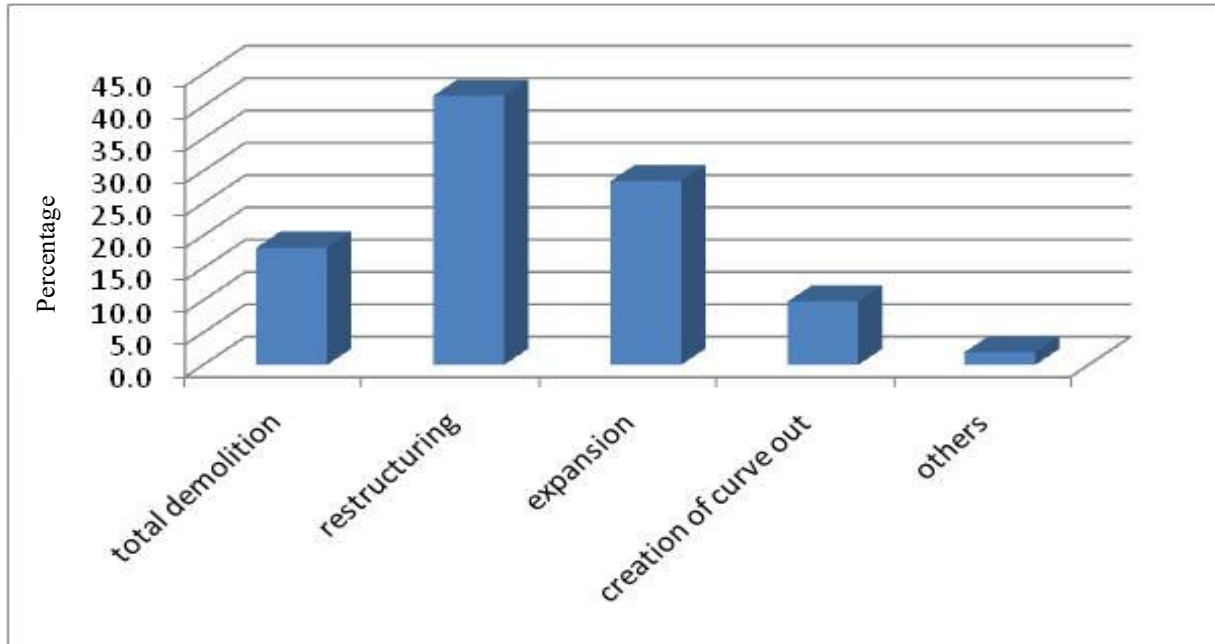
Creation of carve out involves the subdivision of the houses with ample space to create another house which is different from the original house in terms of size and structure. Those that created carve outs were fewer in numbers (9.4%). Carve out was possible only for those with ample space where the units are located. Examples of this are to be found with houses around Block G and H.

Other type of transformation were those that added shop spaces used as sales outlets for small and medium scale businesses and all manners of commercial activities such as poultry farming fish farming, ladies saloons ,barbing saloons and fashion or tailoring shops. These sales outlets were found to be part of the parent buildings located in the front or side as attachments. Those that created other type of transformation were also fewer in numbers less than (5%).

4.4.2 Transformation of the Interior

Three types of transformation were noted to have been carried out on the interior: Transformation of the rooms, of the toilets and of the kitchen.

The transformation of the rooms was largely to increase in the number from the original 2 to 4 rooms to 5 and more than 10 rooms. Table 4.3 shows that 63% of the occupants of 2 bedroom



Source: Field work 2017

Figure 4:1 Types of Transformation on the Whole House Units

houses and 3 bedrooms have increases the number of their rooms to 5-7 rooms. 37% of occupants with 4 bedrooms increased the number of their rooms 4 rooms to 5 up to 10 rooms. Those with large number of rooms actually demolished the original structures and replaced them with new once.

Table 4.3 Numbers of Rooms before and Number of Rooms after Transformation

		<i>Number of rooms after transformation</i>				<i>Total</i>
		2-4	5-7	8-10	Above 10	
<i>No of rooms in original design</i>	2	3	23	5	1	32
	3	2	68	27	6	103
	4	0	34	31	12	77
<i>Total</i>		5	125	63	19	212

Source: Field work 2017

Housing units that have not increased the number of their rooms have made an additional modifications on the houses by creating an additional toilet, parking space or changed the structure of the house by adding aesthetic beatification, changing the doors and windows. This is in line with a study conducted by Mai and Shamsuddeen (2006), on housing transformation in Karu community. The findings of the study shows that houses in that community have been transformed in one way or another. Modification of different housing types ranged from minor alterations to major extensions, thereby increasing the supply of dwelling spaces. These transformations have greatly increased the number of dwelling space in terms of both housing units as well as rooms for renting.

In terms of toilets number, the housing units are divided into 2 at the initial plan of the estate depending on the number of toilets, 22.6% of the four bedrooms houses in Phase 1 and Phase 2 are those with 2 toilets, one at the top the other at the ground floor. While the 3 bedrooms and 2 bedrooms houses have only one toilet. But some 3bedroom houses create a local pit latrine in the surrounding space before the owner occupier scheme with the permission of the government or the housing corporation. While only (8.2%) housing units maintained one or two toilets, the rest have added two to four depending on the space available. This is related to increase in family size from one to two wives for instance to provide one toilet for each of the wives, one for the children and one for the husband. In a situation where the toilets are more than 4 it was observed that one was a local pit latrine which is used during ceremonies and for visitors coming from the villages.

Most of the housing unit with increased number of rooms (5 - 7) also increased the number of toilets to as many as 2-5 and even more. Few of the housing units with increased number of

Table 4.4 Numbers of Toilets Before and After Transformation

Number of toilets	Before		After	
	N	%	N	%
1	164	77.4	18	8.5
2	48	22.6	43	20.3
3	0	0	70	33.0
4	0	0	60	28.3
5	0	0	21	9.9
<i>TOTAL</i>	<i>212</i>	<i>100</i>	<i>212</i>	<i>100</i>

Source: Field work 2017

rooms of from 8-10 maintained the one or two toilets. Thus majority have increased to 3 to 5. All the housing units that increased to over 10 rooms have increased the number of toilets to 4 and more than 5 as shown in Table 4.5. This is due to increased in the number of family, as the children are growing there is need to separate the girls from the boys.

At the initial plan of the houses in the estate all had one kitchen. While the (72%) of the housing units maintained one kitchen, the rest have added either one or two kitchens. This was found to be related to increase in family size from one to two wives for instance or other for each of them. However, in a situation where there is only one wife with two kitchens the other was just a local kitchen for cooking with fire wood or coal.

4.4.3 Transformation of the Exterior

Transformation of the exterior was about the changes made by the allottees to the external part of the house. These include extension to walls on all side creation of parking space and carve out by

Table 4:5 Cross tabulation of Number of Rooms against Number of Toilets after transformation

		<i>Number Of Toilets After Transformation</i>					
		1	2	3	4	Above 5	Total
<i>Number Of Rooms</i>	2-4	4	1	0	0	0	5
<i>After</i>	5-7	9	36	53	24	3	125
<i>Transformation</i>	8-10	4	5	15	30	9	63
	Over10	0	0	4	6	9	19
<i>Total</i>		17	42	72	60	21	212

Source: Field work 2017

Table 4:6 Numbers of Kitchens Before and after Transformation

Number of kitchen	Before		After	
	N	%	N	%
1	212	100	152	71.7
2	0	0	59	27.8
3	0	0	1	.5
Total	212	100	212	100

Source: Field work 2017

varying number of allottees (Figure 4.2). The initial plan of the houses had no provision for any garage or parking spaces. This became necessary in order to ensure the security of the occupant vehicles. Extension to the front side of the houses was also to provide security and privacy. Back wall extensions and curve outs were not common as only few houses had spaces at the back yard.

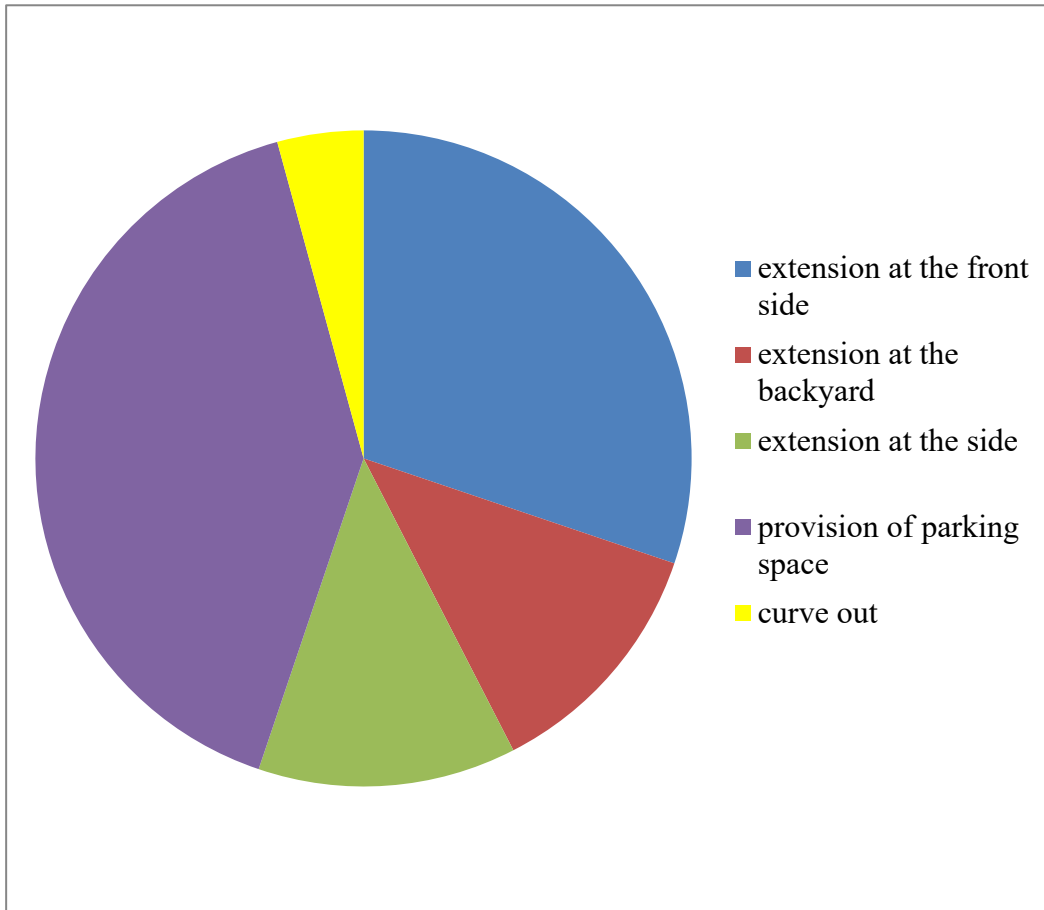


Figure 4:2 Pie Types Of Transformation Carried Out to the Exterior

4.5 Reasons of Housing Transformation

Many reasons have been put forward by the occupant as to why housing transformation. In this particular estate, some of these reasons were traceable to increase in family size, increase in income, dis- satisfaction with the housing type, the need for aesthetics beautification and space

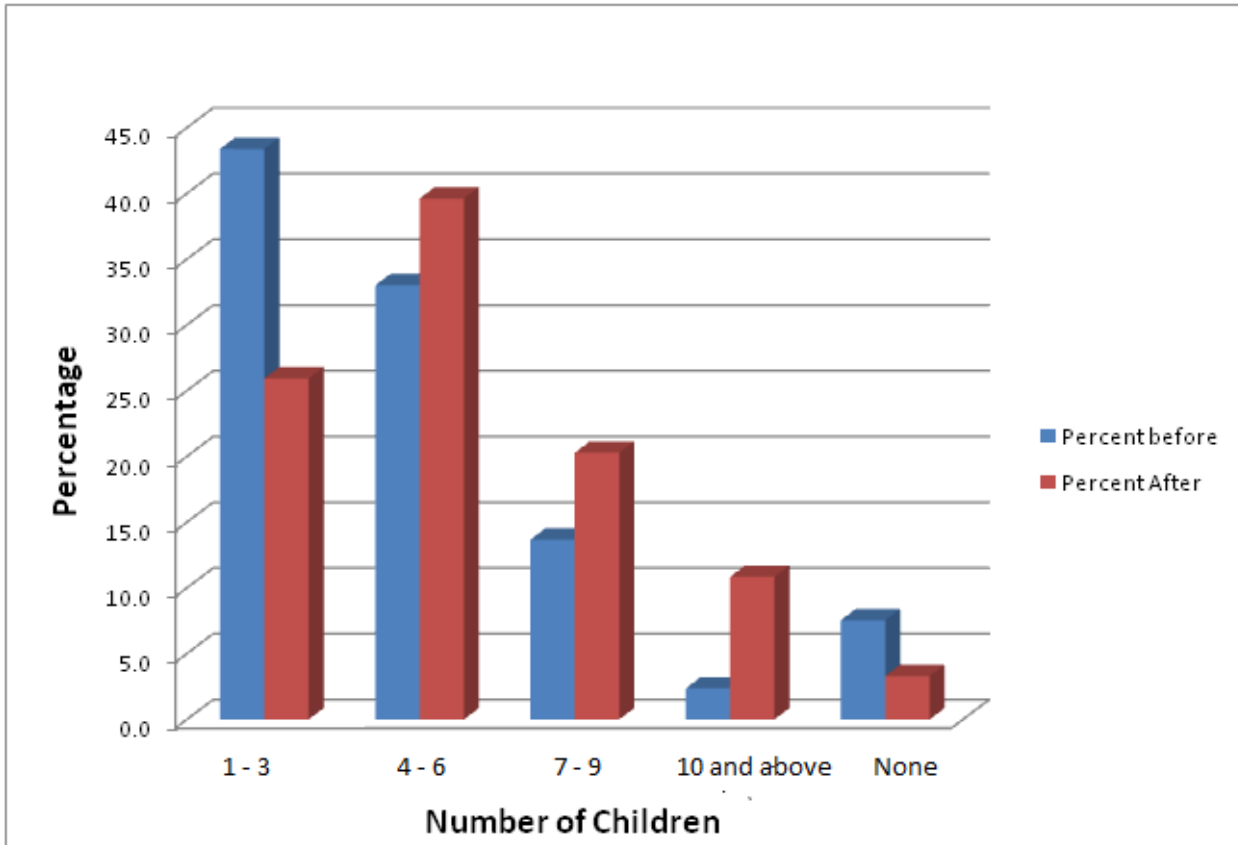
for business as reflected in the mean score of over 4.0 derived from the analysis of the lickert scaled data of 1-5 (Table 4.7).

Table 4.7 Reasons for Housing Transformation

REASONS		SA (5)	A (4)	N (3)	D (2)	SD (1)	TOTAL SCORE	MEAN SCORE
Increase in family size	F	94	97	11	8	2	909	4.29
	(%)	(44.3)	(45.8)	(5.2)	(3.8)	(0.9)		
	Score	470	388	33	16	2		
Increase in income	F	98	100	11	2	1	928	4.38
	(%)	(46.2)	(47.2)	(5.20)	(0.9)	(0.5)		
	Score	490	400	33	4	1		
Need to create more space	F	93	87	20	7	5	892	4.21
	(%)	(43.90)	(41.0)	(9.4)	(3.3)	(2.4)		
	Score	465	348	60	14	10		
Need to add aesthetic beautification	F	73	115	16	7	1	888	4.18
	(%)	(34.4)	(54.2)	(7.5)	(3.3)	(0.5)		
	Score	365	460	48	14	2		
The need to create space for business	F	43	62	56	39	12	721	3.40
	(%)	(20.30)	(29.2)	(26.4)	(18.4)	(5.7)		
	Score	215	248	168	78	12		
Dissatisfaction with the housing structure	F	83	101	18	6	4	889	4.19
	(%)	(39.2)	(47.6)	(8.5)	(2.8)	(1.9)		
	Score	415	416	54	12	4		

Source: Field work 2017

Increase in family size comes up in terms of increase in the number of children, marrying more wives and migration of relatives from the villages to urban centers for studies or in search of employment. With increase in family size comes (Figure.4.3) the needs to change the housing unit to accommodate additional wives, children and relatives. Transformation in the estate is also changing the family system for example, before transformation most of the families are nuclear but as the estate changes the families become extended.



Source: Field work 2017

Figure 4:3 Composite Bar Chart of Number of Children Before and After Transformation

Another reason that is making people to transform their houses is increase in income. Majority of the respondents believe that increase in the source of income makes people to transform their houses. This is because cost implication. Majority of the housing occupants are civil servants working in different government ministries and parastatal who when promoted get increase in their income.

The need to add aesthetic beautification to the houses is another reason why the people of the estate are transforming their houses. Adding aesthetic beautification is in the form of changing the paintings of the houses from the original, red, blue, green and grey to any color of choice.

Changing the doors, windows, roof, gates, planting flowers and installing air conditions are all forms of beautification (plate 4.1).



Source: Field work 2017

Plate 4.1 A Transformed 4 Bedroom Corner House With Added Beautification

Majority of people living in this estate are average and low-income earners. So there is need to create more space for business in order to compliment their income. Creation of corner shops around the housing units depends largely on the amount of space surrounding the houses. A corner shop can be enacted after leaving 3meters to the side of the road or occupants can converts one of the rooms in the house to a corner shop. Example of these corner shops found in and around the estate are tailoring or fashion centers, provision stores, saloons, barbing shops, and many furniture shops. Some people create a room for poultry farming or fish farming.

The last but not the least reason why people are transforming their houses is the issue of, dissatisfaction with original housing structure that had smaller rooms, few toilets and kitchens. Furthermore, original kitchen were open space with no door. There were no fencing or walls to give privacy to the occupants, no garage to give security to vehicles, and no in house space for children to play (plate 4.2 and 4.3)



Source: Fieldwork 2017

Before Transformation

After Transformation

Plate 4.2 A 3 Bedroom House Before and After Transformation



Source: Field work 2017

Before Transformation

after Transformation

Plate 4.3 4bedroom House Before and After Transformation

All the above reasons are in line in with what Mirmoghtadaee (2009) said, that settlements are naturally designed and built to meet the needs, social norms and lifestyles of people. Norms in this context refer to rules and regulations that determine the way of life and conduct of people in the family or society. Therefore, when a household's current housing conditions do not confirm with the established norms and lifestyle as a result of changing needs over time, family life cycle

such as increase in household size (e.g. arrival of new babies, elderly relatives) and income, there is bound to be what is called “housing deficit” which (Mohit, Ibrahim and Rashid 2010), argued can manifest in housing dissatisfaction.

4.6 Implication of Housing Transformation

The transformations to houses have had both positive and negative effects. Among the positive values were additions of aesthetic beautification on the houses. On the other hand the negative effects observed were: increase in crime rate, increase in electricity consumption, disappearance of roads and path ways, disruption of the sewage system, unplanned development, security disharmony, over population, violations of privacy and encroaching on open space. These are all spelt out on from Table 4.8 with mean scores ranging from about 3.5 to over 4.0 which are all expressions of agreement by the respondents to these effects.

The electricity and water supply of the estate are also affected by transformation,(table 4.8) as indicated by more than 80% of the respondents. This is because; the supply of electricity and public water supply which were available during the 80s and 90s could no longer meet the increase in the population on the estate. This has led some households in the estate provide their own boreholes and electricity generating plant.

Pedestrian circulation is a means of moving from one point to another on foot. In a well planned layout, there are facilities put in place to facilitate easy and speedy movement of people around. These facilities like walkways and pathways help to control circulation sometimes through the shortest and convenient distances. The road and pathways are among the infrastructures that have

Table 4.8 Implications of Transformation in the Estate

Implications of Transformation		5	4	3	2	1	Total	Mean
		SA	A	N	D	SD	Score	Score
Increase in crime	F	62	61	44	27	18	758	3.57
	(%)	(29.2)	(28.8)	(20.8)	(12.7)	(8.7)		
	score	310	244	132	54	18		
Affected electricity and water supply	F	61	109	25	7	10	840	3.96
	(%)	(28.8)	(51.4)	(11.8)	(3.3)	(4.7)		
	score	305	436	75	14	10		
Affected the road and path ways	F	75	103	23	5	6	872	4.11
	(%)	(35.4)	(48.6)	(10.8)	(2.4)	(2.8)		
	score	375	412	69	10	6		
Affected the sewage system of the estate	F	79	102	12	14	5	872	4.11
	(%)	(35.4)	(48.1)	(5.7)	(6.6)	(2.4)		
	score	237	408	36	28	10		
Led to an unplanned development in the estate	F	66	81	42	17	6	820	3.87
	(%)	(31.1)	(38.2)	(19.8)	(8.0)	(2.8)		
	score	330	324	126	34	6		
Added aesthetic beautification on the estate	F	70	102	28	4	8	858	4.05
	(%)	(33.0)	(48.1)	(13.2)	(1.9)	(3.8)		
	score	350	408	84	8	8		
Added values to the houses	F	96	76	28	8	4	888	4.19
	(%)	(45.3)	(35.2)	(13.2)	(3.8)	(1.9)		
	score	480	304	84	16	4		
Affected the security system of the estate	F	48	70	49	35	10	747	3.52
	(%)	(22.6)	(33.0)	(23.1)	(16.5)	(4.7)		
	score	240	280	147	70	10		
Created disharmony among the housing occupants	F	46	65	59	25	17	734	3.46
	(%)	(21.7)	(30.7)	(27.8)	(11.8)	(8.0)		
	score	230	260	177	50	17		
Increased population of people living in the estate	F	82	101	19	9	1	890	4.20
	(%)	(38.7)	(47.6)	(9.0)	(4.2)	(0.5)		
	score	410	404	57	18	1		
Violation of privacy of the occupants	F	70	115	15	11	1	878	4.14
	(%)	(33.0)	(54.2)	(7.1)	(5.2)	(0.5)		
	score	350	460	45	22	1		
Encroachment into open spaces	F	79	109	17	5	2	894	4.22
	(%)	(37.3)	(51.4)	(8.0)	(2.4)	(0.9)		
	score	395	436	51	10	2		

Source: Field work 2017

negatively affected by transformation in the estate. In the original plan there were four pathways meant for pedestrians these have now been turned into houses or corner shops. Example is the pedestrian road opposite old trade fair complex now Ado Bayero shopping mall.

The sewage system in the estate is a central (sewage system) connecting all the houses. The sewage system is also negatively affected by transformation in the estate. It was meant to serve only the houses that were in the original plan of the estate. Following the building of so many houses which were not part of the original plan in the estate, this leads to putting additional pressure on the same sewage system, thus leading to massive toilet blockages over the years. This has caused a serious environmental, health and psychological problems for almost two years in the estate.

Disharmony among the allottees is another implication of transformation affecting the estate. Unlike in the past when the people of the estate were living in harmony and at peace with one another, but with transformation on the increase, there have been so many disputes as a result of issues arising from, a neighbor adding few feet's from the surrounding area of his neighbors, sewage, electricity problems, drilling of bore holes and erecting improper structures. The housing authorities are always around the estate trying to solve one dispute or the other. More than half of the respondents agree that transformation has created a lot of disharmony among the people living in the estate.

As already discussed the available infrastructural facilities of the estate can no longer meet the demand of the increasing number of people that are now living in the estate. Majority of the respondents agree that over population as a result of transformation is having a negative effect on the estate.

Privacy is very important in any society; table 4.8 further shows that, in terms of violation of privacy majority of the respondent strongly agree that transformation has violated their privacy. Furthermore transformation of bungalow to one storey building has greatly hampered ventilation to the neighbor houses that are still a bungalow.

Transformation in the estate is legal after the occupant applies either for change in structure or demolishing of a housing unit. After approval the occupant will submit the housing design to the architectural department of the housing corporation for approval. Authorities then pay a visit to the house to make sure that at least 3meters from the side road was left. Transformation became illegal as a result of illegal as land subdivision, increase of some meters as a result of transformation of the exterior of the house and the allocation of open space by government without consultation with the housing corporation (land extension) which normally end of violating the privacy of the original occupants.

Land subdivision in the estate arises as a result of dividing the main house from the surrounding space of the housing unit. Some houses have bigger or larger surroundings while some have smaller once. A house can have a large surrounding unit area up of to 100m in length, while a smaller once usually has 5-6meters. There is no any specific number of meters allowed by the authorities to the occupants to add from the surrounding areas (this depends on the available space in the housing unit). A housing unit with a bigger surrounding can apply for the permission to add it to the main house. Permission will be granted after applying, payment and leaving 3meters to the side road. After approval housing units with bigger surrounding will re-apply for the subdivision of the surrounding from the main house, then the occupant will developed a house on the subdivided land very close to the main house without leaving that

3meters away from the main house, this cause some houses to have doors and windows very close to one another, The proximity of the houses causes problems of ventilation and inadequate light in the housing units.

Encroachment of open spaces is prevalent in the estate as strongly agreed by almost 90% of the respondents. From the original list of the estate obtained from the Kano State Housing Corporation there are about 954 houses but at present as a result of land encroachment, housing sub division and extension, there are about 1552 houses in the estate. All the open spaces in the estate have been encroached upon, new structures erected, and so many valuable spaces have disappeared. For example, what use to be the children football field in the middle of the estate has now been converted into houses.

Another noticeable misuse of open space is the creation of corner shops now found everywhere (furniture shops and galleries, hair and beauty salons. barbing saloons, tailoring outlets and provision stores) At the inception of the estate assessable from any angle was easy but now corner shops have circled round the estate thus making movement not easy (Plate 4.4 and 4.5).

At the inception of the estate there was a buffer garden controlling the atmosphere within the estate and also served as a recreational facility to the people living in the estate. This has now disappeared following the erection of so many structures such as corner shops, the Sahad Stores, MTN office, banks, galleries, filling stations, VVF Hospital which is now converted to pediatrics hospital, secondary school and a police station (Plate 4.6).

Another implication of encroachment on open spaces in the estate is the problem of lack of



Source: Fieldwork 2017

Plate 4.4 Corner shop around the estate



Source: Field work 2017

Plate 4.5 Corner Shops inside the estate



Source: Field Work 2017

Plate 4.6 Structures on the Old Buffer Garden

proper management of the few once that are available. These have been converted to a dump site, which is very hazardous to the health of the people living in the estate. Furthermore the creation of new corner shops that encamped around the estate prevents normal ventilation in and around the estate.

From the original estate design, there was a large open space used as a football field. This has now been converted to a school (Plate 4.7).



Source: Fieldwork 2017

Plate 4.7 School Built On the Old Foot Ball Field

Also the building of new houses on all the available open space in the estate has created serious environmental problem as some have blocked the drainage system of the estate thus causing some areas to be over flooded during the rainy season (Plate 4.8).



Source: Fieldwork 2017

Plate 4.8 Extensions of Houses Builds On Open Spaces

All the above problems are in line with what Bndungu, (2013) pointed out as the problem of transformation in urban formal and informal settlements and went further to assent that transformation means a lot to those who engage in the practice as it has far reaching implications for them. These include promoting the asset base of owner households and the local economy of the settlements, and providing easy access to their social needs. However the lack of statutory development control leads to excessive densification with public health hazards and road blockage.

4.6.2 Positive Impact of Transformation

Transformation in Kundila housing estate has positive implications, these among others include: adding aesthetic and economic values to the houses.

Enhancing the exterior and interior looks of the housing unit is one of the positive impacts of transformation in the estate, as indicated by 81% of the respondent who either agree or strongly agree that transformation has beautified the houses in the estate to become mansions with modern designs. These improvements such as planting of flowers, tress, erecting gardens and the provision of modern infrastructural facilities have enhanced the looks of the buildings and also met with modern trends of building in the urban centers (Plate 4.9).



Source: Fieldwork 2017

Plate 4.9 Transformed Houses with Added Aesthetic Values

Another positive impact of transformation is that it has increased value to these houses as attested by more than 80% of the respondents (see table 4.8). For example following the owner occupier scheme a two bedroom flat that was sold at the cost of 400,000 Naira to the allottees now sales for 2million Naira and a two bedroom house after transformation can be sold for 7

million or 10million naira depending on the location, number of rooms, toilets, kitchens and other facilities.

All the above implications are in line with the statement of Tipple (2000), a house is more than just a dwelling to the occupants; it is a source of identification and status booster and a place of assembly. It may also be a location for business, which provides the basic necessities of life or for augmenting the income of the household. Furthermore every house is said to be a work in progress. It begins in the imagination of the people who built it and it is gradually transformed for better or for worse by the people who occupy it, since their housing need could not be met.

4.7 Measures to Address the Adverse Effect of the Changes

Respondent's perspective was sought on what to do in order to address the adverse effect of transformation in the study area. These perspectives are discussed under two views;

1. the effect of government decision on stopping transformation in the estate and
2. Measures government should adopt to stop illegal transformation in the estate.

The views are presented in Tables 4.9 and 4.10

On the effect of government decision to stop illegal transformation in the estate it will lead to both positive and negative effects. The negative effects are on the increase in illegal transformation, causing under development and stopping aesthetic beautification of the estate and the positive effect are that it would save the infrastructural facilities of the estate as in the original design as reflected by the mean score of 4.0 as shown in Table 4.9 there is therefore no any variation on the responses as all the respondents agree with the view on government decision.

Majority of the respondents were of the opinion that if government stops transformation in the estate it will lead to the increase in illegal transformation in and around the estate. Government cannot stop transformation activities in the estate because the housing units are no longer in

Table 4.9 Effect of Government decision on stopping transformation in the estate

Reasons		S	A	N	SD	D	Total	Mean
		5	4	3	2	1	score	
Increase illegal transformation	F	71	77	32	22	10		
	(%)	(33.5)	(36.5)	(15.1)	(10.4)	(4.7)		
	Score	355	308	96	44	10	813	3.83
cause under development	F	65	103	24	15	5		
	(%)	(30.7)	(48.6)	(11.3)	(7.1)	(2.4)		
	Score	325	412	72	30	5	844	3.98
Stop aesthetic beautification	F	77	99	21	5	10		
	(%)	(36.3)	(46.7)	(9.9)	(2.4)	(4.7)		
	Score	385	396	63	10	10	864	4.07
Save the infrastructure facilities	F	68	99	29	11	5		
	(%)	(32.1)	(46.7)	(13.7)	(5.2)	(2.4)		
	Score	340	396	87	22	10	850	4.0

Source: Fieldwork 2017

control of the housing corporation, and the respondents agree that transformation whether legal or illegal cannot be stopped in the estate. Aesthetic beautification is one of the reasons why many occupants are transforming their houses, majority of the occupants agrees that stopping transformation in the estate will leads to stopping the aesthetic beautification of the estate. Stopping aesthetic beautification will invariably lead to underdevelopment of the estate. This is evident when we compare with those houses that have not been transformed. Those not transformed are very dilapidated, some have cracked and the paints have faded over the years. Furthermore the doors and windows have broken.

A very large number of the respondents agree that, if government decided to stop transformation, it will save the infrastructural facilities of the estate. This is because transformation is affecting the facilities in the estate, example, water supply in the estate; the estate has no supply of tap water for over 10years which is cause as a result of constant tampering of the water pipes during transformation activities. It will also save electricity of the estate, the roads and footpath which are all affected as a result of continuous transformation taking place in the estate.

4.7.2 Views on Measures Government should adopt to stop Illegal Transformation in the Estate

The following measures should be taken by government and the views of the housing occupants to eliminate or to reduce illegal transformation activities in the estate.

(i)Government should demolish the illegal structures, (ii) ask the occupants to demolish by themselves, (iii) fine for violating regulations, (iv) impose very strict laws on issues of illegal transformation and to remain indifferent (Table4.10). There is however significant variations among respondents in relation to these views on measures to be taken by government to checkmate illegal transformation in the study area, with mean score ranging from 3.25 to over 4.0.

Illegal transformation should not be left unchecked in the Estate; as agreed by 56% of the respondent that illegal transformation should be stopped by government in the estate. This is because it has so many negative effects on the estate, and if left unchecked with time the estate will be turn into ghetto. About 81% of the respondents agree that, strict laws should be impose so that, the estate should be governed by certain laws or rules and regulations on illegal structures. By breaking this laws or rules and regulations 54% of the respondents agree that violators should pay some certain amount of money as a fine, this is with respect of gender, age or social status.

Table 4:10 Measures Government should adopt to stop illegal transformation in the estate

Measures Government should take		5 S/A	4 A	3 N	2 D	1 SD	Total score	Mean
Demolish them	F (%) Score	52 (24.5) 260	81 (38.2) 324	43 (20.3) 129	21 (9.9) 42	15 (7.1) 15	770	3.63
Ask the occupant to demolish	F (%) Score	45 (21.2) 270	66 (31.1) 264	54 (25.5) 162	39 (18.4) 78	8 (3.8) 8	737	3.43
Not do anything	F (%) Score	37 (17.5) 185	52 (24.5) 208	65 (30.7) 195	42 (19.8) 52	16 (7.5) 16	668	3.25
Ask occupant to pay fine for violating regulations	F (%) Score	47 (22.2) 235	68 (32.1) 272	64 (30.2) 192	26 (12.3) 52	7 (3.3) 7	758	3.58
Stop all illegal transformation	F (%) Score	52 (24.5) 260	62 (29.2) 248	46 (21.7) 138	41 (19.2) 82	11 (5.2) 11	739	3.49
Impose strict laws on the issue of illegal transformation	F (%) Score	113 (53.3) 565	60 (28.3) 240	17 (8.0) 51	11 (5.2) 22	11 (5.2) 11	889	4.19

Source: fieldwork 2017

As a result of investing a lot of resources in transforming the structures 37% of the respondents are of the opinion that government should not demolish the illegal structures in the estate. Furthermore government can't demolish a property unless instructed by court of law, which usually take a long period of time before the court of law granted that permission.

Since demolishing by government will take longer time, 52% of the respondents either agree or strongly agree that, government should ask the occupants to demolish the structures by themselves. This was believed that if government asks the occupants to demolish by themselves

it will serve as a lesson to other occupants that are thinking of erecting any illegal structure in the nearest future. If government decided to be indifferent on issue of illegal transformation, this research cannot predict what will happen in the next 10 years, this is why 27% either disagree or strongly disagree that government should be indifferent.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Transformations in Kundila Housing Estate have given the housing estate a totally different outlook from what it was originally. Transformations have affected the whole of the housing units in the forms of total demolition of the houses, extension of existing structures (interior and exterior), modifications of structures and creation of carve out. Transformations of the interior were in a form of increase in the number of rooms, in a few cases addition to kitchen and that of the toilet depending on the number of wives and space available. The reasons advanced for transformations were increase in family size and increase in income; the need to create space for other businesses to compliments existing income and to add aesthetic beautification to the old structures.

The transformations in the estate have had both positive and negative effects. It has added value to the housing units (in terms of rent collectable for instance) through aesthetic beautification. Among the negative impacts are increase in crime rate, stress on water and electricity, disappearance of standard roads and pathways, encroachment on open spaces and violation of resident privacy.

Majority of the occupants did not support stoppage of ongoing transformation especially in the areas of aesthetic beautification. On the other hand some occupants agreed that stopping transformation in the estate will save the infrastructural facilities of the estate and thus suggested that government should set limits on what to consider legal transformation and violators should be made to bear the consequences of illegalities.

5.2 Conclusion

From all the findings of this research work it may be concluded that the aim of providing the low and average income earners in the state with decent and affordable housing through owner occupier scheme has not been achieved. This is because most of the occupants of the housing units have sold the houses to the public. Transformation of housing forms and structure is seen as a form of behavioral pattern influenced by not just housing needs but also housing satisfaction, socio-economic factors and general attitude to housing matters.

A review of the impact of transformation on the estate further pinpoints to the need for control measures to be put in place because as observed, the negative impacts far outweighed the positive impacts. Also open spaces which are necessary components of healthy and livable housing environment may eventually become non-existent in the housing estate due to unplanned and spontaneous transformation activities by the residents. This, no doubt, has implications for the health and well-being of the residents and the environment.

5.3 Recommendations

Following from above are forwarded recommendations to avoid problems when establishing low cost housing estate.

1. Evidently houses for the low income group were officially designed and constructed based on the affordability of the average household income but not on the average household size. They are also designed for single household occupancy and not for extended family occupancy. During the design of this houses government should look into the issue of family increase and made provision in terms of space for possible transformation to accommodate more rooms and even toilets.

2. Privacy is valued by most of the households. It is understood that privacy differs by culture. House designed should be built to suit the needs, culture and the privacy of the potential allottees. This is to avoid any alteration or changes that will affect the life of the people and the environment of the estate.
3. As regards security, it has been established that one of the reasons underlying transformations is improvement of security. Most of the occupants have tried to improve security in their homes by making provision of burglary proofs, concrete walls and gates. So government should pay attention to the issue of security in housing estate.
4. There is a need for the provision of spaces for shopping and recreational facilities within the estate. This will discourage spontaneous transformations which are unhealthy for the housing environment.
5. Central sewage system has been observed to be non functional in the estate. This is because blockage from one house does cause problems for many houses. Given current situation, it is suggested that design of low cost houses should have separate sewage system.
6. Some of the violations could be traced to the housing corporation who is compelled to generate own internal revenue, which requirement makes the corporation to source funds from allocating lands haphazardly in the estate. This happens any time the occupants are seeking approval for the creation of curve outs and the Corporation give approvals without considering the consequences just because of the financial gains. This needs to be brought to a stop.
7. There should be regulations concerning conservation of the green areas which are being currently encroached through land allocation and extension of houses.

8. The infrastructural facilities – water and electricity supply need upgrading.
9. Aesthetic beautification is among the reasons why people are transforming their houses in this estate, so there is need to look into the issue of providing beautiful houses for the low income earners in order to minimize constant changes and alteration of the houses in government low income estate.

It is suggested that housing for low-income people be based on core housing strategy, which enable households to undertake modifications or upgrading of their housing units in a planned and orderly manner that will not be damaging to the environment.

5.4 Areas for Further Research

There is need for further and in depth study on the social infrastructural facilities, disappearance of open spaces and recreational areas and the issues of land allocation in the estate, further more a panacea for more sustainable transformation of estates.

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Appendix I

QUESTIONNAIRE ON: IMPLICATION OF OWNER INITIATIVE TRANSFORMATION OF KUNDILA ZOO ROAD HOUSING ESTATE KANO.

Dear Sir/Madam,

This Questionnaire is designed to elicit responses from residents for a Post Graduate research on issues pertaining to the implication of housing transformation by owner's initiative. It is essentially an instrument for data collection and gathering for an on-going research on housing studies. Please be assured that the information, which you will provide, will be treated in strict confidence and the results will be published only in an aggregated form. You will remain anonymous. The questionnaire only takes 10-15 minutes.

(Please choose the appropriate answer or write your answer where necessary)

HADIZA SANI GADANYA
08035930831

NOTE: IT SHALL BE APPRECIATED IF THE HOUSEHOLD HEAD OR HIS/HER REPRESENTATIVE FILLS THIS QUESTIONNAIRE.

SECTION A: GENERAL INFORMATION

1. Please indicate your age range 1.[25 – 34]youths 2.[35 – 44]young adult 3. [45– 54]adults 4.[55 – 64]older adults 5.[65- and above]

2. Sex of the respondent
 1. Male
 2. Female

3. Marital Status.
 1. Married
 2. Single
 - 3.Divorcee
 4. Widow(er)

4. Occupation.
 1. Civil servant (specify status).....
 2. Self employed
 3. Retiree (specify from which job).....
 4. Private sector employee
 5. Others

5. Religion.
 1. Islam
 2. Christianity
 3. Others

6. Level of Education.
 1. Secondary
 2. ND/NCE
 3. HND/First degree and above
 4. Quranic
 5. Certificates

7. Ethnic Group.
 1. Hausa/Fulani
 2. Yoruba
 3. Igbo
 4. Others

8. Income status.
 1. Lower income
 2. Average income
 3. upper income

9. Form of acquisition of the house.
 1. Allocation from the government (owner occupier)
 2. Purchase from government allottee
 3. Inheritance
 4. Gift
 5. Others

10. What is the tenure Status of Respondents?
 1. Original allottee by government
 2. transfer of ownership from allottee
 3. bought from an allottee
 4. others
 5. large family

SECTION B1: Various kind of physical transformation that has taken place in the housing estate.

11. How many rooms are there on the original plan of your house?
 1. 2 rooms
 2. 3 rooms
 3. 4 rooms

12. How many kitchens are there on the original plan of the house?
 1. 1 kitchen
 2. 2kitchens
 3. 3kitchens

13. How many toilets are there on the original plan of the house?
 1. 1 toilet
 2. 2 toilets
 3. 3 toilets

14. What type of transformation have you carried out on your house?
 1. total demolition of the house
 2. restructuring of the house
 3. Expansion
 4. creation of curve out
 5. Others

15. How many rooms are there after you transformed the house?

16. How many kitchens are there after you transformed the house?

17. How many toilets are there after you transformed the house?

18. What type of transformation have you carried out within the exterior space of the house?

1. Extension at the front side of the house
2. extension at backyard
3. extension at the side
4. provision of parking space
5. curve out

SECTION C: The causes of transformation on the houses and space in of the study area.

19. How many children do you have before you transformed the house?.....

20. How many children do you have after you transformed the house?.....

Strongly Agree	Agree	Neutral	Disagree		Strongly Disagree		
SA 1	A 2	N 3	D 4		SD 5		
STATEMENT			SA 1	A 2	N 3	D 4	S D 5
21. Increase in family size makes people to transform their houses.							
22. Increase in income makes people to transform their houses.							
23. The need to create more rooms in the house makes people to transform their houses.							
24. The need to add aesthetic beautification to the house makes people to transform their houses.							
25. The need to create more space for business makes people to transform their houses.							
26. Dissatisfaction with the structure of the houses makes people to transform.							

SECTION D: The implication of transformation on the household as well as the environment of the estate.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree			
SA 1	A 2	N 3	D 4	D 5			
Statements			SA 1	A 2	N 3	D 4	SD 5
30. There is an increase in crime rate due to transformation activities in the estate.							
31. Transformation has affected the electricity and water supply of the estate.							
32. Transformation has affected the roads and pathways of the estate.							
33. Transformation has affected the sewage system of the estate.							
34. Transformation leads to an unplanned development in the estate.							
35. Transformation has added aesthetic values to the estate.							
36. Transformation has added values to the houses.							
37. Transformation is affecting the security of the estate.							
38. Transformation created disharmony among the allottees.							
39. Transformation has increases the population of people living in the estate.							
40. Transformation is violating the privacy of the allottees.							
41. Transformation has added aesthetic values to the estate.							
42. Transformation is encroaching into open spaces in the estate.							

SECTION E: Views on the effect of government decision to stop transformation of the Whole of the estate

Strongly Agree	Agree	Neutral	Disagree		Strongly Disagree		
SA 1	A 2	N 3	SD 4		D 5		
STATEMENT			SA 1	A 2	N 3	D 4	S D 5
43. It will increase illegal transformation in the estate.							
44. It will cause underdevelopment of the estate							
45. It will stop aesthetic beautification of the estate.							
46. It will save the infrastructural facilities.							

Measures government should take in relation to illegal transformation in the estate

Strongly Agree	Agree	Neutral	Disagree		Strongly Disagree		
SA 1	A 2	N 3	D 4		SD 5		
STATEMENT			SA 1	A 2	N 3	D 4	S D 5
47. Government should demolish them.							
48. Government should ask the occupant to demolish							
49. Government should not do anything.							
50. Government should ask them to pay pine for violating regulations.							
51. Government should stop all illegal							

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
SA 1	A 2	N 3	D 4	SD 5
transformation				
52. Government should impose strict laws on the issue illegal transformation.				

THANKS FOR YOUR COOPERATION

APPENDIX II

Interview Questions for the Officials of Kano State Housing Corporation

Date of the interview.

Time of the Interview

Location of the Interview.

Rank of the interviewee in the corporation.

Brief history of the estate.....

1. What are the reasons that you think makes the people of the estate to transform their houses?
2. Are all these transformations legal?
3. If it's legal what is the role of government in the transformation processes?
4. If it's not legal what is the role of government in checking these transformation?
5. What type of transformation is usually allowed by government?
6. What type of penalty is usually given to a tenant cut in the act of erecting a structure without permission?
7. There are so many structures that are not on the original plan of the estate, example new extensions of houses, new school buildings who allocated the land for the structures?
8. Is this allocation assign to government workers like the original plan in the estate or private individuals?
9. What are the reasons that make the government to give out these allocations?
10. What are the problems that this corporation is facing as a result of this issue of transformation?
11. Is there any decree that is concerned with the planning and regulation of the estate?
12. Do you think this extension is not violating the privacy of the tenants?
13. What is the role of this corner shops to the estate?
14. Do you think these transformations have negative or positive impact?
15. If negative why and if positive what are the reasons?
16. Do you think these transformations should be left unchecked?
17. If yes do you think these transformations if left unchecked will not destroyed the infrastructural facilities of estate?
18. Do you think the infrastructures in the estate are not over used as a result of this transformation?
19. Do you think this curve outs /extension from the exterior are causing a lot of problems among the tenants?
20. If yes is there any report of crises like fighting among the tenants?

21. Do you think this transformation within the estate is increasing crime rate in the neighborhood?
22. At the inception of the estate there is a buffer garden that is controlling the climate of the estate, what makes the government to temper with the garden?
23. What is the alternative to that buffer garden now?
24. The corner shops on the garden, are they own by the government or private individuals?
25. If by government, are they under ministry of land and physical planning or housing corporation?
26. If under housing how much is the housing generating from these shops?
27. In your own view what are the general implications of these transformation?
28. What do you think government should embark to check the issues of inappropriate development in the estate?

THANKS FOR YOUR TIME AND COOPERATION

APPENDIX iii

**STATISTICAL DATA ON THE CORPORATION HOUSES ZOO ROAD HOUSING
ESTATE AS AT 13TH JULY 2014**

There are a total of nine hundred and fifty four (954) houses of varying categories in the estate. This figure consists of 950 under owner occupier scheme and 4 under rent. Below is the statistical data of the houses.

PHASE 1

S/N	BLOCK NUMBER	NO.OF HOUSES	S/N	BLOCK NUMBER	NO. OF HOUSES
1	A BLOCK	12	11	M BLOCK	20
2	B BLOCK	12	12	N BLOCK	12
3	C BLOCK	12	13	P BLOCK	12
4	DBLOCK	12	14	R BLOCK	12
5	E BLOCK	18	15	S BLOCK	10
6	F BLOCK	30	16	T BLOCK	10
7	G BLOCK	24	17	U BLOCK	12
8	H BLOCK	20	18	V BLOCK	12
9	J BLOCK	18	19	W BLOCK	12
10	K BLOCK	20		TOTAL	290 HOUSES

PHASE 11

S/N	BLOCK NUMBER	NO. OF HOUSES	S/N	BLOCK NUMBER	NO.OF HOUSES
1	KC BLOCK	20	12	KA BLOCK	18
2	ZC BLOCK	33	13	LA BLOCK	22
3	AA BLOCK	28	14	MA BLOCK	28
4	BA BLOCK	26	15	NA BLOCK	26
5	CA BLOCK	14	16	PA BLOCK	14
6	DA BLOCK	8	17	RA BLOCK	20
7	EA BLOCK	10	18	SA BLOCK	16
8	FA BLOCK	10	19	TA BLOCK	12
9	GA BLOCK	14	20	WA BLOCK	24
10	HA BLOCK	8	21	YA BLOCK	20
11	JA BLOCK	14		TOTAL	385 HOUSES

PHASE 111

S/N	BLOCK NUMBER	NO. OF HOUSES	S/N	BLOCK NUMBER	NO.OF HOUSES
1	ZA BLOCK	10	9	HE BLOCK	12
2	QA BLOCK	10	10	HF BLOCK	12
3	FB BLOCK	10	11	FE BLOCK	12
4	KB BLOCK	12	12	FF BLOCK	12
5	KD BLOCK	10	13	FG BLOCK	12
6	HB BLOCK	12	14	FH BLOCK	12
7	HC BLOCK	12	15	FJ BLOCK	12
8	HD BLOCK	12	16	FK BLOCK	12
17	FM BLOCK	12	21	GD BLOCK	12
18	FN BLOCK	12	22	GE BLOCK	12
19	GB BLOCK	12	23	GF BLOCK	12
20	GC BLOCK	12	24	GH BLOCK	12
				TOTAL	279 HOUSES