

Comparative Assessment of the Housing Quality in Federal and State Residential Estates in Enugu Metropolis, Nigeria

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Abstract

No known study has focused on the empirical evaluation of the quality of these estates, let alone doing a comparative assessment along the same quality parameters. Furthermore, it is evident that there are limited recent researches on this subject matter in Enugu and where the state owned and federal owned housing estates have been provided. It is against this background that this study sought to make a comparative assessment of the housing quality in State and Federal housing estates in Enugu metropolis with a view to empirically appreciating the quality of these estates. The data were derived from a questionnaire survey of 308 tenants derived from 1,347 housing units in the selected state and federal public Housing Estates in Enugu metropolis with household-head as the respondents and analyzed using descriptive and inferential statistics. Twenty one parameters were used to measure quality of housing for this study . The housing estates were clustered into two – State and Federal housing estates. Simple and systematic random sampling techniques were both adopted for this study. Two housing estates were selected from each of the clusters. The result of the study showed that the housing quality ranking of the two State Housing estates had a relatively high rate of 2.95 (Riverside Estate) and 2.90 (Real Estate) unlike the Federal housing estates that had the quality rank of 2.7 (Federal Housing Estate) and 2.8 (Federal Sites and Scheme estate). This implies that the State housing estates are of better quality than the federal owned housing estate. The understanding of the revelation from the study will help the urban planners and housing technocrats in developing countries with relevant information that will guide them in housing improvement and development and for their future planning activities are more inclusive, pro-poor and hence sustainable.

Key words: *Quality, Estates, Federal, sustainable*

1. Introduction

Studies have identified housing as basic need for human survival, and an important tool for measuring the citizen's quality of life (Ugonabo et al, 2018; Ugochukwu et al, 2015). In the policy document (National Housing Policy, 2006), the federal government defines housing considering its entire ramifications and sees housing as the structure that provides accommodation for man, the environment of the structure and all the basic social services and utilities that make houses, a neighborhood or community a livable environment. The housing situation in Nigeria is characterized by some inadequacies, which are qualitative and quantitative in nature (Adegoke, 2016). With the high rate of urbanization, housing provision has become an uphill task in Nigeria. The rate of supply of housing stock evidently lacks behind the quantitative need of the populace, and housing deficit has been observed as a visible enduring feature of the urbanization process (Umar et al, 2019).

However, the government (federal, state and local) is not the only body saddled with the responsibility of providing housing, the private sector and other agencies are also involved in the provision of housing. Over the years, there have been several attempts by the stakeholders to provide lasting solutions to the housing problems in Nigeria. These attempts can be perceived as futile, because it has yielded little or no result. For the past few decades, access to adequate housing has remained one of the most unattainable expectations of the majority of urban dwellers in Nigeria (Jiboye, 2010). Furthermore, there have been inconsistencies in governments approach at resolving the seemingly intractable housing problem of the country. This is evident from ever-changing strategies aimed at achieving the goal of the National Housing Policy, and the institutional framework for it (Teketel, .& Huang, 2021). The Nigerian public sector has been involved in outright housing construction as well as sites and services schemes. This is evident in major cities in the country, where there have been construction of residential estates by both the federal and state government as well as land made available for sale with basic amenities. Enugu, which is the study area for this research is a beneficiary of such interventions.

In spite of government interventions to provide low cost housing, access to quality housing is largely out of the economic reach of the populace ((Teketel, & Huang, 2021)). More so, relevant socio-economic and environmental factors are not taken into consideration in the provision of housing. The goal of the policy on housing reviewed and adopted in 2012, is to ensure that all Nigerian own or have access to decent, safe and sanitary housing in healthy environment with infrastructural services at affordable cost, with secure tenure (National Housing Policy, 2012). This goes to show that, the physical condition as well as the environmental quality of the houses provided should be taken into consideration. Related literature has connected housing quality with residents' satisfaction and general wellbeing. Quality of housing is a more complicated phenomenon than earlier mentioned, comprising of different attributes and globally accepted parameters for classification.

Most urban centers in Nigeria are characterized by high densities of building, the crowding of houses, lack of space for open air living between houses, substandard housing, and acute environmental and sanitary problems (Samson, and Tunde, 2020). Studies have shown that the

quality of housing has a profound influence on the well-being and productivity of individuals, households and communities (Preetha, & Sheeba, 2020) . However, with the trend of rapid urbanization prevalent in city centers, there is a growing need to study the quality of housing inhabited by the low and medium income group, and also to understand the quality of housing constructed solely by government. Access to quality housing is a multi-dimensional issue. Consequently, availability, accessibility, demand, satisfaction, preferences, affordability and sustainability are among key factors usually considered in the provision of quality housing globally. In Nigeria, apart from private individuals that have formed 90% of the provider of residential housing in the urban area (Ogunbayo et al, 2018), the State and the Federal government have as well provided houses for the dwellers. The provision of housing in Enugu urban has actually not matched the demand of those seeking for residential accommodation. Enugu, just like most cities in Nigeria has many unfavourable factors militating against the achievement of high housing standards attained by the developed nations. Some of these factors include dwindling national economy, poverty, unemployment, low educational level, house hold size, low utilization of local building materials, and high costs of materials and labour. This study will reveal the reality of the situation as they relate to housing quality in the study area.

Some estates like the, Federal housing estate Trans-Ekulu, Federal sites and services scheme and Republic layout etc were provided by the Federal ministry of Housing and Environment, while others such as the Lomalinda Housing estate, Riverside housing estate Abakpa, Real estate, Liberty Estate and Trans-ekulu Housing estate amongst others were provided by the State Housing Cooperation. These estates are currently housing thousands of households and arguably, these households have diverse views concerning the neighborhood and housing quality. Studies on these estates have dwelt on the maintenance, the accessibility, the adequacy and the affordability of these estates (Nwalusi et al, 2022; Nwankwo & Okonkwo 2012). No known study has focused on the empirical evaluation of the quality of these estates, let alone doing a comparative assessment along the same quality parameters.

Furthermore, it is evident that there are limited recent researches on this subject matter in Enugu and where the state owned and federal owned housing estates have been provided. Not much is known of the residents' perception on the quality of government constructed housing and the key factors that significantly influence this in Enugu. In addition, very little research attention has been given to examining the differences and similarities in the qualities of housing between different residential estates in Enugu State. In view of the fact that housing quality affects health, welfare and productivity of individuals, households and communities, it is pertinent to investigate and understand what aspects of residential environment that can be manipulated to achieve improved housing quality outcomes. It is against this background that this study sought to make a comparative assessment of the housing quality in State and Federal housing estates in Enugu metropolis with a view to empirically appreciating the quality of these estates. The outcome of the study is of immense important to the relevant authorities in charge of provision of housing like the Enugu State Housing Corporation, Federal Housing Authority, Federal and State Ministries in charge of housing provision and other housing professionals for planning, designing and constructing residential housing in the country. This will help them to identify and tackle the

challenges facing the provision of adequate housing for all Nigerians, especially in the area of maintenance.

2. Literature Review

2.1. Housing standards

Housing standards vary from one nation to another and also within a particular country; variations in climate, culture, degree of urbanisation, and socio-economic progress also affect standards. The UNO (1969) stated that standards derive from a people's cultural level of attainment. It has been argued that standards should combine the best features of traditional practice with the economy and rationality of modern techniques. The Nigeria's Federal Ministry of Housing and Environment has yet to come up with a definite housing standard for the country. However, Ubani and Nwauzoma (2018) empirically classified housing standards in Nigeria into two categories: first, space standard, which defines housing intensity development in terms of plot sizes, number of buildings per unit area of land and occupancy sizes. The second relates to performance standard, which describes the quality of the environment. This approach is a modified form of the housing standard specified by the American Public Health Association (APHA) (1946) in 1945, 1946 and 1950. The APHA method minimises individual opinions so as to arrive at numerical values of the quality of housing that are comparable with results from other cities and can be reproduced in the same city by different evaluators using the same system.

2.2 Housing Quality

Quality according to Onion cited in Afon (2000) is a mental or moral attribute of things which can be used when describing the nature, condition or property of that particular thing. Quality is a product of subjective judgment which arises from the overall perception which individual holds towards what is seen as the significant elements at a particular point in time as observed by Olayiwola et al (2006) and Anantharajan,(2023). Ebong (1983) identified some criteria as indicators for quality evaluation in residential development. These include aesthetics, ornamentation, sanitation, drainage, age of building, access to basic housing facilities, burglary, spatial adequacy, noise level within neighbourhood, sewage and waste disposal, air pollution and ease of movement among others. However, Nelson (2004) stipulates 5 basic criteria which provide that housing must be in compliance with tolerable standard, free from serious despair, energy efficient, provided with modern facilities and services; and that it must be healthy, safe and secure. The quality of housing within any neighbourhood should be such that satisfies minimum health standards and good living standard, but should also be affordable to all categories of households as observed by Aribigbola, (2000). Studies have shown that the urban housing in Nigeria is in a deplorable condition. Almost 75% of the dwelling units in Nigeria's urban centres are substandard and the dwellings are sited in slums (Onibokun, (1972); Wahab et al. (1990); Olotuah, (2000); Jagun, (1983). These result from combined effects of natural ageing of the buildings, lack of maintenance and neglect, wrong use of the buildings, poor sanitation in the disposal of sewage and solid waste, wrong development of land, and increasing deterioration of the natural landscape

The slow process of urban planning and zoning, in the face of rapid urbanisation in most urban centres, has resulted in poor layout of buildings with inadequate roads between them and inadequate drainage and provision for refuse evacuation. Thus there is a high incidence of pollution (water, solid waste, air and noise) and inadequacy of open spaces for other land uses.

Egbu et al (2006) devised a model for three Nigerian cities and concluded that properly monitored land use planning has a positive bandwagon effect on housing quality. The quality of a residential area not only mirrors the city development, planning and allocation mechanisms between socio-economic groups, but also shows the quality of life of the urbanites. The realisation of a decent home in a suitable living environment requires the availability of clean air, potable water, adequate shelter and other basic services and facilities. The present study was aimed at investigating housing quality as well as the quality of the environment in which such houses are sited.

2.3: Indicators for Evaluating Housing Quality

In assessing the quality or suitability of housing, qualitative studies have identified some criteria as relevant indicators for quality evaluation in residential development. Among such is Ebong (1983] who acknowledged aesthetics, ornamentation, sanitation, drainage, age of building, access to basic housing facilities, burglary, spatial adequacy, noise level within neighbourhood, sewage and waste disposal, air pollution and ease of movement among others, as relevant quality determinants in housing. However, Hammer et al. (2000) conclude that qualitative housing involves the provision of infrastructural services which could bring about sustainable growth and development through improved environmental conditions and improved livelihood. In determining the quality of residential development, Nelson (2004) stipulates five basic criteria which provide that housing must be in compliance with tolerable standard, free from serious disrepair, energy efficient, provided with modern facilities and services, and that it must be healthy, safe and secure. These indicators consist of variables such as; access to basic housing and community facilities, the quality of infrastructural amenities, spatial adequacy and quality of design, fixtures and fittings, building layout and landscaping, noise and pollution control as well as security.

There are however indications from these various studies that a single variable may not be sufficient to assess the qualitative nature of residential development; as noted by Jiboye, [2004). Therefore, housing acceptability and qualitative assessment should also take into account type of constructions, materials used, services, spatial arrangement and facilities within dwellings, function and aesthetics, among others

3. Case study area

The selected case study is Enugu, the capital of Enugu State and is located in the South-Eastern geopolitical region of the Federal Republic of Nigeria as shown in Figure 1. Enugu City is located between $06^{\circ}21'0''N$ and $06^{\circ}30'$ latitude and between longitude $07^{\circ}26'$ E and $07^{\circ}37'$ E. The land area of the city is estimated at about 72.8 square kilometers. Enugu Urban consists of three local government areas, namely: Enugu North, Enugu South and Enugu East as shown in Figure 2. Enugu is the foremost headquarter of the former south east region of Nigeria. It has 24 prominent residential neighbourhoods. Enugu urban registered a population of 62,764 in 1952; the 1991 Census shows the population count of Enugu to be 462, 514, accommodated in 28 residential

patterns. This increased to 722,664 in 2006 and is estimated to be 1,414,785 in 2022. The spatial scope of this study is limited to the neighbourhood in the Enugu metropolis, Enugu south, Enugu north and Enugu East Local government areas.

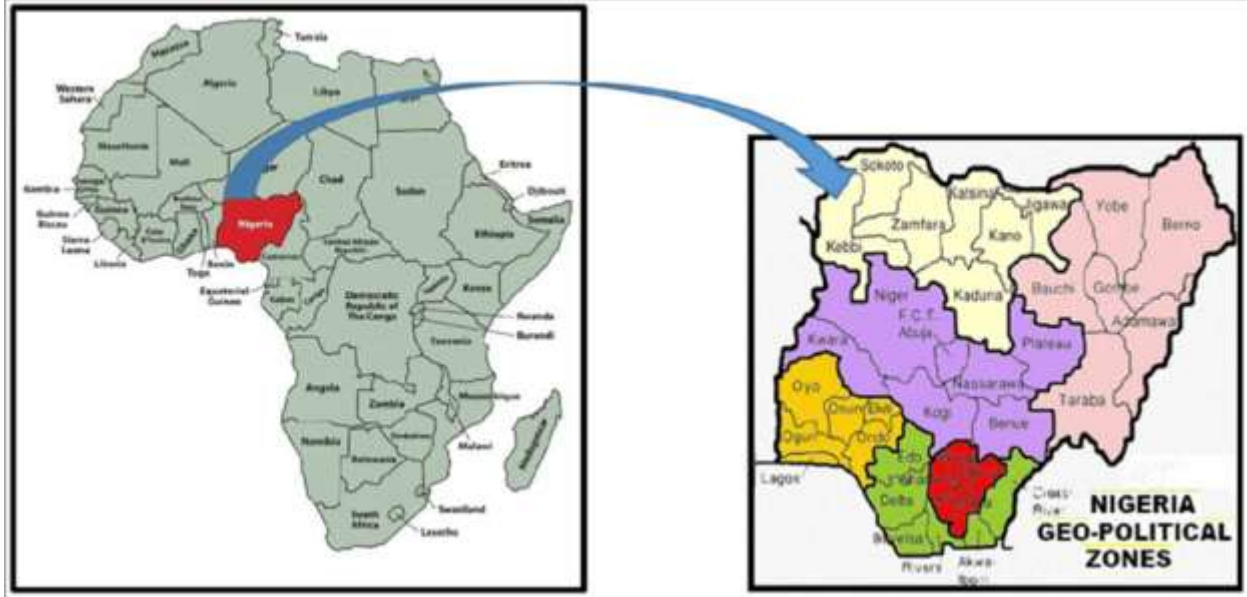


Figure 1: Map of Africa showing Nigeria

Source: Ministry of Lands Survey, Enugu State, 2018.

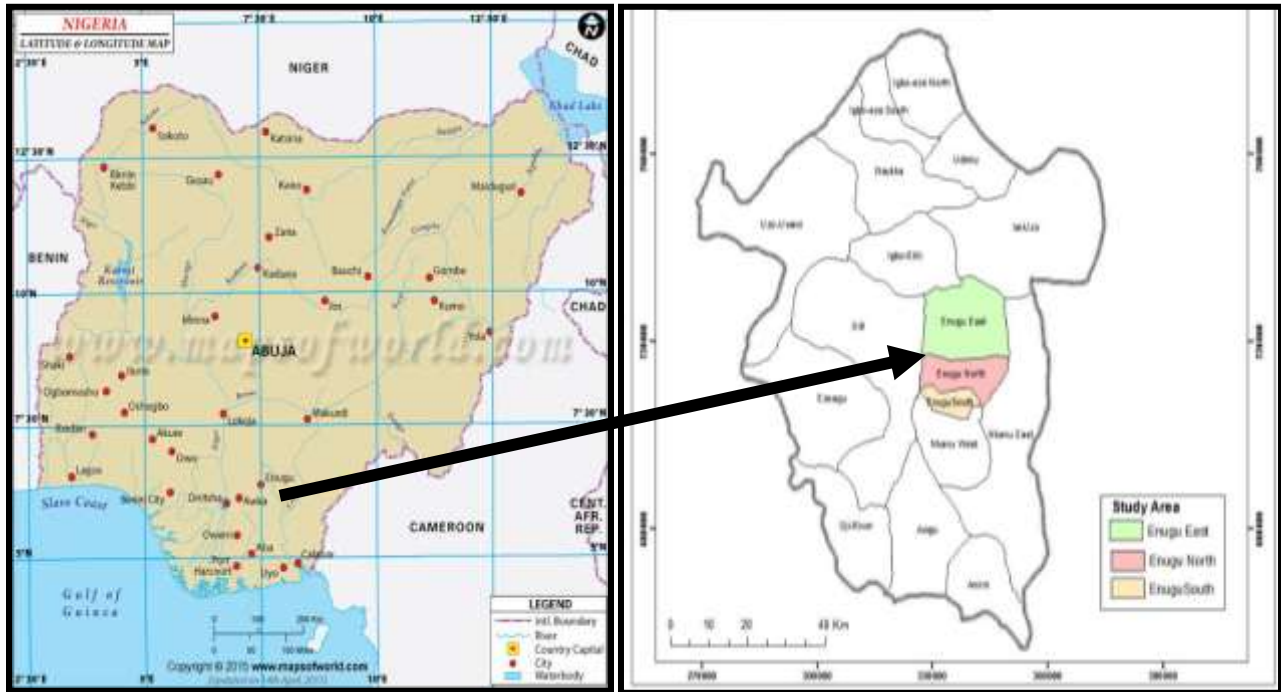


Figure 2. Map of Nigeria showing Enugu and that of Enugu State showing Enugu urban
Source: Ministry of Lands Survey, Enugu State, 2018.

3. State and Federal Housing Estates in Enugu metropolis

Among the public housing estates in the study area are the State and Federal housing estates. Descriptions of the physical characteristics of both the public and private of housing estates investigated are presented with the aid of plates as seen below.

3.1. State Housing Estates in Enugu metropolis

3.1.1 Riverside housing Estate, Abakpa Nike, Enugu

This estate is a residential development for low income earners constructed in the 70's (1972-1974) by the then Eastern Housing Corporation, now Enugu state Housing Development Corporation (ESHDC). It was completed in 1974 and thus, it is classified as one of the estates that have lasted for more than 30years. The estate is made up of Semi-Detached (Multi-Flats-Block of 3 or more Flats); Semi-Detached (Duplex, Maisonette) including Terraced houses; and Detached (Maisonette) as well as detached duplexes; Allocated randomly to different households as shown in Plates 1. Most of the dwelling units are owner occupied. The units have been privatized, the residents pay ground rent to the government for maintenance, unfortunately the estates are still being neglected and maintenance left to individuals. Security is also organized by the estate association. The estate has no form of perimeter fencing, access and internal roads are in a bad state, the condition of storm water drainages are poor and in most cases, lacking. The soft and hard landscaping were not accessed because of its absence.

3.1.2. Real estate, Uwani

This estate is also a residential development for low income earners constructed and owned by the state government. Under the Enugu state Housing Development Corporation (ESHDC). The estate is made up of uniform buildings of blocks of flats. Each block has a total of six (6) flats, each having two bedrooms. As with the other estates, they have been privatized, the owners pay ground rent to the government for maintenance. Most of the dwelling units has an almost equal percentage of owner occupied and tenancy buildings. In all the estates studied, this is the only estate where government still provides security. The estate has perimeter fencing, access and internal roads are in good condition as they were rehabilitated in 2012. Drainages are present but not properly maintained. The housing facilities such as indoor running taps and water heater are no longer functional. Elements of landscaping that would improve the aesthetic quality of the estate are not present in this estate. Officials from housing corporation reported that they conduct regular maintenance, but the residents reported otherwise saying that they never respond to complaints in time.

3.2 Federal Housing Estates in Enugu metropolis

3.2.1 Federal low cost Housing estate, Trans ekulu

This estate was Federal government mass housing scheme provided for low income earners in Enugu during the Shehu Shagari administration. It has also lasted more than 30 years. The original design of houses in this estates were twin Maisonette (bungalows), due to neglect from the government the most of the housing units have been redesigned and restructured. The owners, have changed them to suit their taste, only a very few of the buildings have retained the original design used mostly as rental housing. The estate was made open for purchase to the general public. The residents pay ground rent to the government for maintenance, unfortunately the estates are still being neglected and maintenance left to individuals. Security is also organized by the estate association.

The estate has no form of perimeter fencing with security post mounted at the entrance, access and internal roads are in a bad state. There are no drainages, the few present were provided by the individuals). The soft landscaping was noticed at the front yard of some of the housing units

3.2.2 Federal sites and services scheme, Independence layout

This estate was developed for middle income earners by the Federal Government of Nigeria through the Federal Housing Authority. It is located at Independence layout, very close to the Federal secretariat and it is classified as below 15 years old. The scheme was made available for individuals to buy up plots for residential and other land uses. The estate has blocks of flats, detached bungalows and duplexes of 2-bedroom, 3-bedroom, 4-bedroom and 5-bedroom apartments for fifty one households. The estate was just parcelated with basic amenities of road, electricity and water. Access to the above mentioned amenities is through communal effort.

The estate has perimeter fence, well-paved access/driveway and very bad internal roads as well as no storm water drainages, residents rely on run off. The main entrance to the estate has security post manned by a team of security officers. The soft and hard landscaping within the estate are fair

4. Research methods

4.1 Research Design and Study Population

The study adopted survey research design. The population of the study comprised of housing units in the chosen estates. The household heads (tenants) that have lived in the estates continuously for not less than a year formed the respondents. The collection of primary data was accomplished by conducting reconnaissance survey and administering copies of questionnaire. The survey was conducted among the household heads (tenants) that have lived in both the state and federal Housing estates of Enugu Metropolis.

4.2 Sample Frame

The research population is made up of 1,347 housing units in the selected state and federal public Housing Estates in Enugu metropolis with household-head as the respondents. They are made up of 878 Federal government and 469 State government constructed housing units

4.3 Sample size determination

In determining the sample size in this research work, Yaro Yamani population sampling size formula was used. The formula is stated below.

$$\text{Yemen's formula: } n = \frac{N}{1+N(e)^2}$$

Where Sn = Sample size

N= Population

E = error margin or exponential point

I = constant

In order to obtain the number of questionnaire to be administered in each of the selected housing estate, this formula below was used. Note that the number of the housing units got from the Enugu State Housing Cooperation (ESHDC) in all the selected housing estates was 1,347

$$S.sn = \frac{1,347}{1 + 1,347 (0.05)^2}$$

$$S.sn = \frac{1,347}{1 + 1,347 (0.0025)}$$

$$\therefore S.sn = 308.414$$

The sample size calculated for the study is 308 respondents, which represents 22.86% of the total population of the study. This implies that a total of 308 respondents were chosen for the study. All 4 estates in the study area were considered in the study for better representation of the respondents.

4.4 Data collection instrument and variables investigated

The major instrument that was used in the survey was the questionnaire. The questionnaires were given to the household heads that represent the tenants. Only respondents who have lived for one year and above were considered in the study. The questionnaire comprised of two parts. The first part of the questionnaire examined many socioeconomic aspects of residents, including gender, age, educational attainment, years of schooling, occupation, income level, household size, and period of residency in the estates. The second part was composed of structured and unstructured questions on relevant indicators of housing quality in the various housing estates. The structured or closed questions were meant to tailor the respondents to specific answers that addressed the aim and the hypothesis of the study. Respondents' housing quality indices with these variables was obtained using a four-point likert scale ranging from very dissatisfied (rated as 1), to very satisfied (rated as 4). The information from the questionnaire helped to ascertain the residential satisfaction of the study area. . Ubani et al (2023) stated that likert scale is a four point scale in which the interval between each point on the scale is assumed to be equal and it is used to register the extent of agreement or disagreement with a particular statement or an attitude, belief or judgments. The questionnaire was first of all tested with few randomly selected residents in the estates before administering it to the sampled residents in area. This was done in order to assess the level of comprehension of the contents of the questionnaires by the respondents and make minor changes in the grammar to avoid ambiguity of any sort. Twenty one variables were used to measure quality of housing for this study. They are: Quality of wall, Quality of foundation, Quality of roof, Quality of paint, Quality of doors, Quality of windows, Quality of drainage, Quality of toilet, Quality of power supply, Quality of refuse disposal, Security of the estate, Security of individual buildings, Closeness to recreational facilities, Area of compound, Area of internal spaces, Management of estate, Location of estate, Closeness to hospital, Closeness to market, Closeness work, Closeness to basic facilities

4.5 Data collection and analysis

The simple and systematic random sampling techniques were both adopted for this study. Simple random sampling technique was used to choose two housing estates from each of the categories of public housing estates. For the Federal housing estate; Federal Sites and scheme Independence layout and Federal housing Estate Trans Ekulu, were selected. And for the State government estate: Real estate Uwani and Riverside estate Abakpa, were selected. Table 1 shows the housing estates and the number of housing unit for each estate, as was got from the Federal Ministry of Housing (FMH), Enugu and Enugu State Housing Development Corporation newsletters (ESHDC).

Table 1: Number of housing units for each estate and Sample Size

S/N	ESTATE	PROVIDER	NUMBER OF HOUSING UNITS	SAMPLE SIZE
1.	Federal sites and services Scheme	FEDERAL GOVT.	51	9
2.	Federal housing estate, Trans ekulu	FEDERAL GOVT.	827	145
3.	Real estate	STATE GOVT.	108	35
4.	Riverside estate	STATE GOVT.	361	119
	TOTAL		1347	308

Source: ESHDC, FMH, 2024

The total number of streets in each Estate was established during the preliminary survey. Based on an initial assessment and data gathered from Google Earth, it was determined that there are a total of 433 streets across the selected estates. The distribution revealed that there existed 109, 145, as well as 179 streets in the low, medium, and high density housing estates respectively. Therefore, a selection was made of 10% of the total streets in each residential zone. A systematic sampling procedure was employed to select each 5th building on the chosen streets. Systematic sampling technique was used to select the household heads from each of the selected streets to be sampled. The 5th building was always selected, this was to ensure proper representativeness in the streets sampled. However, any building that the household head has not lived up to one year was not sampled. Proportionate allocation strategy was used to get the sample size for each of the estates using their housing unit' numbers as seen in table 2. Recall that this is a comparative study of both the Federal and state residential estates, as a result the questionnaire were evenly divided into two: 154 questionnaires for the Federal Estate and, 154 questionnaires for the State government estate. This number was further allocated to different estate either in the Federal or State category, using proportionate allocation technique, to derive a sample size for each estate. The total number of questionnaires share were 308 to household heads, In all, a total of 308 copies of questionnaires were distributed.

4.6 Data Analysis

Required data were collected at specific periods (between 7.00a.m. -9:00 a.m. and 4:00p.m -7:00 p.m. on week days), on the sampled housing to facilitate meeting the respondent household heads at their residence from March to September, 2024. The establishment/organizational surveys were conducted during office hours through oral interview to obtain information on housing quality and maintenance. Because of the wide distribution or dispersion of the study population and other technicalities, administration and collection of questionnaire and other data were carried out over a period of two weeks. Distribution and collection of some questionnaires, observation and data collection with photographic materials in all the sampled estates were also carried out by the researcher. Only one type of statistical tools was employed in this study, - descriptive statistics. The descriptive statistics involves ranking, frequencies and percentages.

5. Results and Discussions

5.1 Overall Housing quality

The various mean ranking of the housing quality of the estates given by the respondents were presented and discussed in this section. A mean score of their 4 point likert scale was calculated using SPSS to determine the overall quality of each estate, as seen in table 2. A mean score of less than 2.5 was considered as poor quality, while mean score of above 2.6- 3.0 is rated as fair quality, a mean score above 3.0 is rated as very good. The parameters used to measure quality of housing for this study are: Quality of wall, Quality of foundation, Quality of roof, Quality of paint, Quality of doors, Quality of windows, Quality of drainage, Quality of toilet, Quality of power supply, Quality of refuse disposal, Security of the estate, Security of individual buildings, Closeness to recreational facilities, Area of compound, Area of internal spaces, Management of estate, Location of estate, Closeness to hospital, Closeness to market, Closeness work, Closeness to basic facilities

Table 2: Overall quality of each housing Estate

Location	N	Mean	Std. Deviation
Mean quality score (Riverside estate, Abakpa)	119	2.9572	.23291
Mean quality score (Real estate, uwani)	35	2.9007	.23651
Mean quality score (Federal housing estate)	145	2.7238	.25487
Mean quality score (Federal sites and services scheme)	9	2.8836	.28082

Source: field survey and SPSS result, 2024

It was observed that housing quality ranking showed that the two State Housing estates had a relatively high rate of about 3 approximately unlike the Federal housing estates that had the quality rank of 2.7 and 2.8 which is of average rating. This indicates that the respondents submitted that housing quality ranking in the State housing Estate is better than that of the Federal housing estates. In other words, from the result of the analysis, it was inferred that Riverside estate and Real estate has the higher quality of housing compared to the Federal housing estates considered in this study. With a mean score of 2.95 and 2.90 respectively, these estates can be said to be of good quality. Federal housing estate Trans Ekulu and Federal sites and services scheme, had a mean score of 2.7 and 2.8 respectively. The mean score of the various estates are all above 2.5 men score, which means that they have a good quality. From these results it can be inferred that the State housing estates are of better quality than the federal owned housing estate.

5.2 Residents' ranking of individual quality parameters

This section reports result of the respondents ranking of the individual parameters. A descriptive analysis was run on the data collected using the four point scale. Results show residents perception of the quality of each of the housing parameters in their individual estate as presented in Tables 3.

Table 3: Variable ranking for Riverside Housing State Housing Estate

	N	Minimum	Maximum	Mean	Std. Deviation
Quality of wall	119	2.00	4.00	3.5882	.64324
Quality of foundation	119	2.00	4.00	3.6218	.52062
Quality of roof	119	1.00	4.00	2.9076	.73636
Quality of paint	119	2.00	4.00	3.3025	.59024
Quality of doors	119	1.00	4.00	2.9160	.69599
Quality of windows	119	2.00	4.00	3.2353	.63387
Quality of drainage	119	1.00	4.00	2.7563	.94749
Quality of toilet	119	2.00	4.00	3.0588	.62834
Quality of power supply	119	1.00	4.00	2.0336	.84305
Quality of refuse disposal	119	1.00	4.00	2.4370	.73229
Security of the estate	119	2.00	4.00	2.8487	.49811
Security of individual buildings	119	1.00	4.00	3.0504	.64897
Closeness to recreational facilities	119	2.00	4.00	2.9076	.62425
Area of compound	119	1.00	4.00	3.0000	.63779
Area of internal spaces	119	1.00	4.00	2.6807	.82269
Management of estate	119	1.00	4.00	2.3333	.82333
Location of estate	119	2.00	4.00	2.9833	.48478
Closeness to hospital	119	2.00	4.00	2.8750	.66815
Closeness to market	119	2.00	4.00	3.3750	.51957
Closeness work	119	1.00	4.00	3.0083	.60106
Closeness to basic facilities	119	2.00	4.00	3.1583	.46735
Valid N (listwise)	119				

Source: Field survey and SPSS result, 2024

In riverside estate, rankings for the structural attributes of the housing units ranked highest, followed by proximity of the estate to other landuses. The lowest on the list are parameters relating to quality of basic amenities and adjoining infrastructures. The lowest being the quality of power supply.

Table 4: Variable ranking for Real estate, Uwani

	N	Mean	Std. Deviation
Quality of wall	35	3.1143	.40376
Quality of foundation	35	3.7143	.45835
Quality of roof	35	2.7714	.42604
Quality of paint	35	2.9714	.56806
Quality of doors	35	2.7143	.45835
Quality of windows	35	3.0857	.50709
Quality of drainage	35	2.6571	.83817
Quality of toilet	35	2.8857	.67612
Quality of power supply	35	2.0286	.98476
Quality of refuse disposal	35	2.5429	1.06668
Security of the estate	35	3.0286	.51368
Security of individual buildings	35	2.8857	.32280
Closeness to recreational facilities	35	2.2000	1.05161
Area of compound	35	3.0857	.81787
Area of internal spaces	35	3.5429	.56061
Management of estate	35	2.8857	.79600
Location of estate	35	2.9429	.53922
Closeness to hospital	35	3.1429	.42997
Closeness to market	35	3.0000	.24254
Closeness work	35	2.7143	.51856
Closeness to basic facilities	35	3.0000	.24254
Valid N (listwise)	35		

Source: field survey and SPSS result, 2024

Table 4 shows the results from the residents ranking of Real estate. The result shows that the quality of power supply, quality of drainage and quality of proximity to recreational facility have the lowest quality ranking. According to the results the quality of proximity to basic facilities is good. The housing quality parameter with the highest ranking mean is the foundation of the house, while the lowest ranking are mostly related to adjoining infrastructure that facilitate housing.

Table 5: Variable ranking for Federal Housing Estate

	N	Mean	Std. Deviation
Quality of wall	145	3.0897	.65529
Quality of foundation	145	3.1241	.67580
Quality of roof	145	3.0276	.73546
Quality of paint	145	3.2207	.58296
Quality of doors	145	3.1793	.64193
Quality of windows	145	3.3586	.61999
Quality of drainage	145	2.5655	.92657

Quality of toilet	145	3.2207	.71170
Quality of power supply	145	1.4276	.63185
Quality of refuse disposal	145	2.6069	1.07559
Security of the estate	145	2.4069	1.01719
Security of individual buildings	145	2.5310	.95055
Closeness to recreational facilities	145	1.6966	1.10129
Area of compound	145	2.8966	.54929
Area of internal spaces	145	2.8966	.62053
Management of estate	145	1.7034	.79166
Location of estate	145	3.0483	.54430
Closeness to hospital	145	2.7103	.72569
Closeness to market	145	2.9241	.80866
Closeness work	145	2.9862	.56502
Closeness to basic facilities	145	2.5793	.82217
Valid N (listwise)			

Source: Field survey and SPSS result, 2024

Results of the descriptive analysis run on Federal Housing Estate as seen in table 4, revealed that the quality of power supply, proximity to recreational facility and management of estate was ranked lowest as having a poor quality. Next in ascending order is the quality of basic infrastructure and proximity to basic facilities. The highest ranking was the structural quality of the housing unit. This is no surprise as most of the houses have been remodeled from the original design, and built to the taste of the owners. The respondents, maintain their individual housing units.

Table 5: Variable ranking for Sites and services Federal scheme

	N	Mean	Std. Deviation
Quality of wall	9	3.5556	.52705
Quality of foundation	9	3.5556	.52705
Quality of roof	9	2.7778	.66667
Quality of paint	9	2.7778	.66667
Quality of doors	9	3.3333	.50000
Quality of windows	9	3.1111	.33333
Quality of drainage	9	1.8889	.33333
Quality of toilet	9	3.4444	.52705
Quality of power supply	9	1.7778	.97183
Quality of refuse disposal	9	2.8889	.33333
Security of the estate	9	3.0000	.00000
Security of individual buildings	9	2.6667	.50000
Closeness to recreational facilities	9	2.3333	1.00000
Area of compound	9	3.3333	.70711
Area of internal spaces	9	3.0000	1.00000
Management of estate	9	2.7778	.66667

Location of estate	9	3.5556	.72648
Closeness to hospital	9	2.4444	.52705
Closeness to market	9	2.6667	.50000
Closeness work	9	3.0000	.00000
Closeness to basic facilities	9	2.6667	.70711
Valid N (listwise)	9		

Source: Field survey and SPSS result, 2024

In Federal sites and services scheme, as presented in Table 5, quality of power supply and quality of drainage ranked the highest. And truly, from physical observations the drainages were not constructed in the estate. These houses were constructed by the respondents, so the qualities were ranked high. However, the neighbourhood and environmental qualities were ranked poor.

6. Policy Implication and Recommendation

Based on the findings of this research the following recommendations were made.

Firstly, Housing maintenance is required on both estates. Although most of them have been privatized, basic amenities and infrastructure such as, portable water, electricity and roads should be provided and maintained over time. The only estate that has experienced any form of renovation is Real estate, and that was in the year 2007. Others have been neglected, this should not be. Government must provided housing and make sure that quality is maintained. The state government should assist the federal government in maintaining the provided estates, as the findings suggest the federal government have neglected the provided estate. Management agencies need to be set up on both estates to cater for problems that generally beset the resident population, and ensure that the buildings meet basic requirements for habitability. Public goods and services supplied on community basis, which are not functioning properly, should be looked into by the agencies. Refuse disposal is of paramount importance in maintaining the quality of the environment. It is imperative that incinerators should be provided on the estates and a effective collection procedure is put in place to get the wastes there. This will eliminate the creation of unsightly refuse dumps and indiscriminate refuse burning. The State Waste Management Board should be encouraged to extend their services to the estates to further improve the level of cleanliness of the estates. The evacuation of slop water from rain run-off and wastewater discharged from kitchens and bathrooms should be enhanced by the provision of drains within the individual plots, as well as along the roads on the estates.

Secondly, it is also suggested that steps be taken to improve the quality of housing schemes targeted at the middle and low income earners. This is in view of the fact that among the three income categories of housing estates investigate. This can be achieved by adopting the public housing delivery option more in the development of housing for the middle and low income earners. This suggestion is hinged on the finding of this study that housing provided solely by government agencies in the research population were rated higher on the quality scale than the PPP housing by the residents.

Thirdly, the finding of this study indicates that houses in all the estates were constructed using conventional building materials with attendant high housing cost or rent, high maintenance cost and other housing expenditures; which cumulatively led to the housing being considered to be „unaffordable“ by the residents. For this reason, it suggested that housing developers should explore into how to make housing affordable to the people. This can be achieved by: (a) bringing down the cost of housing, (b) using durable materials and construction solution that will minimize maintenance frequency, (c) providing accessible basic amenities, services and public facilities and at minimum cost in the study area.

Fourthly, Electricity supply is erratic on both estates. The problem of electricity supply is a national one since this is more of power generation and distribution by the National Power Distribution and Transmission Companies. However local problems often compound the situation which management agencies are suitably placed to tackle. These include bad 'transformers, feeder pillars and transmission wires. It is obvious from the study that although most of the housing estates are connected to the national grid for the supply of electricity, the main source of power supply was private electricity generating sets, which depend most on fossil fuel and has adverse environmental and health implication. In view of the current electricity supply crisis in Nigeria, it is imperative housing developers explore the integration of alternative sources of clean energy such as „solar“ into the design and construction of mass housing.

Fifthly, Public water supply is hardly available on the estates and where available it is unreliable. The alternative sources on both categories of estates, which are predominant, are hand-dug wells and vendors. The wells, however, often dry up in the dry season; the situation where most of the households depend on water vendors for the supply of water for domestic consumption is very worrisome as this has serious health implications. It is therefore recommended that this should be addressed. One of the ways for achieving this for the residents Community Development Associations (CDAs) to partner with housing providers to set up efficient water supply systems in the estates by sinking (more) boreholes and constructing water reservoirs. This can ensure constant supply of good drinking water for residents of these housing estates. New schemes should consider incorporating alternative. Bore holes, which are deeper than wells, and provide safe drinking water, are better alternatives, which should be provided by the management agencies. This will enhance the quality of housing on the estates and consequently their livability sources of water supply.

7. Conclusion

The research gave a comparative assessment of the housing quality in State and Federal housing estates in Enugu metropolis with a view to empirically appreciating the quality of these estates The study concluded that the quality of housing units, the quality of neighbourhood environment, that of overall housing in the research population were all good and acceptable. However, the quality of housing in the State residential Housing estates was better than those in the Federal housing estates. Based on this result, this study has shown there is a significant relationship between the quality of dwelling units, neighbourhood environment and overall housing quality in the study

area. The overall assessment can be seen as that of aesthetic values and/or use values of the residential estates; the identification of targets for upgrading the performance of the existing housing stock; thereby facilitating prioritization of limited resources; and the identification of priority predictors to maintain or improve the housing quality or to achieve high quality housing in the study area; landscaping must be taken as priority in the provision of housing. The study has a number of implications on policy formulation, practice and research. The findings would inform policy on part of the future pathways for meeting the housing needs of different socio-economic groups in Enugu in particular and Nigeria in general; for practice they have revealed that, over 50% of the predictor variables are related to infrastructure and basic amenities, in other words planners and other professionals in the environmental and building/construction industry need to give adequate attention to those aspects of housing and layout design to achieve improved quality; and for research the quality of the dwelling units and that of the estate/neighbourhood environment are vital in housing quality assessment.

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