

## Housing Transformation in Government Constructed Residential Estates in Lagos Nigeria

Egidario B. Aduwo<sup>1</sup>, Eziyi O. Ibem<sup>2</sup>

<sup>1&2</sup>Department of Architecture, College of Science and Technology, Covenant University, Ota,  
Ogun State, Nigeria

Corresponding Author: Egidario B. Aduwo

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**Abstract:** *The desire to remodel houses in line with changing needs of occupants is on the increase, but there is a lack of understanding of the processes involved in housing transformation by residents in public housing estates in a developing country like Nigeria. This study investigated housing transformation in two low-cost public residential estates in Lagos, Nigeria, with a view to understanding the socio-economic characteristics of those engaged in housing transformation and how they undertake this. The data were derived through a cross sectional survey of 614 household heads in the estates using questionnaire and interview guide, and analysed using descriptive statistics and correlation analysis. The result shows that most of those involved in housing transformation were male low-income household heads with large families living in owner-occupied houses for over 15 years. It was also found that a significant correlation exist between housing transformation and the socio-economic characteristics of the residents except age. Although housing transformation involved substantial amount of money, yet it was undertaken using direct labour and self-help approach without building plans and authorisations. The paper concludes by highlighting the need for appropriate actions to check the current spate of transformation activities by residents in public housing estates in the study area.*

**Keywords:** *Housing transformation, low-cost housing; government residential estate, survey, Lagos*

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### I. Introduction

Rapid urban population growth coupled with severe housing crisis has resulted to tremendous changes in the physical, spatial, and structural fabrics of housing in the developing countries including Nigeria. Housing development accounts for a larger percentage of the built environment and the growing demand to achieve compatibility between housing form and lifestyle has made it imperative for people to change the initial configurations of their houses and surroundings for personal occupation, rental purposes, and home based enterprises. According to Mirmoghtadaee [1], housing changes in different ways by modification or remodelling of parts or whole to meet new desires and changing needs of occupants. This means that houses are not static objects, but often goes through a process of transformation in the course of their life span.

In an extant study by Habraken [2], the author argued that because housing is a consumer item, no one can live satisfactorily within a fixed environment in which he/she has no input; thus, the practice of altering and extending mass housing would then appear inevitable. Hamdi [3] also noted that the worsening housing conditions in non-industrialised countries are caused by the fact that institutions and professionals are not aware of the realistic shelter requirements of the low income. This view was corroborated by Oruwari [4] who explained that the transformation of housing forms and structure is seen as a form of behavioral pattern influenced not just by housing needs but also housing dissatisfaction, socio-economic factors, level of education/information and general attitude to housing matters. This is usually the case in low-income public housing estates where the inputs of target users are not taken into consideration from the onset resulting to a mismatch between expectations and realities. Mohit *et al.*[5] noted that where there is a mismatch between what households expected and what they have, dissatisfaction with housing is reported leading to some forms of housing adjustments, which most often 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 such as 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 means that households can react to residential dissatisfaction in three basic ways: adaptation, transformation, or mobility as buttressed by Aduwo, Ibem, and Opoko[6].

Although Adegbehingbe[7] has observed that housing transformation is a common in government housing estates in many developing countries, including Nigeria, there is very little research efforts at

understanding some specific issues associated with housing transformation process in these estates. In order to check mate the adverse consequences of housing transformation in mass housing projects, it is imperative to examine among other things, the systematic process through which residents carrying transformation of their dwelling units and surrounding environment. It was on this premise that this study investigated housing transformation in government construction residential estates in Lagos, Nigeria. The specific objectives were to: (i) identify the residents who have transformed their dwelling units (ii) the relationship between the socio-economic characteristics of the residents and housing transformation and (iii) the processes involved in the transformation of housing units and surrounding environments in the estates.

The study is based on a questionnaire survey of 614 household heads in two low-cost public housing estates in Lagos, Nigeria. It makes contribution by improving knowledge of the relationship between the socio-economic characteristics of residents and their housing transformation behaviour. The study also adds to the existing body of knowledge the process involved in housing transformation by residents in public housing from the Nigerian perspective.

## **II. Literature Review**

### **2.1 THE CONCEPT OF HOUSING TRANSFORMATION**

According to Nguluma[8], housing transformation is not a new concept as it has been studied in several quarters as basically attempts to address changes and embrace the variables of physical alterations, extension and possibly renewal of part or whole of buildings. Consequently, Tipple *et al.* [9] described housing transformation as any change in the form of alterations, extension, modification, or addition to the original forms, extent and patterns of their buildings including their immediate environment made by residents after allotment. It usually occurs in buildings in use, and thus Sueca[10] view it as an informal housing supply strategy initiated by end users-initiated that could lead to improvements. Sueca[10] further explained that housing transformation in most public housing in developing countries involves the adoption of construction practices familiar and convenient to those people who are eligible to live in such properties. It was on his premise that others [11;12;13;14) concluded that in the developing countries, housing transformation is largely accomplished through spontaneous private initiatives. Based on the foregoing, housing transformation as used in this study refers to the physical and spatial alteration or addition, modification or extension of any part of existing residential building or its immediate surroundings by the residents for one reason or the other. It can take the forms of materials or space alteration/ addition or both.

### **2.2 WHY HOUSING TRANSFORMATION**

Housing transformation all over the world, especially in major cities in the developing countries has continued to attract concern from researchers, scholars and other stakeholders in the built environment considering the rapid and uncontrollable changes that occur in the process [15, 16]. Transformation is often associated with owner-occupiers or long term tenants who have lived in the house for a long time and have no intension of moving [9, 17]. In fact, according to Tipple [18], long residence is likely to foster commitment to an area, which is consequently likely to increase the desire to extend houses rather than to move.

Inadequate housing, housing dissatisfaction and the multiplicity of programmes and projects initiated by governments and the private sector most of which unfortunately have barely solved the menace of housing crisis in major cities have been widely discussed as a major reason why people transform their homes. In fact, it is known that houses are shaped and transformed by the need for them to be compatible with social norms and lifestyles. Tipple [12] noted that in many countries, occupants of public housing make unauthorized but quite considerable changes and extensions to their dwellings for their own use and for renting out. Cunningham *et al.*[19] however argued that despite the current spate of transformation of public housing, it has largely failed to address the more complex needs of low-income earners and the average urban residents who have relied on public housing as a source of stable housing. Consequently, it is very common nowadays to find physical appearances, internal elements, spatial orientation of existing dwellings changed thoroughly to reflect current needs, desires, and aspirations.

Mirmoghtadaee [1] was of the view that the prevailing lifestyle, rooted in social and cultural characteristics of the society, is embodied in the composite elements of residential units; and this developing countries are witnessing vital changes in household composition due to their deep rooted extended family system, which makes it imperative for dwelling units to be expanded to accommodate more extensive family life. As a result, important changes take place in the physical form of houses and households, while they tried to preserve their cultural values. An ideal house form, in this regard, should respect the needs of a new generation, while at the same time it should be adapted to cultural values and traditional lifestyles. In a study carried out in Tanzania, Nguluma [20] observed that transformation of houses was associated with modernisation forces whereby people adapt their houses to suit their needs and desires. The two reasons identified were the desire to

own a “modern house” and to fulfil the desire to contribute to the modernisation of urban settlements through transformation. Aduwo *et al.*[9] found that the rationale for housing transformation in low-cost public housing estates in Lagos, Nigeria, ranges from economic benefits such as rent from extra rooms and shops added to their houses to the need to provide more and better spaces to accommodate their growing families and current lifestyles, spaces for worship and other religious rituals, the need to ensure privacy and security of life and properties in the home.

From the above, it can be inferred that housing transformation can be linked to housing dissatisfaction and inadequacy both of which according to Ibe, Adeboye and Alagbe [21] are measures of the extent to which housing has failed in meeting users’ needs and expectations. Specifically, housing inadequacy is described as the level of consumption of housing that fall short of a satisfactory minimum standard as a basic need, and a valuable component of household consumption [22]. This means that housing inadequacy and dissatisfaction as perceived by residents can trigger transformation behaviour, which is a strategy for augmenting the obvious inadequacies of an individual’s or household’s present housing situation.

### **2.3 HOUSING TRANSFORMATION PROCESS**

Although there is no account in the literature on a universal process through which residents carry out housing transformation, authors[23] have revealed that in some advanced countries like the USA, Netherlands and Britain, housing transformation is carried out in a well planned and properly executed manner that aimed at deconcentrating poverty in urban centers. According to these authors [23], housing transformation is usually done within the ambient of the operational housing policies through a number of approaches. One of the approaches draws its strength from the “dispersal policy” and it encourages public housing residents to move out of large public housing projects into higher income and less segregated neighborhoods. Residents may receive vouchers to use in the private market or move to public housing units the cities [24; 25]). Another approach is based on the “place-based redevelopment policy,” which is focused on demolishing large public housing projects and replacing them with mixed-income developments on the same site. The federal HOPE VI Program is an example of this approach [26; 27]. The aim of both approaches are to counteract the effects of concentrated poverty by providing public housing residents with access to more resources and opportunities, including better schools, more responsive services, better access to the workforce, and opportunities to forge new social relationships with more affluent neighbors [28; 29].

In the developing countries, Salim [30] observed that housing transformation is very common among owner occupiers, who through personal initiatives and efforts to alter or extend their houses with the aim of improving their housing conditions and meeting their household needs. Tipple [12] also noted that housing transformation was often illegal and involved modifications and extensions of the external and internal parts of dwelling units or both. He made it clear that most transformations in the developing countries are done by small scale contractors and single artisans using locally available materials and labour, and are so extensive to the extent that the original dwelling units could hardly be recognized. From the foregoing, it is evident that housing transformation in both developed and developing countries seeks to improve the living conditions by meeting the growing households’ need. Whereas in the developed countries, housing transformation appears to be government sponsored programme carried out within the framework of the existing housing policies, and thus viewed as a legal means of improving housing supply in the developed countries, in the developing countries, housing transformation is viewed as an illegal a self-built improvements of homes and their immediate surroundings. It does not receive government support as individuals or households use their resources to plan and execute all phases of the process. This explains why housing transformation, especially in public residential estates in the developing countries result in massive distortion of the original plan of such estates resulting in rapid deterioration of the socio-spatial and physical attributes of the neighbourhoods with the attendant public health implications [6; 7; 12].

### **III. Research Design And Methods**

This study was conducted in two of the oldest in low-cost public housing estates in Lagos, Nigeria. The two housing estates purposively selected for this study were the New Lagos Re-Housing Estate (Phase 1) in Surulere and the Federal Low-Income Housing Estate commonly known as the Shagari Estate in Mosan-Abesan, Ipaja. The research design was survey involving the administration of questionnaire and oral interviews with selected residents of these estates. Both quantitative and qualitative data were used in this study.

At the time of the survey they were 2870 housing units in four typologies. The distribution shows that the New Lagos Re-housing Estate (Phase 1) had four housing typologies of 1,356 units comprising 172 one-bedroom bungalows, 636 units of one bedroom apartments, 380 units of two-bedroom units and 168 units of 3-bedroom bungalows. In the Federal Low-Income Housing Estate (Shagari Estate) they were 1,514 housing units comprising 1,284 units of 1-bedroom in rows of 2-semi- detached bungalows and 230 units of 3-bedroom in

rows of two in semi-detached bungalow. The following formula presented in Adebayo [31] was used to determine the minimum sample size for the research

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

Where, n= sample size, N= population size, e= level of precision expressed as a proportion (i.e. 0.05) and confidence level of 95%. Although the result indicated a minimum of 351 housing units, 626 housing units representing around 22% of the total number of housing units were selected. This was to ensure that the different housing typologies were represented and that the consequences of low response rate would be mitigated in the survey.

The data collection instruments designed by the researchers and used in the survey were questionnaire and interview guide. The questionnaire had three main sections. Section 1 was used to collect data on the participants' socio-economic characteristics and the type of housing units they occupied in the estates. Section 2 had questions on their levels of involvement in housing transformation, the rationale, and the specific aspects of their residential environment they have subjected to alteration. The last section of the questionnaire was designed to elicit responses on the process involved in executing transformation endeavours in the housing estates. On the other hand, the interview guide contained a set of questions designed to elicit responses from the residents on why they were involved in housing transformation and the process they followed in carrying out the exercise.

The field work was conducted in 2010 in the study area. In selecting the participants of the research, the multi-stage sampling technique was used. First, the stratified sampling technique was used in selecting the housing units. This was to ensure that the different housing typologies were included in the survey. The random sampling technique was then used in selecting housing units from each of the typologies identified. Although 626 questionnaires were administered by hand to the household-heads or their representatives living in the dwelling units, 614 questionnaires representing 98% of the distributed questionnaires distributed were retrieved found to be correctly filled. The interviews were also conducted by the researchers when the questionnaire was administered. The interviews were reordered electronically and later transcribed into word document.

The quantitative data were analyzed using descriptive statistics and Spearman's correlation coefficients with the help of the Statistics Packages for Social Science (SPSS) Version 21. The qualitative data derived via the interviews were analysed using content analyses.

## IV. Study Findings

### 4.1 SOCIO-ECONOMIC CHARACTERISTICS OF PARTICIPANTS IN THE SURVEY

Result in Table 1 shows the socio-economic characteristics of those who participated in the survey. It is evident from this result that most (465) representing around 76% of the respondents in the survey indicated that they had in one way or the other transformed their houses, while 149, which is about 24% of them said they had not transformed their homes.

**Table 1:** Socio-economic characteristics of participants in the survey

	Have you transformed your housing		Total N=614(100)
	Yes	No	
<b>Sex</b>			
Male	248	104	352(57.3)
Female	217	45	262(42.7)
<b>Age</b>			
25-40years	117	25	142 (23.1)
41-50years	127	33	160(26.1)
51-60years	61	75	136(22.2)
61-70years	67	12	79(13.0)
71years -above	93	4	97(16.0)
<b>Marital Status</b>			
Single	38	14	52(8.5)
Married	223	90	313(51.0)
Widow	118	13	131(21.4)
Widower	46	32	78(12.7)
Divorced	39	0	39(6.4)
<b>Highest Educational Attainment</b>			
No formal education	125	2	127(20.7)
Primary Education	42	23	64(10.6)
Secondary Education	117	45	162(26.4)
Tertiary Education	181	79	260(42.4)
<b>Income categories</b>			
Low	213	22	235(38.3)

Lower middle	141	53	194(31.6)
Upper middle	67	51	118(19.2)
High	30	23	53(8.6)
Not sure	14	0	14(2.3)
<b>Occupation</b>			
Retired	81	1	82(13.4)
Self employed	264	53	317(51.6)
Civil Servant	38	47	85(13.8)
Artisan	77	42	119(19.4)
Others	4	6	10(1.6)
<b>Religious affiliations</b>			
Christianity	198	136	334(54.4)
Islam	250	1	251(41.0)
Atheist	17	12	29 (4.7)
<b>Household size (Person)</b>			
1-3	8	9	17(2.8)
4-6	63	6	69(11.2)
7-10	119	54	173(28.2)
above 10	228	80	308(50.2)
No Response	47	0	47(7.7)
<b>Length of Stay in the residence</b>			
Less than 5 years	13	54	67(11.0)
6-10years	34	36	70(11.4)
11-15 years	52	21	73(12.0)
16-20years	89	25	114(18.6)
21-25 years	69	12	81(13.2)
over 25 years	208	1	209(34.0)
<b>Tenure Status</b>			
Privately rented	88	117	205(33.4)
Owner occupied	293	32	325(53.0)
Inherited	57	0	57(9.3)
Free houser	2	0	2(0.3)
Multiple ownership (family house)	25	0	25(4.1)
<b>Housing typology</b>			
Semi-detached 1 bedroom bungalow	257	62	319(52.0)
Semi-detached 2-bedroom bungalow	74	24	98(16.0)
3 bedrooms	110	57	167(27.2)
One bed seater house	24	6	30(5.0)

Further examination of the result in Table 1 shows that greater proportions of those who have transformed their houses were male household heads between 41 years and 60 years, had secondary education as their minimum educational attainment and low-income earners. Further, they were mostly self-employed moslems, with household size of over seven persons, living in owner-occupied houses and had lived in semi-detached 1 bedroom bungalow and the estate for over 15 years.

Regarding the nature of transformation the residents have subjected their houses to, the result is shown in Figure 1. Examination of the result in Figure 1 reveals that the most prevalent type of housing transformation in the two estate is the addition of bedrooms (51%) followed by construction of perimeter fencing (16%), addition of shops (12%) and worship place (10%), while the least is the addition of burglar proofing of doors and windows.

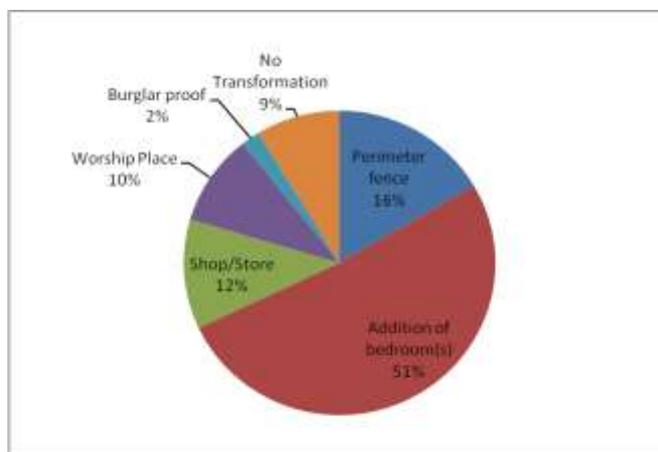


Figure 1: The Type of transformations carried out by the respondents

**4.2 RELATIONSHIP BETWEEN SOCIO-ECONOMIC CHARACTERISTICS OF THE RESIDENTS AND HOUSING TRANSFORMATION**

The relationship between the variables used in describing the participants in the research as shown in Table 1 and their involvement in housing transformation was investigated using Spearman’s correlation coefficient. The result is as displayed in Table 2. The result in Table 2 shows that on the one hand there was a large positive correlation between housing transformation and residents’ tenure status and length of stay, while there was a medium positive correlation between housing transformation and occupation of the participant; and small positive correlation between housing transformation and household size and type of building occupied by the residents. On the other hand, there was medium negative correlation was found to have existed between housing transformation and religious affiliations of the residents, while there was small negative correlation between housing transformation and sex of the respondents in the survey. In addition, the result however shows that there was no significant relationship between the age of the respondents and housing transformation. This result suggests that involvement in housing transformation is influenced by the socio-economic characteristics of the residents in these housing estates.

**Table 2:** Relationship between the Socio-economic characteristics of the residents and housing transformation

Socio-economic Variables	Correlation	Housing Transformation
Sex	Correlation Coefficient	-.143**
	Sig. (2-tailed)	.000
Age of respondent	Correlation Coefficient	-.020
	Sig. (2-tailed)	.625
Marital status	Correlation Coefficient	-.089*
	Sig. (2-tailed)	.028
Occupation	Correlation Coefficient	.335**
	Sig. (2-tailed)	.000
Religious affiliations	Correlation Coefficient	-.375**
	Sig. (2-tailed)	.000
Highest educational attainment	Correlation Coefficient	.229**
	Sig. (2-tailed)	.000
Income Grouping	Correlation Coefficient	.282**
	Sig. (2-tailed)	.000
Household size	Correlation Coefficient	.157**
	Sig. (2-tailed)	.000
Tenure status	Correlation Coefficient	.523**
	Sig. (2-tailed)	.000
Building typologies	Correlation Coefficient	.120**
	Sig. (2-tailed)	.003
Length of stay in the residence	Correlation Coefficient	.552**
	Sig. (2-tailed)	.000

\*Correlation is significant at the 0.05 level (2-tailed).

\*\*Correlation is significant at the 0.01 level (2-tailed).

**4.3 HOUSING TRANSFORMATION PROCESS**

In an attempt to understand the processes involved in the transformation of houses and their surrounding environment within the estates, the respondents who have transformed were asked to indicate if they have building plans for their new additions or alterations. The result is presented in Table 3.

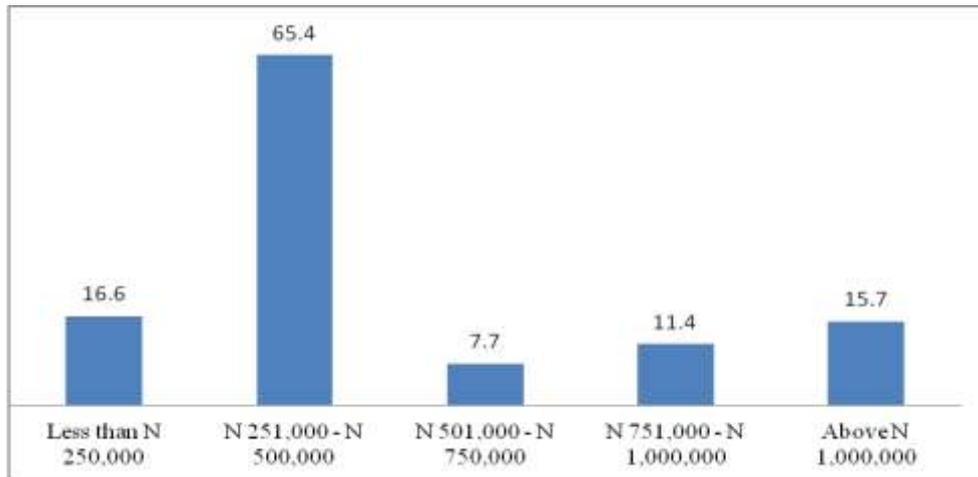
**Table 3:** Possession of a building plan and approval for the effected transformation

Response	Frequency	Percentage
Yes	161	34.6
No	304	65.4
<b>Total</b>	<b>465</b>	<b>100</b>

From the result in Table 3 it is evident that around 35% of those who had embarked on transformation claimed that they have building plans and approved for the alterations, while around 65% said they did not have any building plan and approval to undertake the alteration of their homes. This result suggests that a majority of the alterations done by the residents in these two estates were carried out with building plans and approvals from the relevant government agencies.

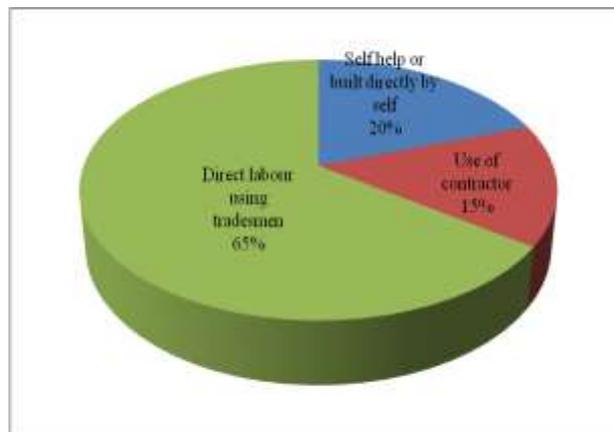
The cost of carrying out housing transformation was also investigated. Although it may be difficult to actually put together the exact amount of money spent on the transformation because in most cases, the exercises are carried out in piece meal manner and the cost varies depending on the magnitude and nature of alterations and additions, yet the respondents provided data, particularly on the range of the money spent in actualizing the transformation exercise as shown in Figure 2. It is evident in Figure 2 that a majority (65.4%) of

those involved in housing transformation spent between ₦ 251,000 and ₦500,000 on their projects, followed by those who spent less than ₦250,000 and those that spent more than ₦1,000,000



**Figure 2:** Estimated cost implication of transformation  
*1US\$= ₦365.5 as at August, 2017*

Adequate knowledge of the methods adopted by the resident to effect transformation is important in improving understanding of process involved in the alteration if the physical and spatial attributes of the housing estates investigated. For this reason the current study also investigated the methods used by the residents in accomplishing their transformation activities by asking those involved in housing transformation in the two estates to indicate the sources of labour used in the transformation process. The result is displayed in Figure 3.



**Figure 3:** Sources of Labour for Housing Transformation

The result in Figure 3 shows that a majority of those who had embarked on housing transformation used direct labour method involving tradesmen in the building industry, 20% relied on self-help, while 15% of them engaged the services of building contractors to execute the job.

## V. Discussion

From findings of this research, the following issues deserve further discussion. First, it is evident from the result that a high majority of the participants in this research had been involved in one form of housing transformation or the other. This consisted with the assertion by previous authors [7; 19] indicating that housing transformation is a common behaviour of residents in government housing estates in many developing countries. Examination of the socio-economic characteristics of the residents who have transformed their houses reveals that most of them are low-income earners and owner-occupiers and had lived in their residences for over 15 years. This findings are in line with previous studies [6;17;30] suggesting that housing transformation is associated with owner-occupiers and long term tenants who have lived in the house for a long time and have no intension of moving to alternative residences. In addition, the current study has also shown that the largest proportion of those who had transformed their houses lived in semi-detached 1-bedroom bungalow. This might help to explain why the result in Figure 1 shows that the addition of bedrooms was the most prevalent

transformation activities among the residents in the two public housing estates sampled. In fact, this finding is not a surprise because most of those who had transformed their houses lived in 1-bedroom bungalows with household size of over seven persons. This housing type is obviously inadequate for a family of seven persons; hence there is a need to increase the size of dwelling units to meet the needs of households. This suggests that the residents perceive their housing as inadequate in terms of the number of sleeping space; hence they have to engage in the addition of bedrooms into the address the short supply of sleeping space on their homes. This is in line with the submission by Nguluma[20] and Aduwo *et al.*[6] on what triggers housing transformation behaviours among residents in mass housing projects.

Second, the result also reveals that there are significant relationships between the socio-economic characteristics of the residents and housing transformation behaviour. These findings appear to be consistent with the submission by Oruwari[4] that housing transformation is a behavioral pattern influenced by a multiplicity of factors, including residents' housing needs, satisfaction, and socio-economic characteristics. In fact, the current study shows that there is a significant relationship between residents' sex, marital status, occupation, income, educational attainment, and household size, type of house, tenure status, religious affiliation, and length of stay. Highlights of the result is the evidence suggesting that the higher the educational attainment, income, household size and length of stay in the residence of the resident the higher the tendency for them to be involved in housing transformation activities in the estates. Similarly, the finding also indicates that the more secured the tenure, the higher the tendency to engage in transformation; suggesting that owner-occupiers are more likely to engage in housing transformation than renters as previous studies [17; 31] have revealed.

Third, regarding the processes involved in housing transformation, the study found out that a majority of those involved in housing transformation do not have building plans and necessary approvals from the relevant government agencies before embarking on the exercise. On why they did not have building plans and approval before embark on the alteration of the original design of their houses, one of the respondents interviewed said: *"I don't have time for that extra stress of seeking approvals, besides what I have done here were not really done in an organized way."* This appears to be in support of the finding by previous study by Tipple [12] indicating that in the developing countries housing transformation was often illegal as it was done without authorization by the relevant government agencies. It was also found that housing transformation activities involved substantial amount of money ranging from ₦250,000 to ₦1,000,000 and above depending on the nature and magnitude of alteration or addition work involved. In the process of carrying out housing transformation, it was observed that a majority of the residents used the direct labour and self-help approaches to get the work done. This is understandable because these approaches are cheaper than the use of building contractors. According to one of the residents interviewed, *"I preferred the direct labour option because I had all the time to personally supervise my work so there was no need to do otherwise"*. Regarding why some of the residents adopted the self-help approach, another respondent noted thus:

*Most of us who were resettled here in those days had one hand work or the other. For instance I trained as a carpenter; my neighbour who is now late was a welder while that old man opposite was a very good bricklayer. We were engaging ourselves where necessary to reduce cost. In fact that was how all these were accomplished".*

Based on these submissions, it can be inferred that most of the housing transformation activities identified in the two estates were undertaken by people in the informal sector of the building industry, which is why Sueca[10] described housing transformation in developing countries as informal housing supply strategy initiated by end users, which involves the adoption of construction practices familiar and convenient to the people.

## **VI. Conclusions**

The current study investigated housing transformation in two low-cost public housing estates in Lagos, Nigeria. Based on the findings, the following conclusions are made. The first conclusion is that a high percentage of the residents who had embarked on the alteration or addition to their dwelling units and surrounding environment were male household heads with large families living in owner-occupied semi-detached 1 bedroom bungalows and had lived in the estate for over 15 years. The second conclusion is that a significant relationship exists between housing transformation behaviour and residents' sex, marital status, occupation, income, educational attainment, household size, type of house, tenure status, religious affiliation, and length of stay. The last conclusion is that the housing transformation activities in the residential estates involved a substantial amount of money but were done without building plans and necessary approved and relied on the use of direct labour and self-help construction approaches.

These findings have a number of implications that are noteworthy here. The first implication is that to minimize the rate at which residents alter their residences indiscriminately, government in Nigeria need to borrow a leaf from advanced countries where housing transformation is part of the housing policies. This can

help provide guidelines for residents who wish to alter their homes for one reason or the other. The study also implies that there is a need for mass housing designers, developers, and managers to constantly update their knowledge on the changing needs of the people in order to design and develop houses that are satisfactory and adaptable to the needs of the target population. This calls for the adoption of incremental (core housing) strategy and adaptable design practice and construction methods in mass housing projects in Nigeria. These would provide residents the flexibility required in adjusting to their housing needs as at when due. Findings of this study also show the imperativeness of relevant government agencies charged with the responsibility of monitoring physical development process to improve on their strategies in ensuring that there is a drastic reduction in the rate at which residents of state constructed mass housing projects are at liberty to alter the original plan of their dwelling units and surrounding environments. There is urgent need for the authorities in charge of these estates to increase their monitoring and surveillance of activities to check the current spate of illegal transformation activities which are contributing to physical and spatial distortion of the original plans of the estates.

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