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Assessment of the Social and Physical Characteristics of Obiagu Shanty Area in Enugu Metropolitan City, Nigeria

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Abstract
The persistent rise of the urban population and high housing rent has driven many to shanty towns. However, due to the increased population of the shanty towns, the social and physical characteristics of the towns have deteriorated. The study assessed the social and physical characteristics of Obiagu Shanty Area in Enugu Metropolitan City, Nigeria, with the purpose of establishing the extent of the rehabilitation and its impacts in the lives of the residents, as well as provides a better alternative. The data was obtained using a questionnaire survey. The statistical techniques employed to analyse the data are descriptive statistics (such as simple percentages, standard deviation and mean). The study, in general terms identified that the level of physical and social characteristics of Obiagu Shanty Area is highly negative. The study also reveals poor infrastructural amenities in the area. It demonstrates that the government is failing to fulfill its responsibilities in terms of urban development and infrastructure renewal. Furthermore, the study shows that private individuals and communities do not actively participate in urban regeneration and infrastructural renewal efforts in Obiagu Shanty Area. Therefore, the study recommends some retrofitting measures, such as the construction of modern houses with modern facilities and good sewage systems, the government partnering with private organisations/individuals or the community to assist in the remodeling of structures in the area, and constant sensitisation of residents by the government and NGOs on the negative health consequences of living in a dirty environment, among other things.
Keywords: Shanty Area, Social Characteristics, Physical Characteristics, Metropolitan City, Retrofitting Measures, Urban Regeneration
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1. Introduction

A shanty town is a negative and harsh sort of urban residential space with a lengthy history in large cities and crowded places; it is a space with a progressive deterioration in function and poverty (Yuan & Song 2020). It is also a concentrated reflection of an imbalanced and insufficient development of urban social space, which stifles the growth of a high-quality, long-term social economy (Yuan & Song 2020).

Shanty towns are afflicted by inadequate public services, poor medical and educational care, and a general disregard of its inhabitants by the broader society, even though the presence of dilapidated housing is the most obvious part (Gottdiener & Budd 2005). As a result, a shanty town is defined as an area with insufficient housing, community services, private sector retailers, and professional offices such as doctors, among other things (Gottdiener & Budd 2005). Shanty town dwellers are almost always racially and economically disadvantaged (Gottdiener & Budd 2005). Overcrowding, a shortage of both inexpensive and fresh food, and expert medical aid in the area exacerbate health problems (Gottdiener & Budd 2005).

Shanty towns have settlements that are closely connected, and have residents who have unstable residential status, lack access to safe water, sanitation, and other essential infrastructure and services, low housing quality, and are overcrowded (UN-Habitat 2003). Shanty town is defined by UN-Habitat (2016) as an unapproved or unlawful area typified by poor dwellings built of plastic sheets, corrugated metal, or cardboard boxes, held by underprivileged people without tenure security.

The continued migration from rural to urban regions will increase the number of megacities, which are frequently afflicted by environmental degradation, inadequate housing, traffic congestion, social alienation shanty areas, crime, and homelessness (Akanle & Adejare 2017; Makinde 2012). Owing to filthy circumstances, malnutrition, and a lack of basic health care, shanty communities in many poor nations have high incidence of disease (Makinde 2012; World Health Organisation 2008). Drug trafficking and consumption, burglary, family violence, infections, fires, and hopelessness are all examples of the difficulties of shanty town existence (Makinde 2012; UN-Habitat 2003). All of them have the potential to irritate people and, as a result, derail even the most ambitious municipal plans (Makinde 2012).

Urban regeneration has been used globally to renew shanty areas. According to Couch and Fraser (2003), urban regeneration refers to the field of public policy concerned with the regrowth of economic activity, the restoration of social function or social inclusion, and the restoration of environmental quality in areas where those features have deteriorated. It is a comprehensive and integrated vision and activity that leads to the

settlement of urban problems and aims to achieve long-term improvements in the economic, physical, social, and environmental conditions of a changing area (Roberts & Sykes 2008). Urban regeneration is a modern urban development concept (Pérez, Laprise, & Rey, 2018). It can successfully improve the urban physical environment (Forouhar & Hasankhani 2018), support economic growth, and conserve cultural heritage (Berta *et al.* 2018). Land reutilization (Wang *et al.* 2021), rehabilitation of ancient residential buildings (Zhu *et al.* 2020), and brownfield redevelopment (Martinat *et al.* 2018) are all examples of urban regeneration initiatives.

The majority of Nigeria's metropolitan centers are chaotic, congested, declining, decaying, and blighted areas, with developed shanty areas, as reviewed. These urban shanty areas are known for their horrible living circumstances, which include poor land use planning, insufficient social services, high rates of communicable diseases, and exposure to fires, floods, and violence (Njoku & Okoro 2014). Rapid urbanisation, poverty, an insufficient supply of urban housing, a lack of enforcement of urban development and management standards by city authorities, and a lack of repairs and housing maintenance are all factors that contribute to shanty areas in Nigeria (Njoku & Okoro 2014). These shanty areas must be altered by razing old structures, rehabilitating, and constructing new and modern structures and infrastructures that re-define the areas.

Jegede *et al.* (2019) studied several existing buildings in Lagos Island's residential district areas with the goal of finding housing and planning characteristics in these areas to facilitate smart city implementation. The history of the buildings and the variables that have influenced the evolution of housing types were investigated, as well as how these can influence and affect any smart city implementation or reform agenda. According to the survey, a major percentage of the buildings have not been refurbished in the last ten years and are mixed-use structures. It states that expanding business operations in the area have had a significant impact on the current status of homes in Lagos Island. Furthermore, the study reveals that the purpose and styles of homes in the area have changed with time, with what was once a resting spot for a man and his family becoming a multi-functional space. However, in order to create a smart city, the report recommended sustainable urban regeneration and planning.

Ezema *et al.* (2016) investigated Urban Regeneration in Lagos Inner City, Nigeria, using state-led New-Build Gentrification. This study examined a case of state-led new-build gentrification in Lagos, Nigeria's densely populated and congested inner city. The characteristics, problems, and potential of new-build gentrification in the Lagos inner city were examined using a case study of a multi-story government-sponsored residential building project currently under construction on Lagos Island. Interviews, observations of the research region, and documentation evidence from the government agency in charge of the project were used to gather data for the study. It was discovered that the consequence of displacement of the area's original residents was handled in a satisfying manner by them. The need to rejuvenate and reinvigorate the inner city was also discovered to be driving state-led gentrification in the research region. The implications of gentrification for successful land use and densification inside the inner city were discussed.

High-income earners buy individual residential units from low-income working-class owner-occupiers or landlords with tiny property holdings in older portions of the city, mainly the inner city, in classic gentrification. Gentrification changes the physical character of a community, as well as its socioeconomic and demographic aspects, over time (Ezema *et al.* 2016). As a result, gentrification refers to the transformation of run-down, low-income inner-city districts into affluent regions, which is frequently coupled with population shifts and improvements to the physical environment (Criekingen & Decroly 2003).

Nwachi *et al.* (2012) conducted a critical examination of the Ogui shanty town in Enugu, Nigeria. The indigenous inhabitants' hold on land has functioned as a boost for others to thrive, according to this study, which found the variables that have caused the inner-city slum to persist. Other causes include the slum's central location in town and its accessibility to different schools, marketplaces, and sources of employment. However, in the early 1970s, an extraordinary inflow of people into Enugu overwhelmed the city's existing infrastructure, turning the indigenous territory of Ogui into a slum. The study made various recommendations for the study area's renewal schemes. The use of public participation in the process, as stressed by the UN-Habitat projects' Urban Management Programmes (UMP), is critical to this endeavour. The timely payment of adequate compensation to indigenes for lands acquired for the program is even more crucial to the renewal endeavor.

Furthermore, Uwadiegwu (2013) investigated the factors that influence the rate of housing deterioration in Nigerian cities with high densities and run-down neighborhoods, with a focus on Enugu. The study took place in Enugu City, in two high-density zones, Asata and Ogui New Layout, as well as one slum area, Obiagu. This survey included 257 landlords who were chosen at random from these areas to serve as respondents. Five of the seven suspected factors, including the high occupancy ratio (0.968), the number of non-residential rooms (0.875), the landlord's level of education (0.675), the landlord's household size (0.593), and the number of tenants (0.406), all have a significant relationship with housing deterioration. As a result, the more of these identified elements are coupled in a dwelling unit, the faster that dwelling will deteriorate. It therefore suggests that governments at all levels should provide a suitable enabling environment for local councils to enforce acceptable occupancy ratios and rules through Town Planning Authorities. Similarly, the study concludes that the subject of family

planning should be pursued with greater force and determination, with offenders sanctioned and prosecuted. Additionally, landlord education should be made mandatory and expanded to incorporate information communication technology (ICT) to enable them to connect with the outside world for increased awareness and networking. The study then concludes that, while it was conducted in Enugu, the findings are applicable to other Nigerian and third-world cities.

Obiagu Shanty Area in Enugu Metropolitan City needs immediate attention and proper regeneration (Uwadiegwu, 2013). The physical structures are archaic, dilapidated, and unplanned, while social qualities are badly affected, and if not addressed, Enugu Metropolitan City's security may be jeopardised (Uwadiegwu, 2013). Furthermore, the health of the residents of Obiagu Shanty Area is compromised by obnoxious odours emanating from the homes, and the quality of underground well water is severely polluted, as most of the structures lack proper waste management systems. Similarly, the area is deficient in infrastructure (Ujah *et al.* 2021).

There are no recent studies on government, private sector, or community involvement in restoring the Obiagu Shanty Area in the studied literature. By bringing the realities on the ground to light, this study seeks to close this gap. In light of the aforementioned, the study aims to assess the physical and sociological aspects of the Obiagu Shanty Area, as well as the government, private, and community involvement in its rehabilitation, with a view to ascertaining the extent of the rehabilitation and its impacts in the lives of the residents, and however recommend better retrofitting alternatives.

2. Materials and Methods

2.1 The Study Area

Enugu State is bordered to the north by the states of Benue and Kogi, to the south by the state of Abia, and to the west and east by the states of Anambra and Ebonyi (Enete & Ebenebe 2009). Enugu metropolitan city is located between the latitudes 6^0 21^1N and 6^0 30^1N of the Equator and between the longitude 7^0 26^1E and 7^0 37^1E of the Greenwich Meridian, and encompasses an area of about 145.8 square kilometers (Ezenwaji *et al.* 2018; Onwuadiochi *et al.* 2020). The annual rainfall is clustered around 1200mm and 1900mm, the maximum temperature is clustered around 29.1^0C and 33.9^0C with a mean of 32.0^0C, while the relative humidity stood at an average of 57.32% (Onwuadiochi *et al.* 2021).

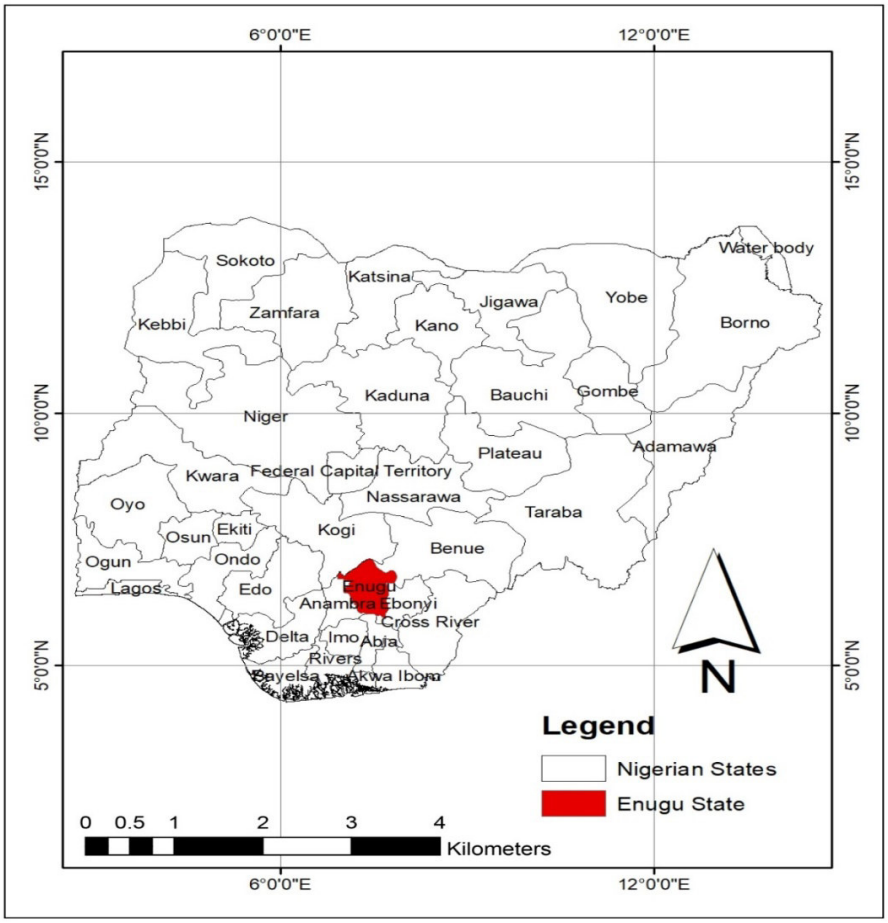

Fig. 1: Map of Nigeria showing Enugu State
Source: Researchers' work

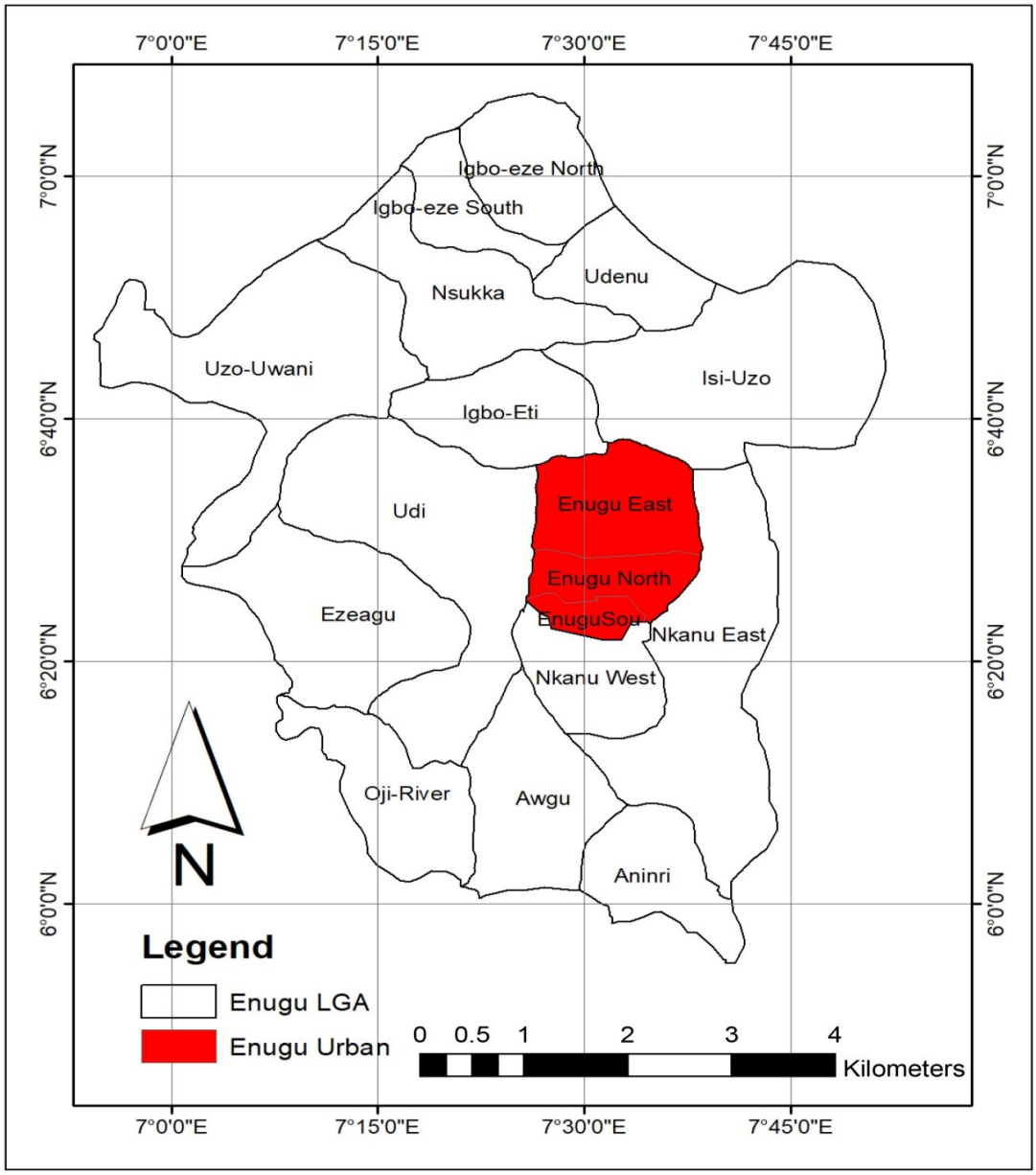

Fig. 2: Map of Enugu State showing Enugu Metropolitan City
Source: Researchers' work

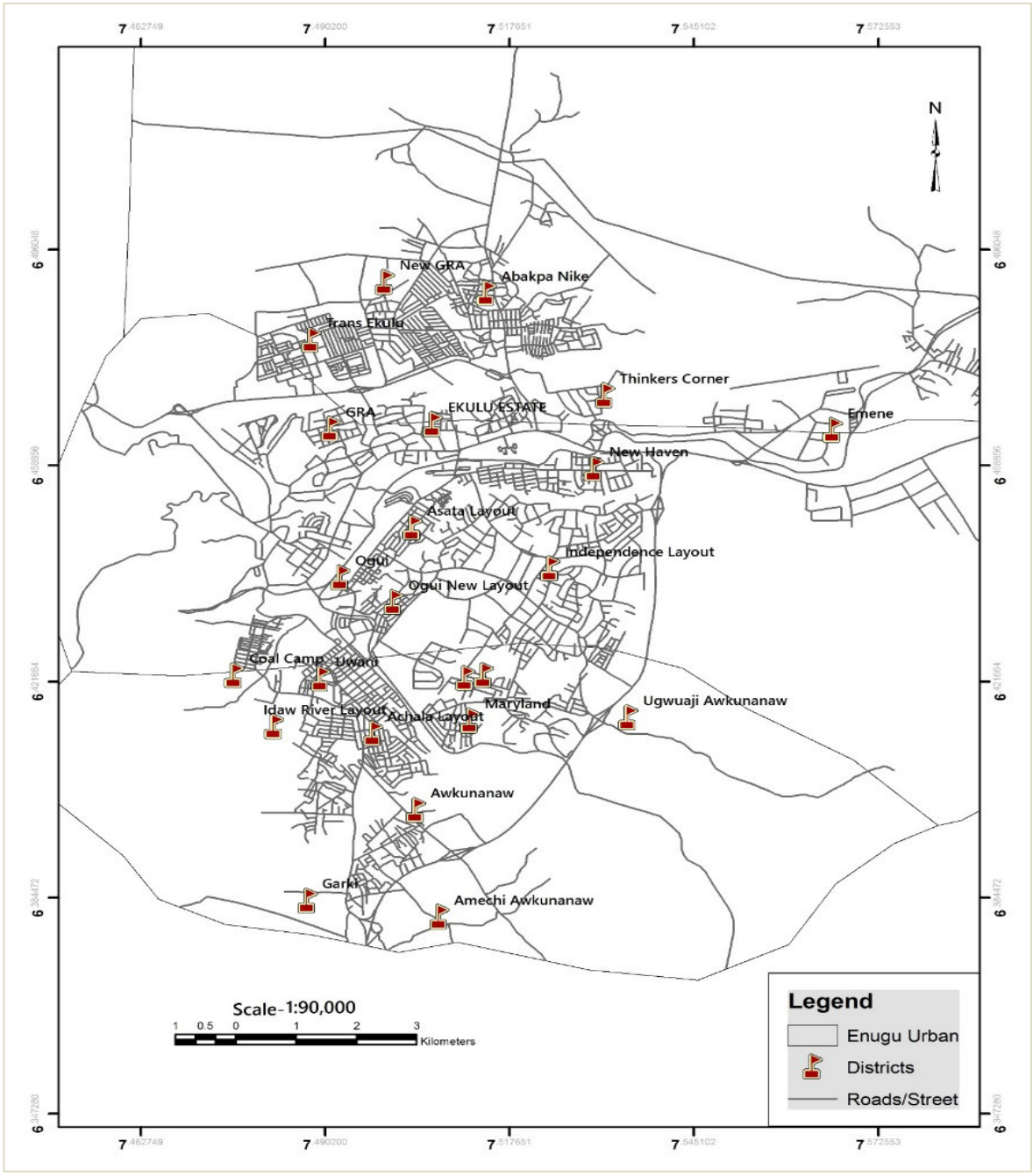

Fig. 3: Map of Enugu Metropolitan City showing Obiagu Shanty Area in Ogui New Layout
Source: Onwuadiochi et al., 2020

2.2 Method of Data Collection

The data was obtained through questionnaire survey. For reliability and proficiency in this study, a structured questionnaire of about 400 was administered to the residents of Obiagu Shanty Area. This provided insight to the challenges that the residents face.

2.3 Method of Data Analysis

At the end of the data collection process, all the codes and their corresponding data were entered into the collation sheet. The qualitative data from the Likert scale structured questionnaire response were coded using values such as, 5, 4, 3, 2, and 1 for strongly agree, agree, undecided, disagree, and strongly disagree, respectively. These were further converted to quantitative data using weighted mean. This conversion enabled further analysis of the generated data. The statistical techniques that were used to analyse the data obtained from the field are descriptive statistics (such as simple percentages, standard deviation and mean) and inferential statistics (such as

Principal Component Analysis).

The Principal Component Analysis (PCA) which is a data extraction technique was used to reduce the number of variables while retaining as much of the original variance as possible.

2.3.1 Sampling Frame and Techniques

A sample is the finite part of a statistical population whose properties are studied to gain knowledge about the whole. Hence, there are different types of sampling methods (random, judgmental, cluster or multi-stage, systematic, quota and the random walk sampling). Simple random sampling technique was used to sample population within the study area. The simple random technique permits (gives) each member of the population an equal chance of being selected.

The population of the study area was based on 2022 projected figure of 1991 National Population Census. The result of the 1991 census was used for the projection because the results of the 2006 census do not contain community level data. The projection of the sample population was based on Enugu State population growth rate of 3.14% in 2022 using the formula:

$$P_{t+n} = P_t e^{rn} \quad (1)$$

Where:

P_{t+n} = Future population (2022)

P_t = Base year (present population

e = Exponential

r = Growth rate

n = Interval between future population and base year (2022-1991 = 31years). This is shown in Table 3.1.

The sample size for this research was statistically determined using the "Taro Yamane" (1967) Formula:

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

Where:

n = sample size:

N = population size

e = level of significance (limit of tolerable error), that is 0.05(5%) and

1 = unity (a constant).

Table 1: Presentation of the Sample Population

Study Area	NPC 1991	2022 Projection	Sample Population
Obiagu Shanty Area	20,618	54,574	400

Using the sample frame formula with 2022 projected population of 54,574, approximately 400 respondents were sampled at 0.05 level of significance. Analytical package that was used is Statistical Package for Social Sciences (SPSS) version 25.0 for windows.

3. Result and Discussion

3.1 Socio-Demographic Characteristics of the Respondents

The researcher, with the help of research assistants distributed and retrieved a total of four hundred (400) copies of questionnaire. The socio-demographic characteristics of the respondents are as presented in Table 2.

Table 2: Socio-demographic characteristics of the respondents

Socio-demographic characteristics	Statistical Reports
Gender	52.8% of the respondents are male. 47.3% of the respondents are female
Age Group	23.2% of the respondents are of ages 18-24 years 25.0% of the respondents are of ages 25-34 years. 16.5% of the respondents are of ages 35-44 years. 22.8% of the respondents are of ages 45-54 years. 12.5% of the respondents are of ages 55 years and above
Level of Education	30.0% of the respondents had O'level. 22.0% of the respondents had OND Degrees. 20.0% of the respondents had HND degrees. 17.5% of the respondents had B.Sc. 5.0% of the respondents had PGD 3.8% of the respondents had M.Sc./MBA 1.8% of the respondents had Ph.D.

Source: Authors' compilation from field survey, 2022

There is almost an equal proportion of males and females in the study. Majority of the respondents are of

ages 25-34 years, while the least was people of ages 55 years and above. Also, as seen in the result, the level of education of the respondents cut across O'level, OND, HND, B.Sc., PGD, M.Sc./MBA and Ph.D. with the percentage of people with O'level, OND and HND being higher in comparison with those with other degrees. Specifically, only about 1.8% of the respondents had Ph.D. degree.

3.2 Level of Physical and Social Characteristics of Obiagu Shanty Area

Table 3: **Physical and Social Characteristics of Obiagu Shanty Area**

Physical Characteristics	**5(SA)**	**4(A)**	**3(U)**	**2(D)**	**1(SD)**	$\sum W_i$	$\sum f$	**Mean**	**Std**
Buildings in the area are modern buildings	2 (0.50%)	3 (0.75%)	5 (1.25%)	30 (7.50%)	360 (90.00%)	457	400	1.14	0.50
Most buildings in Obiagu are bungalows	5 (1.25%)	10 (2.50%)	15 (3.75%)	50 (12.50%)	320 (80.00%)	530	400	1.33	0.77
Most houses in Obiagu have small rooms, but still, three or more persons live in one room, irrespective of the size	300 (75.00%)	70 (17.50%)	20 (5.00%)	5 (1.25%)	5 (1.25%)	1855	400	4.64	0.75
The height of buildings in Obiagu are below standard	345 (86.25%)	40 (10.00%)	10 (2.50%)	2 (0.50%)	3 (0.75%)	1922	400	4.81	0.57
In Obiagu area, people dispose waste anyhow (i.e., no proper waste management system)	190 (47.50%)	70 (17.50%)	40 (10.00%)	56 (14.00%)	44 (11.00%)	1506	400	3.77	1.44
Obiagu area produces bad smell	320 (80.00%)	30 (7.50%)	10 (2.50%)	15 (3.75%)	25 (6.25%)	1805	400	4.51	1.13
Social Characteristics									
In Obiagu, there is high level of criminality	310 (77.50%)	40 (10.00%)	10 (2.50%)	20 (5.00%)	20 (5.00%)	1800	400	4.50	1.10
In Obiagu, there are many bad behaved individuals (or Agberos)	330 (82.50%)	40 (10.00%)	5 (1.25%)	10 (2.50%)	15 (3.75%)	1860	400	4.65	0.92
In Obiagu, there are many harlots	150 (37.50%)	70 (17.50%)	17 (4.25%)	80 (20.00%)	83 (20.75%)	1324	400	3.31	1.62
There are many school dropouts in Obeagu area	275 (68.75%)	73 (18.25%)	11 (2.75%)	22 (5.50%)	19 (4.75%)	1763	400	4.41	1.10
In Obiagu area, there are many drug traffickers	309 (77.25%)	50 (12.50%)	7 (1.75%)	19 (4.75%)	15 (3.75%)	1819	400	4.55	1.01
In Obiagu area, children are exposed to bad life at a very tender age	305 (76.25%)	66 (16.50%)	4 (1.00%)	19 (4.75%)	6 (1.50%)	1845	400	4.61	0.85
Cluster Estimate (mean & standard deviation)								**3.85**	**0.98**

Source: Authors' compilation from field survey, 2022

The statistical results as presented in Table 3 indicate that, generally, the level of physical and social characteristics of Obiagu Shanty Area is highly on the negative side (mean = 3.85 > 3.00, std. = 0.98).

Specifically, the study identified that the major physical characteristics of Obiagu Shanty Area include: the height of buildings in Obiagu are below standard (mean = 4.81 > 3.00); most houses in Obiagu Shanty Area have small rooms, but still, three or more persons live in one room, irrespective of the size (mean = 4.64 > 3.00); Obiagu Shanty Area produces bad smell (mean = 4.51 > 3.00); and that in Obiagu Shanty Area, there are no proper waste management system, for which course, people dispose waste anyhow (mean = 3.77 > 3.00). Indirectly, it was observed that most structures (buildings) within Obiagu Shanty Area are old structures.

Additionally, this study identified some special social characteristics of Obiagu Shanty Area to include that: there are many bad behaved individuals (or Agberos) living in the area (mean = 4.65 > 3.00; std. = 0.92), the children in the area are exposed to bad life at a very tender age (mean =4.61 > 3.00; std. = 0.85), there are many drug traffickers in the area (mean = 4.55 > 3.00; std. = 1.01), high level of criminality (mean = 4.50 > 3.00; std. = 1.10), and many school dropouts (mean = 4.41 > 3.00; std. = 1.10). However, the study affirmed that the level of physical and social characteristics of Obiagu Shanty Area is high on the negative dimension (Mean = 3.85, Std. = 0.98).

3.3 Level of Infrastructural Amenities at Obiagu Shanty Area

Table 4: Infrastructural Amenities in Obiagu Shanty Area

Amenities	5(SA)	4(A)	3(U)	2(D)	1(SD)	$\sum W_i X$	$\sum f$	Mean	Std.
Boreholes	11 (2.75%)	15 (3.75%)	7 (1.75%)	20 (5.00%)	347 (86.75%)	523	400	1.31	0.90
Primary Schools	99 (24.75%)	88 (22.00%)	11 (2.75%)	52 (13.00%)	150 (37.50%)	1134	400	2.84	1.68
Secondary Schools	88 (22.00%)	52 (13.00%)	16 (4.00%)	99 (24.75%)	145 (36.25%)	1039	400	2.60	1.60
Tertiary Institutions	10 (2.50%)	15 (3.75%)	8 (2.00%)	150 (37.50%)	217 (54.25%)	651	400	1.63	0.89
Standard Markets	20 (5.00%)	11 (2.75%)	15 (3.75%)	76 (19.00%)	278 (69.50%)	619	400	1.55	1.04
Good road connections	15 (3.75%)	12 (3.00%)	9 (2.25%)	90 (22.50%)	274 (68.50%)	604	400	1.51	0.96
Constant electricity	40 (10.00%)	20 (5.00%)	6 (1.50%)	88 (22.00%)	246 (61.50%)	720	400	1.80	1.30
Good mobile networks for communication	123 (30.75%)	101 (25.25%)	22 (5.50%)	99 (24.75%)	55 (13.75%)	1338	400	3.35	1.47
Standard building structures	5 (1.25%)	7 (1.75%)	7 (1.75%)	15 (3.75%)	366 (91.50%)	470	400	1.18	0.66
Good pipe borne water	7 (1.75%)	9 (2.25%)	5 (1.25%)	79 (19.75%)	300 (75.00%)	544	400	1.36	0.78
Standard open spaces for recreational activities	5 (1.25%)	4 (1.00%)	9 (2.25%)	70 (17.50%)	312 (78.00%)	520	400	1.30	0.68
Renewable and more sustainable energy sources such as solar energy, wind energy, etc	2 (0.50%)	5 (1.25%)	7 (1.75%)	25 (6.25%)	361 (90.25%)	462	400	1.16	0.55

Source: Authors' compilation from field survey, 2022

Result in Table 4 shows that the only infrastructural amenity available in Obiagu Shanty Area is good mobile networks for communication (mean = 3.35 > 3.00), although, not of maximal standard. Particularly, it was ascertained that in Obiagu Shanty Area, there was neither solar energy, wind energy, nor renewable and more sustainable energy sources (mean = 1.16 < 3.00, std. = 0.55); no standard building structures (mean = 1.18 < 3.00, std. = 0.66); no standard open spaces for recreational activities (mean = 1.30 < 3.00, std. = 0.68); no boreholes (mean = 1.31 < 3.00, std. = 0.90); no good pipe borne water (mean = 1.36 <3.00, std. = 0.78), and many more.

3.4 Level of Government's Participation towards Urban Regeneration and Infrastructural Renewal Activities in Obiagu Shanty Area

Table 5: Respondents' opinion on the level of Government's participation in urban regeneration and infrastructural renewal activities in Obiagu Shanty Area

Participation	5(SA)	4(A)	3(U)	2(D)	1(SD)	$\sum W_i$	Mean	Std.
Government contributes in remodeling/rebuilding the structures in the area	4 (1.00%)	6 (1.50%)	9 (2.25%)	99 (24.75%)	282 (70.50%)	551	1.38	0.70
Government helps to provide good waste management system in the area	11 (2.75%)	7 (1.75%)	3 (0.75%)	53 (13.25%)	326 (81.50%)	524	1.31	0.82
Government assists in training the children in schools by giving them scholarships so that there would be lesser out of school children in the area	5 (1.25%)	3 (0.75%)	4 (1.00%)	44 (11.00%)	344 (81.50%)	481	1.20	0.61
Government helps to rehabilitate/sensitise the youths that abuse drugs in the area	6 (1.50%)	3 (0.75%)	7 (1.75%)	35 (8.75%)	349 (87.25%)	482	1.21	0.65
Government assists in providing pipe borne water for the residents	77 (19.25%)	46 (11.50%)	10 (2.50%)	117 (29.25%)	150 (37.50%)	983	2.46	1.55
Government helps to equip the schools within the area	21 (5.25%)	30 (7.50%)	14 (3.50%)	166 (41.50%)	169 (42.25%)	768	1.92	1.11
Government assists in construction of link roads in the area	13 (3.25%)	27 (6.75%)	8 (2.00%)	148 (3.00%)	204 (51.00%)	697	1.74	1.01
Government helps in planting of trees for healthy living of the people	3 (0.75%)	9 (2.25%)	6 (1.50%)	20 (5.00%)	362 (90.50%)	471	1.18	0.63
Government maintains the open spaces and provides the sports materials	5 (1.25%)	4 (1.00%)	11 (2.75%)	17 (4.25%)	363 (90.75%)	471	1.18	0.64
Government helps to provide renewable and more sustainable energy sources, such as solar energy, wind energy, etc.	6 (1.50%)	9 (2.25%)	5 (1.25%)	19 (4.75%)	361 (90.25%)	480	1.20	0.71
Cluster Estimate (mean & standard deviation)							**1.48**	**0.84**

Source: Authors' compilation from field survey, 2022

As presented in Table 5, statistics of the level of Government's participation in urban regeneration and infrastructural renewal activities in Obiagu Shanty Area shows that Government is lacking behind in their responsibilities in urban regeneration and infrastructural renewal activities in Obiagu Shanty Area (mean = 1.48 < 3.00; std. = 0.84). For instance, Government is supposed to assist in remodeling/rebuilding the structures in the area, ensuring that good waste management system are provided, ensure that children are trained in schools and that they are given scholarship opportunities, provide pipe borne water for the residents, equip the schools within the area, help in construction of link roads in the area, and many more. But on the contrary (with strata mean values < 3.00), it was discovered that they fail on these aspects.

3.5 Level of Private and Community Participation towards Urban Regeneration and Infrastructural Renewal Activities in Obiagu Shanty Area

Table 6: Respondents' opinion on the level of Private and Community participation towards urban regeneration and infrastructural renewal activities in Obiagu Shanty Area

Participation	5(SA)	4(A)	3(U)	2(D)	1(SD)	$\sum W_i \lambda$	Mean	Std
Private individuals and community contribute in remodeling/rebuilding the structures in the area	66 (16.50%)	40 (10.00%)	10 (2.50%)	98 (24.50%)	186 (46.50%)	902	2.26	1.52
Private individuals and community help in ensuring that generated wastes are disposed properly in the area	19 (4.75%)	25 (6.25%)	10 (2.50%)	92 (23.00%)	254 (63.50%)	663	1.66	1.11
Private individuals and community assist in training the children in schools by giving them scholarships so that there would be lesser out of school children in the area	7 (1.75%)	20 (5.00%)	7 (1.75%)	89 (22.25%)	277 (63.50%)	591	1.48	0.89
Private individuals and community (through NGOs) help to sensitize the youths that abuse drugs in the area	60 (15.00%)	43 (10.75%)	13 (3.25%)	80 (20.00%)	204 (51.00%)	875	2.19	1.51
Private individuals and community assist in providing pipe borne water for the residents	22 (5.50%)	30 (7.50%)	16 (4.00%)	90 (22.50%)	242 (60.50%)	700	1.75	1.18
Private individuals and community help to equip the schools within the area	40 (10.00%)	29 (7.25%)	5 (1.25%)	89 (22.25%)	237 (59.25%)	746	1.87	1.33
Private individuals and community assist in construction of link roads in the area	20 (5.00%)	15 (3.75%)	7 (1.75%)	101 (25.25%)	257 (64.25%)	640	1.60	1.05
Private individuals and community help in planting of trees for healthy living of the people	15 (3.75%)	17 (4.25%)	6 (1.50%)	77 (19.25%)	285 (71.25%)	600	1.50	0.99
Private individuals and community help to maintain the open spaces and provide the sports materials.	45 (11.25%)	27 (6.75%)	10 (2.50%)	98 (24.50%)	220 (55.00%)	779	1.95	1.36
Private individuals and community help to provide renewable and more sustainable energy sources, such as solar energy, wind energy, etc.	11 (2.75%)	17 (4.25%)	13 (3.25%)	87 (21.75%)	272 (68.00%)	608	1.52	0.95
Cluster Estimate (mean & standard deviation)							**1.78**	**1.19**

Source: Authors' compilation from field survey, 2022

Result in Table 6 indicates that private individuals and communities do not participate in urban regeneration and infrastructural renewal activities in Obiagu Shanty Area (mean = 1.78 < 3.00; std = 1.19). Specifically, it was ascertained that private individuals and communities are required to contribute substantially in

remodeling/rebuilding the structures in the area, ensure that generated wastes are disposed properly, assist in training the children in schools and giving them scholarships; contribute in sensitizing the youths who abuse drugs; assist in provision of pipe borne water for the residents; assist in equipping the schools within the area; contribute in construction of link roads to the neighbouring communities/villages; assist in provision of renewable and more sustainable energy sources such as solar energy, wind energy, etc, and in maintaining open spaces and providing sports materials, to mention but a few. This study discovered that these groups of people do not partake actively in all those outlined developmental activities.

4. Conclusion and Recommendation

It is very apparent that the level of the physical and social characteristics of Obiagu Shanty Area is highly negative. The area also lacks infrastructural amenities, green open spaces, and renewable and more sustainable energy sources. Furthermore, the area lacks government, private and community participation towards regeneration. The study, based on the findings, proposed the following recommendations:

1. Modern houses with modern facilities and good sewage systems should be constructed by the government at the Obiagu Shanty Area.
2. Government can partner with the private organisations/individuals or the community to help in remodeling the structures at the area.
3. The government and non-governmental organisations (NGOs) should always sensitise the residents of Obiagu Shanty Area about the harmful health consequences of living in a dirty environment.
4. The government, NGOs, and the community should always conduct enlightenment programs to reduce the level of criminality and the number of bad behaved individuals, harlots, and drug traffickers in the area.
5. Scholarship programs should be initiated in the area in order to reduce the number of out of school children.
6. The government, private organisations/individuals, and community are all encouraged to work together to provide enough infrastructures, such as more standard schools, standard open areas for recreational activities, and renewable and more sustainable energy sources, among other things.

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