

# Socio-economic Determinants of Housing Satisfaction Among Middle-Income Households in Owerri, Nigeria

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## Abstract

Housing provision in Nigeria has not only been plagued by insufficiency in numbers, but also by inadequacies in quality. Housing quality is a predictor of housing adequacy. Adequate housing is housing that is in congruence with a family's needs and social status. Achieving this balance creates the possibility of residents experiencing satisfaction with their housing. Housing satisfaction must therefore be viewed as a critical element in housing provision, as it can substantially impact on the overall well-being of housing residents. This study addresses housing satisfaction among the middle-income in Nigeria, and the roles if any, socio-economic factors play in housing satisfaction among this income group. A total of 344 middle income households drawn from multi-stage sampling, were studied. Data collection was through administration of a structured questionnaire, and physical appraisal of housing formation in the study area. The socio-economic variables tested in the study are Income, Family size, Family structure, Level of education, Nature of employment, and Socialisation habits. Logistic regression test, with the logit dichotomous model was used for the analysis. The results of the study show that the socio-economic characteristics which significantly affect housing satisfaction among the middle-income group in Nigeria are Income, Nature of employment, and Socialisation habits. The other socio-economic variables could be accommodated by residents in their housing, if these three were adequately considered from inception. It is the conclusion of this study that housing design for this income group must place emphasis on affordable, cost-effective, and space-efficient housing, which will truly reflect good quality environments, and increase residents' satisfaction with their housing.

**Keywords:** Housing satisfaction, Mass housing, Middle-income, Nigeria, Socio-economic

## 1. Introduction

The Federal Government of Nigeria has over the years, made efforts to provide housing for its population, particularly the low and middle-income groups. Government intervention in mass housing in Nigeria dates back to pre-independence era (Onibokun, 1975; Aribigbola, 2000). Post-independence forays into mass housing by the government have included the formation of National Council on Housing in 1971, instituting the Federal Mortgage Bank of Nigeria (FMBN), and establishment of housing corporations across the different regions in the country (UN-HABITAT, 1993). Further interventions were in the form of the National Housing Policy of 1991; revised in 2006, the campaign for Housing for all by the year 2000, among others.

Private property developers on their part have followed up, heeding the call for housing for all, by developing housing schemes targeting mainly the middle and high-income groups. One of such projects is the 324-units of residential houses in ELIM housing estate Enugu, commissioned on 11<sup>th</sup> July 2014, financed by Federal Mortgage Bank of Nigeria (FMBN) using the resources of the National Housing Fund (NHF) Scheme, and in partnership with a private sector developer. These housing schemes, visible in almost every urban area in the country, make up the public housing stock, as they are usually prototype buildings arranged in housing estates, and open to public acquisition and use.

Mass housing estates are typically developed along broad income stratifications, to capture a range of residents that fall within the stated categories. However, in spite of seeming income similarities among residents, different families have their peculiarities bordering on socio-economic factors, which often translate to functional requirements that demand serious considerations in their housing designs. It is obvious that in mass housing development, the possibility for housing designs to be tailored to the specific individual needs of every one of the housing residents, does not exist, in part due to the sheer numbers of housing units to be provided, in addition to the apparent anonymity of the eventual residents at the point of inception of the housing development. These factors notwithstanding, for mass housing to adequately meet the needs of its residents, it is important that mean functional housing design needs for each income category are established. These functional requirements should expectedly reflect the socio-economic characteristics of the population to be housed.

Presently, it appears that determination of the housing design needs for each group of consumers, based on the understanding of their socio-economic characteristics, usually does not precede the development of the schemes, judging by the resultant dislocation of some of the schemes, like the Festac and Shagari schemes in Lagos and across the country (Njoku, 2014). Improper articulation of housing schemes can result in inadequate housing which can lead to dissatisfaction among housing residents. This dissatisfaction is oftentimes expressed in unauthorised and poorly planned alterations to the houses, poor maintenance, and overall deterioration of the housing neighbourhoods, which can have implications for the general welfare of the residents.

Development of future housing schemes can only benefit from research which highlights specific issues affecting housing residents, rather than from generalised statements harping on the inadequacies in the schemes. Generalised appraisals usually provide little factual evidence of the nature of the inadequacies in the existing housing schemes. It is important therefore that there is proper understanding of the various factors that play on housing residents as they interact with their houses, which could lead to either satisfaction or dissatisfaction. This paper addresses the issue of housing satisfaction among the middle-income in Owerri Nigeria, and how socio-economic factors peculiar to this income group interplay to affect residents' perceptions of satisfaction with their housing. This was done by firstly determining the socio-economic characteristics of this income group, followed by an appraisal of current housing formation in terms of the housing unit, and neighbourhood facilities and services. Determination of housing satisfaction was then based on the interplay of socio-economic characteristics of housing residents on the physical quality of their current housing and neighbourhood infrastructure. This is in line with the position espoused by Aigbavboa and Thwala (2013) that satisfaction as a concept can be assessed based on the post-usage evaluation of the product or service form which satisfaction is sought. Analysis of this information provides a basis for understanding the socio-economic factors that affect housing satisfaction among middle-income mass housing residents in Owerri. This information will also prove relevant in future estate developments, as it addresses issues of lifestyle preferences of the target group of any housing scheme, and can therefore be utilised for improved housing quality.

## 2. Conceptual Framework

The significant, yet complex role housing plays in human development makes it imperative that housing occupants are satisfied with their housing. Satisfaction with housing indicates a high degree of agreement between actual housing situation and desired housing requirements (Vera-Toscano and Ateca-Amestoy, 2007). Housing satisfaction is very important, as shown in studies by Kellekci and Berköz (2006), which showed that satisfaction towards the housing environment reflected residents' reaction not only to the physical and environmental components of housing, but also to the social factors and economic conditions around them. High dissatisfaction rates have a high potential of posing a negative impact on the overall well-being of a family (Husna and Nurizan, 1987). This argument provides the conceptual underpinning of this research, such that satisfaction with housing situation is seen as a reflection of the adequacy of the housing to its residents, and an indicator of societal order and well-being.

## 3. Literature Review

### 3.1 Housing Need in Nigeria

The influence of housing on people's lives and well-being is well documented (Scottish Government, 2010; Barnes, Butt, and Tomaszewski, 2008; Evans, Wells, and Moch, 2003; Vandivere, Hair, Theokas, Cleveland, McNamara and Atienza, 2006). Housing has been identified as the central focus of everyday living, thereby raising the possibility that housing could act as a pathway through which social and economic change can be effected. Over the years, there has been a lot of emphasis on mass housing delivery as a solution to the housing problems in Nigeria. This is predicated on the notion that every human being has a right to live in a home, as contained in Article 11(1) of the International Covenant for Economic, Social and Cultural Rights declaration, which recognizes the right of everyone to an adequate standard of living for himself, including adequate housing and a continuous improvement of his living conditions (United Nations General Assembly, 1966). In line with this philosophy, the United Nations placed an obligation on governments to carry out policies that would ensure adequate provision of housing for the entire population, including the urban poor, by instituting the Global Strategy for Shelter by the year 2000 (UN General Assembly, 1988).

Housing need however goes beyond availability of housing to include the design quality of housing development. The effects of housing quality on various aspects of life have been researched and documented (MORI Social Research Institute, 2002). Spiker (2011) identified a clear connection between bad housing design, and social problems like vandalism and build-up of refuse in the neighbourhood. Oladapo (2006) sees adequate housing as the foundation for stable communities and social inclusion, while Gilbertson, Ormandy and Thompson (2008) observed a significant association between housing conditions and physical and mental health of an individual.

Despite efforts to make adequate housing available to the generality of the Nigerian population, various issues relating to quality and appropriateness of the housing to the target group have grossly undermined the success of the schemes. Some of the challenges identified in mass housing in Nigeria include poor design and construction quality (Olotuah, 1997; Agbola & Olatura, 2003), inadequate knowledge of the nature and scope of the country's housing problems (Olotuah and Taiwo 2015), and a narrow concept of the housing need (FGN, 1990 in Ayedun & Oluwatobi, 2011).

### 3.2 Housing Satisfaction

Evaluation of existing housing provides necessary information to improve the design and development of future housing projects (Preiser, 1989). The concept of housing satisfaction over time has become the most widely used indicator for assessing the performance of housing (Adriaanse, 2007; Kellecki & Berkosz, 2006). Evaluating housing satisfaction as a basis for assessing housing performance is important because households judge their housing conditions based on the actual housing situation and norms, and are likely to express higher levels of satisfaction if their current housing situation meets the norms (Teck-Hong, 2012).

Housing satisfaction as defined by Galster (1987 p.93), is the “perceived gap between a respondent’s needs and aspirations, and the reality of the current residential context”. Housing satisfaction can also be described as the degree of contentment experienced by housing residents with regard to their housing situation (Mcgray and Day, 1997). As posited by Djebarni and Al-Abed (2000), housing satisfaction, beyond physical and structural efficiency of the house, is a measure of the contentment experienced by the residents, as a result of the housing. It is usually influenced by the numerous components in the system, and the background characteristics of the occupants (Jaafar et al., nd). These include social, behavioural, cultural, and other aspects of the socio-environmental system (Onibokun, 1974).

Housing satisfaction can be evaluated based on the following criteria, summarised from researches by Onibokun (1974) and Oladapo (2006):

1. Functional and physical adequacy of the building - Functional and physical adequacy imply that the housing must permit the performance of those functions which define the family lives of the residents, while also being structurally stable, and a shield from the natural elements.
2. Convenience for family living - Satisfactory housing should have characteristics which align with residents’ needs. This is because when there is incongruence between residents’ preferences; which is largely determined by family lifestyle, and their actual housing situations, the chances of dissatisfaction with their housing increase (Diaz-Serrano, 2009).
3. Privacy - Privacy within the home can be defined in four dimensions namely protection from outside noise (sound), having enough room not encroached on by others (space), protection from unwanted sights (sight), and feeling safe at home from break-ins (security) (Mulholland Research and Consulting, 2003).
4. Quality and adequacy of social and neighbourhood facilities - Availability of communal spaces increases the likelihood of increased interaction among neighbours, and has implications bordering on security, social balance, environmental improvement, and economic well-being.
5. Territoriality and neighbourhood security - The safety and security of people within their homes are core issues in their housing satisfaction. These can be guaranteed to an extent, only if the neighbourhood is also protected from intrusions. Neighbourhood security goes beyond physical security barriers to include the design and maintenance quality of housing areas. Good neighbourhood design and effective maintenance can contribute to a sense of community which can also be a deterrent to certain forms of anti-social behaviours, while on the other hand helping build community networks that oversee the security of housing neighbourhoods.

### 3.3 Socioeconomic Factors in Housing Satisfaction

Studies have shown that policies towards providing affordable and qualitative housing in Nigeria have achieved minimal successes over the years, largely because the socio-economic and cultural attributes of the end users are ignored, along with their personal preferences (Awotona, 1987; Ukoha and Beamish, 1996; Fatoye and Odusami, 2009; Ibem and Amole, 2010). According to Mohit and Al-KhanbashiRaja (2014), apart from the host of variables relating to housing and its environment which exert significant influences on housing satisfaction, other important factors such as the culture and values of a people also play major roles in their perceptions of housing satisfaction. This further reinforces the importance of case specific research, as a guide to public policies on housing.

Previous researchers have found linkages between housing satisfaction and factors like age (Varady and Preiser, 1998), family structure (Tan and Hamzah, 1979; Miller and Crader 1979 cited in Theodori, 2001), education, income, employment status, length of residency, and physical characteristics of the house (Yeh, 1972). Additionally, fulfilled housing preferences have also been shown to predict quality of life (O’Connell et al., 2006). This follows that notwithstanding the subjectivity of housing satisfaction, it is still a very important predictor of the overall quality of life of housing residents.

Socio-economic status (SES) and socio-economic class are terms used to stratify population according to the interplay of social and economic factors. It may also be defined as a measure of an individual’s place within a social group based on various factors, including income and education ([gse.berkeley.edu](http://gse.berkeley.edu)). In absolute terms, the middle-income group as defined by the African Development Bank (AfDB, 2011) is a group of individuals or households with annual income exceeding \$3,900 (N627,900) in purchasing power parity. The middle class is

also defined by the bank in relative terms, as individuals and households that fall between the 20<sup>th</sup> and 80<sup>th</sup> percentile of the consumption distribution

It is believed that the socio-economic status of a household plays a major role in the quality of their housing (Hwang et al, 1999). The socioeconomic factors that can affect the quality of housing formation are income, family size, family structure, education, nature of employment, and socialization habits. These are briefly described as follows:

**Income** - income determines to a large extent, the quality of housing a housing consumer can afford irrespective of what facilities he may require to make his house a suitable home for his family. Limited income also translates to reduced expectations, such that housing satisfaction may be experienced at a lower scale of housing quality than for those with higher incomes.

**Family size** – family size is a major consideration in housing. Family size may be affected by the extended family system, and adequate space provisions should be available for family members to perform their chosen activities. Family activities include food preparation, dining, bathing, and entertaining, family recreation, sleeping, among others. Some of these activities require dedicated spaces, while some others may be performed in convenient locations within the house. It is expected that family size would affect perceptions of appropriateness of space provision, as posited by Jiboye and Ogunshakin (2010), in asserting that for housing to be appropriate, it should have spatial relevance to its occupants' lifestyle.

**Family structure** – family structure may include nephews, nieces, cousins, grand-parents and others alike. Polygamy where it exists will pose its own challenges. Age and sex distribution are also important aspects of family structure that have implications for design.

**Education** – this includes level of educational attainment, whether primary, post-primary or tertiary. Educational background also determines a person's level of exposure and can affect his judgments and perceptions of things around him.

**Nature of employment** – Occupation and employment status may affect regularity of income, and may lead to operating income-yielding activities in the home which may include poultry business, small retail outlets, small-scale food processing, and vocational businesses like tailoring hairdressing etc. These may have implications for housing satisfaction.

**Socialisation habits** – the socialisation trends of housing consumers can affect their housing preferences. Where the residential environment is used for socialisation purposes, the housing consumers would want their housing to accommodate the nature and frequency of their social functions. Socialisation trends may extend beyond the housing unit to include the need for communal spaces for neighbourhood gatherings and activities. Additionally, adherence to traditional lifestyles, including demand for traditional dishes and their methods of preparation could affect kitchen layout. There may also be the need for outdoor relaxation spaces for family evening story-telling sessions where applicable.

The socio-economic factors here outlined, largely determine the lifestyles of housing consumers, and by extension, their preferences. Awotona et al (1994) opine that housing design that contradicts users' preferences and lifestyles would invariably lack originality and relevance. Jiboye and Ogunshakin (2010) believe that responsive housing should integrate housing designs with the physical, socio-economic and cultural peculiarities of a people. Diogu (2002) underscores the need for proper research on the lifestyle of housing consumers before designing a housing scheme for them, and states that housing programs seldom succeed, when data for the schemes are not based on strong preliminary research conducted on the target consumers.

#### **4. The Study Area**

The study area Owerri, is the capital city of Imo state, situated in the south-eastern part of Nigeria. There are three local government areas that make up Owerri namely; Owerri municipal, Owerri North, and Owerri West. The total population for the three local government areas was 401,873 in 2006 (NPC, 2006). Owerri is home to a vibrant housing sector. There are different categories of public housing developments in Owerri. Firstly, there are estates which are wholly planned and built by the government, through contractors. These include Aladinma Housing estate and extension, federal Housing estate, Uratta, Imo housing Uratta, Egbeada Housing estate (1<sup>st</sup> phase). The second category of estates is planned by the government, and prototype designs made available to would-be developers. In these estates, properties are acquired by private persons, who are required to build according to government prepared designs. There is yet another type of estates, where the government makes land available to private developers, who plan and build the housing estates. The developers enter into a joint venture with the government for the sale and management of the estates. Area H Housing estate New Owerri and Graceland housing estates fall within this category.

The common feature in all these estates is the existence of prototype building plans, which were designed without prior input of the housing residents.

## 5. Research Methodology

Quantitative research strategy was adopted for this study. The focus of the research was to find out if socio-economic factors have any effect on housing consumers' satisfaction with their housing, and to establish which of the socio-economic factors were more critical in achieving housing satisfaction. For this study, descriptive quantitative research method, specifically survey research using structured questionnaire, was employed to elicit information from housing consumers within the study area.

The research population included all residents of middle-income mass housing estates in Owerri capital territory. This did not include middle income housing areas where individual property owners were wholly responsible for the design and construction of their houses, and were not required to build according to an approved prototype. Housing estates within Owerri are usually a combination of housing for different income groups. In such estates, middle-income sections were delineated for the survey. The types of houses that fall within the middle-income category include two-bedroom, three-bedroom, and four-bedroom detached or semi-detached bungalows and flats. Only these categories of houses were included in the survey.

A total of 15 (fifteen) housing estates with 2,157 (two thousand, one hundred and fifty seven) housing units made up the sample population. The sampling techniques adopted for the research were structured to ensure that the final sample size was truly representative of the population for purposes of determining parameters or characteristics of the whole population. Multi-stage sampling was used for the study. A combination of convenience sampling, simple random sampling, and systematic random sampling techniques were used at different stages of the sampling procedure. Non-probability convenience sampling was used to select the housing estates from which the sample population was drawn. These estates were chosen based on convenience and their accessibility to the researcher. Twelve (12) out of the fifteen (15) middle income housing estates identified in this research were chosen for the survey, based on convenience.

Simple random sampling without replacement was used to select seven (7) housing estates out of the list of twelve (12) chosen based on the researcher's convenience. Systematic random sampling was used to select the individual housing units, which made up the survey sample. In this sampling technique, one unit was initially selected on a random basis in each estate, while the other units were chosen at evenly spaced out intervals of two houses apart until the desired number of units was obtained.

The sample size was calculated using the Watson (2001) formula as shown

$$n = \frac{\left\{ \frac{P[1-P]}{Z^2 + \frac{P[1-P]}{N}} \right\}}{R} \quad \dots \quad (1)$$

In applying this formula, the following considerations were made:

1. The degree of variability in the population ( $P$ ) was assumed to be in the ratio of 70:30. This is because the study population is made up typically of people in the middle-income category, ranging from the floating class to upper-middle class. According to Watson (2001) the higher the degree of variability expected in the target population, the larger the sample size must be to obtain the desired level of precision. As a result, this study did not require a very large sample size to achieve an accurate result, being a relatively homogeneous population.
2. An estimated response rate ( $R$ ) of 80%. The use of dedicated research assistants who were also residents of the estates they surveyed led to the assumption of a high return rate of 80%.
3. A confidence level ( $Z$ ) of 95% was assumed for the study. This level is standard for most social science researches (Watson, 2001).

Applying all these considerations, the calculated sample size was 350.

To determine the socio-economic factors that affect housing satisfaction among the middle-income group in Owerri, a total of 350 copies of structured questionnaire were administered with the help of dedicated research assistants over a period of four (4) weeks. The number of questionnaires returned was 344, making a response rate of 98%. The information elicited from the respondents included their socio-economic characteristics, the physical characteristics of their housing, and their satisfaction with their housing. In addition, physical appraisals of some selected prototypes were undertaken by the researcher, to validate the data from the research instrument.

## 6. Findings and Discussion

The houses surveyed were 2-bedroom, 3-bedroom, 4-bedroom, and 3-bedroom with two room service quarters house types. 12.8% of the houses were 2-bedroom house types, 51% were 3-bedroom, 26.6% were 4-bedroom, and 9.6% were 3-bedroom house types with additional two bedrooms. Summary of the socio-economic characteristics of surveyed households showed that majority of the households (63%) are headed by persons earning incomes ranging from \$1,500 to \$12,500 per annum. This translates to between \$125 and \$625 monthly. Only 16% of the population have combined household incomes of \$16,200 or more per annum. These data show that majority of residents of middle income mass housing estates in Owerri fall within the lower-middle income category.

The results further showed that 96.7% of all respondents had a post-secondary education. 2.7% had

maximum qualification of a secondary education, while respondents with only primary school education or no formal education at all accounted for only 0.6% of the population. Average middle-income household size ranged from 2 to 5 persons, with 56.1% of the population falling within this category. Household size is calculated as the total number of residents living together in one house, regardless of family relationship. Large households among this income group ranged from 6 to 9 persons, and were observed in 37.5% of the population. Households with 10 or more persons were clearly in the minority being only 6.4% of the population. It was also observed that household sizes were not made up entirely of nuclear family members, but extended and non-family members also. 31.7% of the population live in exclusively nuclear family households. The remaining 68.3% are made up of a mix of extended family (40.3%) and non-family (28%) households.

The age distribution of middle-income housing residents showed the highest frequency among the 26 to 50yr age range. 81.8% of all the residents fall within this age range, which also accounts for the bulk of the socially, economically, and biologically active group of persons in any population. Children between the ages of 0-5 yrs were found in a little above a third (36.8%) of the households. Children 6-17 yrs were found in 54.8 % of all households, accounting for more than half of the households surveyed. All age ranges were appropriately captured in significant proportions in most of the houses surveyed, meaning that housing formation in these estates must target needs that cut across all ages, from the very young to the old.

Twenty two percent (22%) of all respondents were not in active employment; 5% of whom were unemployed, while 17% were retired. Of the remaining 78% engaged in active income yielding ventures, 33.5% were employed in the public service, 20.5% in the private sector, while 20% were self-employed. This statistic points to the fact that majority of middle income mass housing residents are persons outside government employ. This factor notwithstanding, prevalence of home-operated businesses was low at 31.1%, with 68.9% of respondents indicating that they did not operate any active businesses from their homes.

The regularity of social gatherings and socially related activities were also observed to be quite low in all categories identified in the research. Respondents who indicated hosting social gatherings in their houses either very often or often were 13.8%. On the other hand, 55.4% indicated that this occurred only sometimes. In the same vein, regular participation by families in outdoor activities, in the very often and often categories, was 14.8%, and entertainment of unannounced visitors overnight was 16.7%. These data show that these socialisation trends were not regular features of the lifestyles of the residents of the surveyed households.

The socio-economic factors that make up the independent variables for this study are *Income, Family size, Family structure, Level of education, Nature of employment, and Socialisation habits*. To determine the effects of these factors on housing satisfaction, the hypotheses that each of these factors has no significant effect on housing satisfaction among the middle income group in Owerri Nigeria were tested. These hypotheses were tested using logistic regression. The model used for the analysis is the logit dichotomous model. This model was used because the threshold parameters of the ordinal regression were not significant. In this case the dependent variable assumed only two values of “satisfied” and “not satisfied”.

Table 1 - Hypotheses on Housing Satisfaction and Socio-Economic Factors of Respondents

Logistic regression

Number of obs = 341  
 LR chi<sup>2</sup>(6) = 30.04  
 Prob > chi<sup>2</sup> = 0.0000  
 Pseudo R<sup>2</sup> = 0.0636

Log likelihood = -221.22388

Y1	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
X1	0.470591	0.1783247	2.64	0.008	0.1210812	0.820101
X2	-0.16739	0.1935877	-0.86	0.387	-0.5468121	0.212038
X3	-0.28211	0.2286075	-1.23	0.217	-0.7301684	0.165957
X4	-0.02832	0.1378101	-0.21	0.837	-0.2984189	0.241787
X5	0.283569	0.079103	3.58	0.000	0.1285299	0.438608
X6	0.154261	0.051461	3	0.003	0.053399	0.255123
_cons	-2.68929	1.117151	-2.41	0.016	-4.878865	-0.49971

**X1** = Income **X2** = Educational Qualification **X3** = Family Size **X4** = Family Structure **X5** = Employment Status **X6** = Socialization Habits

From the table above, following the decision rule, given the column, P > |z|, null Hypotheses 1, 5 and 6 are rejected and the alternatives accepted. This means that *Income, Employment Status* and *Socialization Habits* contribute significantly to the Housing Satisfaction of middle income housing residents in Owerri. As seen from the analysis, the coefficients of X1, X5 and X6 are positive. This means that, these variables increase satisfaction when they are increased.

## 7. Conclusion

The socio-economic factors that significantly affect housing satisfaction among the middle-income group are *income*, *nature of employment*, and *socialization habits*. Other factors like family size, family structure and level of education were found not to be significant determinants of housing satisfaction among this group. Studies by Vera-Toscano and Ateca-Amestoy (2008) showed higher levels of satisfaction with higher educational attainment. This could not be established in this study, as the level of education among the survey population was relatively uniform, and could therefore not be isolated as a significant determinant of their housing satisfaction.

Findings of this research which show that income and nature of employment, rather than family size and structure have significant effects on housing satisfaction among the middle-income group affirm that middle-income housing residents in Owerri are satisfied with space and quality requirements of housing they can afford, effectively de-emphasizing large houses with expensive finishing for this group. The predominant house types in this study were the 3-bedroom and 4-bedroom units, while family size ranged from two (2) to nine (9) persons. It follows then that emphasis in housing design and development for this group would be to ensure effective and efficient management of resources to achieve functional cost-effective houses.

Premised on these findings, the research concludes that the quality of mass housing in Nigeria can be improved, through proper understanding of the intended category of residents. As established in this study, this group is highly educated, majority of whom are gainfully employed, and not engaged in any forms of money yielding activities in their homes. Accordingly, they see their homes principally as places for family expression and personal actualization. Expectedly, the design of their housing must meet these requirements, for them to experience any real satisfaction.

Results of this study will prove beneficial in developing policies for future mass housing schemes for the middle-income population in Nigeria. Housing development in this case would emphasise a sense of community, through provision of good and workable neighbourhood facilities that will address the issue of socialisation habits among this income group. In addition, individual housing units should range from two (2) to four (4) bedroom house types, with ancillary and supporting spaces provided to serve a varied range of functions. This effectively eliminates the need to create dedicated rooms for certain household activities, as flexibility in space design would ensure that all household activities are accommodated in more compact floor plans. This addresses the critical aspect of affordability, which was found to be major factor in housing satisfaction for this group.

Finally, findings of this study should stir up further enquiries into more cost-effective ways of delivering adequate housing to the middle-income group in Nigeria.

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