Developing Country Studies
ISSN 2224-607X (Paper) ISSN 2225-0565 (Online)
Vol.4, No.6, 2014

An Assessment of Residential Quality of Life in the Indigenous Enclaves in Port Harcourt

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Abstract
This study has assessed urban residential quality of life in two indigenous enclaves now being absorbed into the urban fabric in Port Harcourt, Rivers State, Nigeria. The study set out to ascertain residents' perception of neighbourhood attributes, residential quality of life as a whole and the variables considered by residents to be the most important to enhance residential quality of life. In the study, neighbourhood attributes were studied *in situ* without experimental manipulation and at one period in time, i.e. the study adopted a passive-observational research design. The study utilized both secondary and primary data sources. The latter included face-to-face administration of a largely pre-coded household questionnaire to a probability sample of 170 respondents, drawn from the two neighbourhoods. Data analysis was based on responses from 170 questionnaire retrieved and the univariate analytical method was adopted. The study found, among others, that garbage existed on the streets and neighbourhoods, there was no street lighting in virtually all the neighbourhoods, periodic flooding occur in all the neighbourhoods, some of the roads and streets were well maintained, each of the 2 neighbourhoods had at least one public primary school, and good housing, provision of basic residential amenities, and improved sanitation were some of the most important variables, in the opinion of residents, contributing to the improvement of perceived residential quality of life. The study further revealed that 26.5% of the residents in the two neighbourhoods were unhappy with their residential quality of life and 82.9% of the residents perceived their neighbourhoods to be of medium quality. A key conclusion of the study was that the improvement of neighbourhood residential conditions as perceived by the residents was important in raising residential quality of life, and recommendations included that in the provision of public infrastructure and services , the perceptions and preferences of the beneficiaries/target population must be seriously taken into account to achieve user satisfaction.
Keywords: Quality of Life, residents perception, dwelling unit, neighbourhood

1. Introduction

The concept, Quality of Life, encompasses the basic conditions of life, including adequate food, shelter, and safety, as well as "life enrichers", which are based on the individual's values, beliefs, needs and interests (WHO-IACCID, 2000). Measuring quality of life means that we value quality within people's lives and that we want to maintain and/or enhance the things that already, or could, add quality to people's lives. It also infers that we want to take action to improve the things that currently detract from quality of people's lives (WHO-IACCID, 2000).

The search for quality of life, particularly in the city, has occupied post-industrial and predominantly urbanized societies (such as the United States of America and Great Britain) for more than 40 years. This has led to initiatives to measure the concept in urban areas (Senecal, 2002). According to Senecal (2002), the concept of quality of life, as applied to the urban environment, is usually understood in two ways.

The first concerns the living environment and involves the patterns of advantages, disadvantages and opportunities that affect each citizen through accessibility to services, facilities and amenities. Proximity to these is adjudged to be a key factor in improving living or residential conditions. Other elements of the living environment include economic vitality and social equity, which encapsulate an infinite number of specific issues, notably, the quality and affordability of housing (Senecal, 2002).

The second approach relates to the natural environment in urban spaces. This approach holds that such factors as air, water, soil quality; and the amount of available green space affect the ways we live. However, measuring these factors, for example noise or olfactory pollution, and defining how they combine to create a good living environment or urban configuration is an inexact science (Senecal, 2002) .

Other aspects that may be used to identify quality of life include aesthetic value, satisfaction with one's home, and patterns of governance (Senecal, 2002). In addition, there are issues of perception that take into account people's experiences in the city, the routes they travel, and the sensory quality of their surroundings (Senecal, 2002).

Nowadays, cities have become the target of quality of life measurement since they exhibit contemporary culture,

ranging from technological development to social progress. Indeed, the process of urban planning and management is aimed at raising quality of life, especially with regard to improvement of facilities and services that fulfil socio-economic needs such as education, health, housing, entertainment, and safety (Discoli, *et. al.,* 2006).

In developing countries, one person in five lacks access to safe water; one billion people live in dry lands damaged by soil degradation; and 1.2 billion live on less than US$ 1.00 a day (Melnick, *et. al.*, 2005). In Africa, the average annual urbanization rate between 2005 and 2010 was 3.3% (United Nations Human Settlements Programme (UNHSP), 2008), the highest among the world regions. Major cities of Africa are dominated by uncontrolled informal and often illegal spatial developments and mushrooming numbers of poor urban dwellers without access to adequate housing or basic services like water, sanitation, electricity and roads (UNHSP, 2008). In central/western African nations, the overall coverage for improved drinking water sources rose by seven percent between 1990 and 2006 i.e. from 49% to 56%. This shows that 44 % of the population in this region is without access to safe drinking water (UNHSP, 2008).

Port Harcourt, one of Nigeria's major cities, has been experiencing rapid urbanization since its inception in 1913. The city has grown from 5,000 persons in 1915, two years after its inception, to 79,634 in 1953, it rose to 179,563 in 1963 (Ogionwo, 1979). The 1991 census gave the city's population as 440,399 and 2006 census fixed it at 541115. The population was projected from the census figure of 2006 to a projected population of 963,373 in 2010 assuming linear growth and an average annual growth rate of 5.2%. This level of population growth has meant considerable spatial expansion, which has engulfed once distant villages on the urban periphery, to the extent that they can no longer be distinguished but have become part of the urban fabric (Wokekoro and Owei, 2006).

Urban infrastructure and services have failed to keep pace with this growth. In addition to rising urban poverty, there is a worsening of urban environmental problems. Such challenges as poor solid waste management, uncontrolled housing and neighbourhood development, flooding, traffic congestion, poor state of the urban physical environment and rising crime rates have been documented (for example, Ugwuorah, 2002). More recently, Obinna, Owei and Mark (2010) have also noted the deplorable housing, inadequate space, and absence of basic services in the informal settlements of the city.

This state of affairs triggered the desire of this investigator to measure residential quality of life in the indigenous enclaves in Port Harcourt Municipality both objectively and subjectively. The aim was to demonstrate the nature and magnitude of deficient conditions in different parts of the municipality and propose appropriate measures to deal with them, thereby raising overall residential quality of life.

It is pertinent to note here that objective conditions or indicators "typically involve reports made by people who are not characterizing themselves" (Andrews, 1980); while subjective (perceptual) indicators refer to people's perceptions or evaluations of aspects of their lives, for example, housing (Andrews, 1980).

1.1 Goal and Objectives of the Study

The goal of this study is to assess residents' perception of residential quality of life in the indigenous enclaves in Port Harcourt Municipality, with a view to proffering policy measures for improvement.

The objectives of the study are to:

(i) Ascertain residents' perceptions of neighbourhood attributes;
(ii) Ascertain residents' perceptions of residential quality of life.
(iii) Obtain Perceived Neighbourhood Quality Index (PNQI)
(iv) Ascertain the variables that are most important to residents in improving residential quality of life.

1.2 Background Information about the Study Area

Spatially, the study covers two indigenous enclaves in Port Harcourt Municipality; that is, Port Harcourt Local Government Area (PHALGA). The indigenous enclaves studied are Oroworukwo and Amadi – ama communities in Ikwerre and Okrika respectively.

Port Harcourt, capital city of Rivers State, Nigeria, lies 40 km up the mouth of the Bonny River, in the Niger Delta. Originally known as "Igwu-Ocha" by the indigenous Ikwerre, was founded in 1913 by the British in an area traditionally inhabited by the Ikwerre and the Okrika Ijaw. It was named after Viscount Harcourt, then British Secretary of State for the Colonies. The initial purpose of the port was to export the coal, which geologist Albert Ernest Kitson had discovered in Enugu in 1912 (Ogionwo, 1979).

It is one of Nigeria's fastest growing cities. The average annual growth rate of Port Harcourt between 1963 and 2010 has been computed to be 5.2%, a very rapid growth rate by world standards, even if less than the growth rate for Lagos, the fastest growing city in Nigeria, at 8.8% (Oyesiku, 2009), during the same period. The growth of Port Harcourt is tied to the social and economic history of the country. Figure 1.1 is a map of Port Harcourt Municipality showing the study locations.

The city is a major educational, administrative, and industrial centre, and is regarded as the oil capital of Nigeria, since it hosts most of the nation's multi-national oil and gas exploration and production companies, two

refineries, petroleum-related service companies, as well as a fast expanding commercial sub-sector (Wokekoro and Owei, 2006)

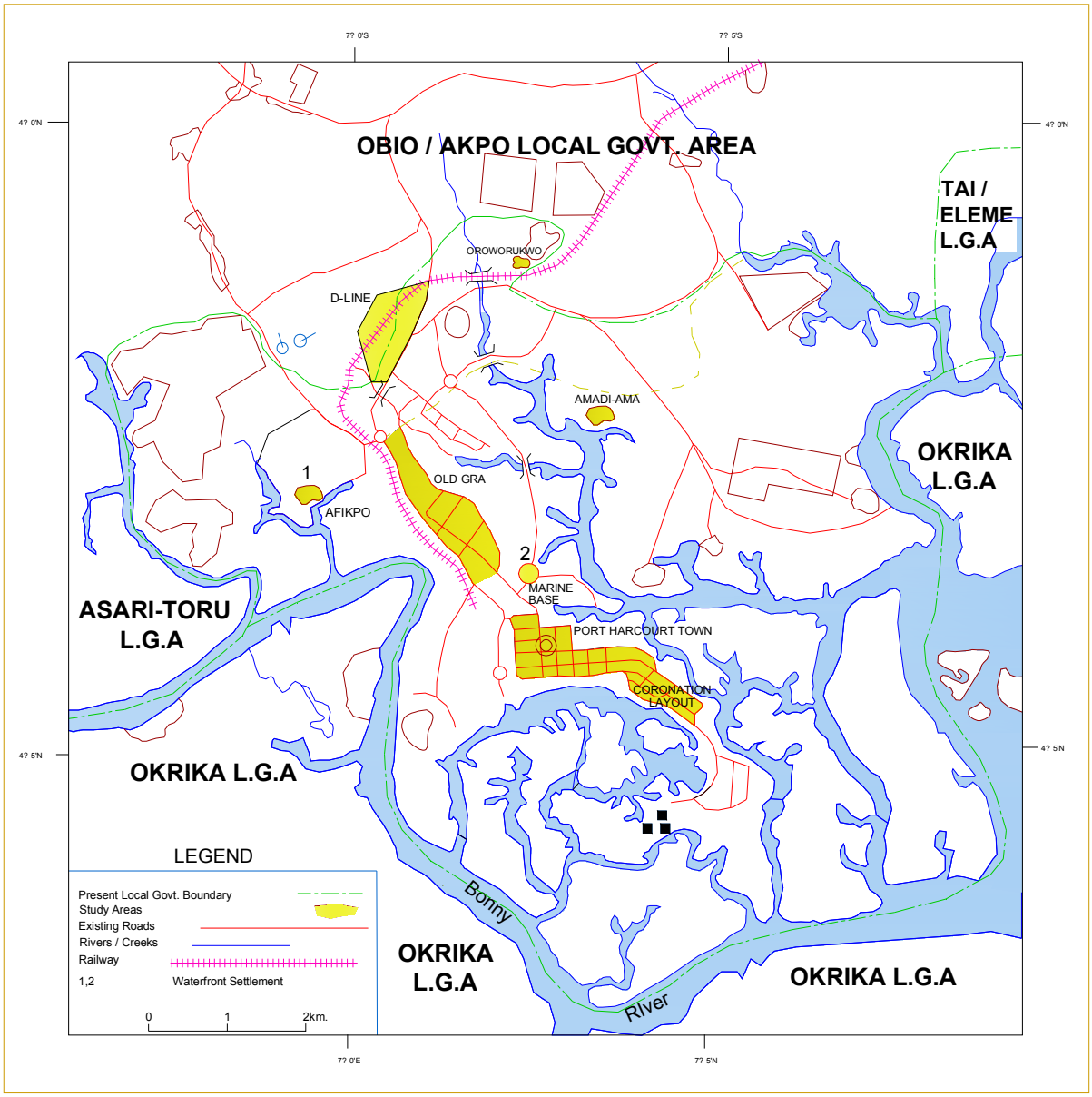

Figure1. Port Harcourt Municipality Showing the Study Area

2. Review of Relevant Literature

The meaning of the phrase “urban quality of life” differs a good deal as it is variously used but, in general, it is intended to refer to either the conditions of the environment in which people live (air and water pollution, or poor housing, for example), or to some attribute of people themselves (such as health or educational achievement) (Pacione, 2003).

Lotfi and Solaimani (2009) stated that a number of researchers have reviewed literature on Quality of Life (QOL) and there is general agreement that a meaningful definition of QOL must recognize that there are two linked dimensions to the concept, namely a psychological one and an environmental one.),

Dissart and Deller (cited in Lotfi and Solaimani, 2009) argue that "a person's QOL is dependent on the exogenous (objective) facts of his or her life and the endogenous (subjective) perceptions he or she has of these factors and of himself or herself." There are two sets of indicators for measuring quality of life with which most of the researchers are agreed. The first set comprises objective indicators which refer to the objective and visible aspects of urban life and are defined by different elements, for example the number of hospitals in a city, unemployment rate, the volume of crime and the area of urban green spaces. The second set comprises

subjective indicators which try to measure and quantify the citizens' satisfaction with those objective attributes (Lotfi and Solaimani,2009).

Meanings of QOL differ according to the field of discourse. The concept of QOL, for example, can be expressed in the context of social policy as a common target to guarantee a good life and equal opportunities for all citizens or, the concept of QOL can also be expressed in the context of individual preferences, which is perhaps the most popular meaning of the concept. (WHO-IASSID WORK PLAN, 2000).

QOL is concerned with people's welfare. It is defined as something that makes life better. This poses three questions, life for whom, in what context, and a better life concerning what? (Discoli *et. al., 2006).* A number of domains of QOL (well-being) have been identified in the international quality of life literature. For example, the University of the Oklahoma School of Social Work (*www.gdrc.org*) identifies the following:

- Family and Friends;
- Work;
- Neighbourhood/Shelter;
- Community;
- Health;
- Education; and
- Spiritual.

Each domain contributes to one's overall assessment of the QOL as a whole. The focus here is on the residential environment or what is referred to above as Neighbourhood/Shelter. Various researchers have addressed this dimension.

2.1 Research on Residential Quality of Life

Giannais (1996) used a structural approach to hedonic equilibrium model to obtain a quality of life ranking of six cities in Southern Ontario, Canada namely: Guelph, Kitchener, London, Sarnia, St. Catharine, and Windsor and found that residential quality of life is a function of housing and neighbourhood characteristics (number of rooms, age of the house, crime rate, air quality, and mean annual temperature). The model was estimated using census tract data for the six cities. The study revealed that each of the six cities provides a different QOL distribution to its residents. The study showed that QOL index was higher in Guelph than other cities of Southern Ontario with Windsor and Sarnia 5th and 6th positions, respectively.

Pacione (2003) reported that in urban social geography, considerable effort has been directed to assessing the quality of different residential environments. Within this field of research, according to him, special attention has been given to social conditions in large urban areas, with particular interest focused on situations characterised by low levels of QOL. In the UK, for example, the continuing decline in status of some inner city areas has been revealed by analyses which showed high concentrations of the unemployed, the low skilled, the aged and ethnic minorities, accompanied by high levels of overcrowding, amenity deficient housing, and out-migration.

Pacione *(*2003*)* in his paper explains the social geographical approach to research into QOL and urban environmental quality. A five-dimensional model for QOL research was presented, and a number of key conceptual and methodological issues were examined. Two case studies were employed to illustrate the application of the five-dimensional social geographical perspective in a real world context. The first case study of social geographical research in the field of QOL studies is selected to illustrate the use of objective territorial social indicators to examine differential QOL in the city of Glasgow. In his research, particular attention was focused on conditions at the disadvantaged end of the quality of life spectrum.

A combination of statistical and cartographic analysis was employed to identify the nature, intensity and incidence of multiple deprivations in the city. A set of 64 indicators relating to demographic, social, economic and residential conditions was extracted from the national census for each of the 5374 output areas in Glasgow. The data set was subjected first to univariate analysis to examine the distributions of individual social indicators across the city. While examination of each of the 64 indicators was of both academic and practical utility, the univariate analyses further suggested some degree of statistical and spatial overlap among the revealed patterns.

An R-type principal components analysis was used to explore the weave of linkages among the individual distributions, and to provide a conceptually and statistically rigorous composite measure of multiple deprivation. The study indicates that principal components were readily identified as indicators of multiple deprivation. Calculation of component scores provided a measure of deprivation for each of the 5,374 census output areas in the city. Mapping these scores revealed the spatial expression of multiple deprivations in Glasgow. This research identified the nature, intensity and incidence of multiple deprivations within the city. In addition, identification of the major loci of deprivation provided a basis for subsequent detailed analyses of particular problems and problem areas. The results also provided a basis for critical assessment of policies aimed at alleviating conditions of disadvantage, as well as a framework for future policy formulation.

The second example of the urban social geography approach to quality of life illustrates the use of subjective social indicators to gauge gender-differentiated fear of crime at the local level within Glasgow. Fear of crime is a growing social problem, a major policy issue and an important element in the social geography of contemporary

cities. For the most vulnerable sub-groups of the population living in high risk environments the impact of fear of crime on daily living patterns and on general quality of life can be profound. A major obstacle to addressing this social stressor is lack of detailed information on fear of crime at the neighbourhood scale. This research was designed to gauge the nature and extent of fear of crime among male and female residents of a deprived social housing estate on the edge of Glasgow, and to identify the geography of fear within the area.

The research employed an interview procedure to determine the relative importance of crime as a social problem on the estate. For both males and females crime was regarded as the second most serious problem in the area. Related social problems were identified in references to the general unfriendliness of the locality and bad relations between residents and the police. Assault and burglary were the most prevalent crimes reported. Investigation of the fear of crime revealed clear gender-based differences. For most young males the high risk of assault was an accepted part of their lifestyle and living environment. Respondents accepted that they are 'fair game' and an automatic target for local gangs. The relative physical weakness of young females fostered a fear of assault and in particular sexual assault. These perceptions of risk conditioned the daily activity patterns of people living on the estate.

Detailed information was also sought on respondents' cognitive maps of fear in order to identify specific danger areas within the estate. Further, analysis of the characteristics of these dangerous spaces can contribute to the design of policies aimed at reducing fear of crime in the locality.

Camfield (2005) conducted a study on how different people characterize quality of life in 24 rural, peri-urban and urban sites in Bangladesh, Ethiopia, Thailand and Peru and found out that the basic ingredients of a good life are very similar, such as having a partner, a family (and a support network that extends beyond it), a good home, a pleasant environment and enough money or other resources to meet the daily needs of the family. Camfield (2005) also reported that the main priorities for people from Bangladesh are maintaining family harmony, getting salaried employment, and being educated, while for people in Ethiopia they are having your own home, enough to eat and drink and being respected by your neighhbours. Camfield also added that the greatest differences are not between people from different countries but between men and women of different ages whose different identities or experiences cause them to value different things. For example, in Thailand, the older generation wanted to be healthy and able to attend the temple, while the young men wanted good jobs and motorbikes.

Hall, *et.al.*(2008) considered valuation of amenities in urban neighborhoods and satisfaction with both those neighborhoods and life in general. First, rents were used to estimate neighborhood amenities price in San Jose, which explained 39 percent of the standardized variation in rents. Some districts ranked very high in housing characteristics but poorly in neighborhood amenities, while others ranked poorly in housing characteristics but high in neighborhood amenities, suggesting that policy measures might reduce inequality in urban areas through improving neighborhood amenities.

Second, the paper explored differences in the valuation of amenities by calculating prices in different urban areas. In more sparsely populated urban areas, distance to national parks was less important, but distance to primary roads became more important. Finally, housing and safety satisfaction represented the key components of life satisfaction.

Pongsapitch, *et. al.,* (2000) as cited by Jongudomkarn and Camfield (2005) took a more focused approach by developing a tool specifically to assess the QOL of Thai people. This was done through participatory action research with local people, which used a qualitative approach to obtain data from 'key informants' with different backgrounds at the community level. The first phase of the study identified eight indicators of QOL, namely good infrastructure and environment, the economy, public health and wellness, information and education, culture and spirit, public society and security, rights and freedom and family and community.

Coker, *et al.* (2007) carried out a survey of housing quality and neighbourhood environments of Ibadan City, Nigeria. The study evaluated the housing infrastructure and identified those areas where there was a likelihood of future incidences of disease and epidemics. Based on existing demographic and land use characteristics, the city could be divided into high, medium and low-density zones. Penalty scoring, rather than positive scoring, was used to assess the conditions and quality of houses and the neighbourhood environment in each of the zones. Houses in the high-density area had the worst property and environmental characteristics followed by houses in the medium-density area. Based on housing condition alone, approximately half of all the dwellings surveyed (n = 172) in the three zones were categorised as either substandard or unfit for human habitation. Based on neighbourhood environment, none of the high and medium-density housing areas and only one of the low density areas attained the good-scoring grade. This is attributed in part to many residents being polygamists which means the houses are overcrowded with perhaps up to eight persons per room and to tenant abuse by internal conversion to increase the occupancy rate. More than half of the houses surveyed have at least or more major defect..

Salau (1986) examines the variations in the quality of life at the relatively neglected inter-urban scale in a developing nation. Based on a sample survey of 3,800 heads of households in Nigeria cities ranked into three categories: large, medium and small, the study found that level of living is related to city size, with the residents

of large cities having a higher quality of life than those in the medium and small cities.
Marans (1979) conducted a study for the U. S. Department of Housing and Urban Development (HUD) and examined the relationship between respondents' evaluations of neighbourhood conditions and services and their overall assessment of neighbourhood quality. Using Multiple Classification Analysis (MCA), predictor variables reflecting the perceived presence or absence of neighbourhood conditions were examined in relation to the neighbourhood rating scores. The study revealed that perceptions covering the 12 conditions such as trash/litter, crime, rundown houses, abandoned structures, streets impassable, street noise, heavy traffic, industrial activities, odors/smoke, streets that need repair, poor street lighting and airplane noise account for 16.7% of the variance in ratings. The study also revealed that perceptions of the existence or absence of trash/litter and neighbourhood crime are the most important predictors of the overall neighbourhood rating with beta coefficient of .142 and .134 respectively while the presence or absence of streets in disrepair, poor street lighting, airplane noise has virtually no bearing on how people evaluate their neighbourhoods with beta coefficient of .036, .023 and .008 respectively. He also found that evaluations of neighbourhood conditions were stronger predictors than objective conditions, accounting for 23% of the variation in the neighbourhood rating.
Guhathakurta and Sadalla (ND) stated that the contributions of water supply to the quality of life sector are straightforward. They reported that when the gap between demand and supply for water increases, there is a corresponding decrease in perceived quality of life. Alternatively, a decrease in the demand-supply gap for water improves quality of life perception.

3. Research Method

The target population is composed of household members residing in the indigenous enclaves. This study adopted the stratified multistage sampling technique (Kish, 1965). The sampling stages are given below:

Stage 1: Selection of neighbourhoods/communities from the Indigenous enclaves (See selected communities in Table 1);
Stage 2: Listing of buildings and households from the selected neighbourhood/communities
Stage 3: Selection of households to be studied from the chosen Neighbourhoods/communities; and
Stage 4: Selection of household respondents in the households to be studied, preferably heads of households, since they are usually the most knowledgeable about residential attributes

To achieve a representative sample of households in each indigenous enclave, Yamane (1965) formula (given below) was applied.

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

Where **n** is the sample size, N is the population size, and **e** is the level of precision (here set at 10%).
Following determination of the sample size, the systematic sampling method (Kish, 1965) was used to select the households to be questioned from the ordered list of population elements).

Table 1: Sampling Details

Name of Stratum	Name of Neighbourhood/ Community	Total No. of Buildings	Total of No. Households (N)	Sample Size *
Indigenous Enclaves	Amadi – Ama community	402	1,608	94
	Oroworukwo Community	72	325	76
Total		**476**	**1,933**	**170**

***Using the Taro Yamane Formula @ 10% Level of Precision**

This study adopted a **passive-observational research design.** The data was collected through a household questionnaire and utilized univariate analysis
This study formed one index –

i. Subjective (Perceived) Neighbourhood Quality Index (SNQI), using subjective neighbourhood attributes.

4. FINDINGS OF THE STUDY

This section presents results of analyses carried out in the course of the study. Seven hundred and twenty-six (170) household questionnaires were administered and 170 retrieved, i.e. a response rate of 100%. Analysis was therefore based on 170 households, representing 9 % of the target population of households in the two indigenous enclaves.

4.1 Neighbourhood Attributes

Table 2 displays the existence or otherwise of selected neighbourhood attributes in the two indigenous enclaves studied. The 7 selected attributes were:

i. Garbage on Streets;

ii. Street Lighting;
iii. Traffic Congestion;
iv. Neighbourhood Vigilante Groups;
v. Neighbourhood Gangs;
vi. Periodic Flooding; and
vii. Public Transportation.

Table 2 reveals that garbage was found on the streets and neighbourhoods in the two neighbourhoods.(See Plate 2) This shows that the neighbourhoods are not very clean, so government should intensify effort in its environmental sanitation programme.

Table 3 also reveals that there were no street light in virtually all the neighbourhoods and pose a threat to security as hoodlums can hide in darkness to harm passersby. The study presents traffic situation in good light. It reveals that there was no traffic congestion in the two neighbourhoods (see Table 2).

Table 2 reveals that neighbourhood vigilante groups exist in Amadi-Ama and Orowurokwo. Table 2 further reveals that neighbourhood gangs exist in Amadi- Ama and Oroworukwo. This also poses security treat to residents and it is the collective effort of government and residents to ensure that neighbourhood gangs are completely eliminated. Table 2 further reveals that public transportation exist in the two neighbourhoods. Table 2 also revealed that periodic flooding occur in the two neighbourhoods. Government and residents should intensify efforts to tackle the problem of flooding. Flooding in the city of Port Harcourt is caused mainly by blocked drains.

Table 2: Existence/Non Existence of Selected Neighbourhood Attributes in the Indigenous Enclaves

	Communities	Existence/Non-Existence of Selected Neighbourhood Attributes						
		Garbage on Street/ Neighbourhood	Street Lighting	Traffic congestion	Neighbourhood Vigilante groups	Neighbourhood Gangs	Periodic Flooding	Public Transportation
(Indigenous Enclaves)	Oroworukwo	•	○	○	•	•	•	•
	Amadi Ama	•	○	○	•	•	•	•

Legend
● Exists
○ Does not Exist

(Source: Authors' Field Survey, 2011)

4.2 Neighbourhood Services

Table 3 shows that each of the two neighbourhoods had at least one public primary school. A similar pattern is also reflected in the provision of public secondary schools.

Table 3: Distribution of Neighbourhood Services in the two Indigenous Enclaves

Services	Oroworukwo	Amadi-Ama
Primary Schools (Public)	1	1
Public Secondary School	1	1
Private Recreational Areas	0	0
Public Recreational Areas	0	0
Traditional Markets	1	1
Super Markets	3	2
Retail Shops	5+	5+
Hospital/Clinics	1	2
Fire Stations	0	0
Police Stations	1	1

(Source: Authors' Field Survey, 2011)

Table 3 also reveals the paucity of recreational facilities in the neighbourhoods. Each neighbourhood had a traditional (local). There were also supermarkets in the two indigenous enclaves. Over 5 retail shops existed in each neighbourhood; but hospitals and clinics were also available. Each neighbourhood had a police station, suggesting adequacy of police protection.

4.3 Residents' Perceptions of Selected Neighbourhood Attributes

Residents of the two neighbourhoods were also asked to indicate their level of agreement or disagreement with statements describing selected attributes of their neighbourhoods. Table 4 shows these results. Most of the respondents (92.9%) agree that elementary schools are within easy reach from their dwellings in the indigenous

enclaves. Slightly over a quarter (28.8%) of respondents in these areas disagree that there is a hospital or clinic within walking distance from their dwellings while 11.8% of the respondents were neutral.

Most of the respondents (76.5%) see their neighbourhoods in a positive light with regards to the statement that this neighbourhood is well provided with shopping facilities, such as traditional markets, grocery stores and supermarkets. Forty six percent of the residents in two indigenous areas studied in Port Harcourt see their neighbourhoods in a positive light with regards to police station within easy reach from their dwelling. This implies that police protection is fairly adequate in these neighbourhoods.

About 60% of residents in the indigenous areas disagree that their neighbourhoods are clean while over a quarter agree to the cleanliness of their neighbourhoods. However 12.9% were neutral to this statement (Table 4). The study further reveals that 61.7% of the residents in these areas saw their neighbourhoods in a negative light with regards to street maintenance (See Plate 1). The study also shows that 48.2% of the respondents agree that their neighbourhood is a safe place to live in the indigenous areas (See Table 4).

Plate 1: A Poorly Maintained Street in Oroworukwo one of the indigenous enclaves.
(Source: Authors' Field Survey, 2011)

Table 4: Perception of of Selected Neighbourhood Attributes in the Indigenous Enclaves

Neighbourhood Attributes	Indigenous Enclaves	
	N	**%**
Elementary Schools are within easy reach from my dwelling		
1.0 Disagree Strongly	2	1.2
2.0 Disagree Somewhat	0	0
3.0 Neither Agree Nor Disagree	2	1.2
4.0 Agree Somewhat	158	92.9
5.0 Agree Strongly	6	3.5
Missing Data	2	1.2
Total	**170**	**100**
There is a hospital/clinic within walking distance from my dwelling		
1.0 Disagree Strongly	26	15.3
2.0 Disagree Somewhat	23	13.5
3.0 Neither Agree Nor Disagree	20	11.8
4.0 Agree Somewhat	46	27.1
5.0 Agree Strongly	49	28.8
Missing Data	6	3.5
Total	**70**	**100**
This neighbourhood is well-provided with shopping facilities, such as traditional markets, grocery stores, and supermarkets		
1.0 Disagree Strongly	5	2.9
2.0 Disagree Somewhat	17	10.0
3.0 Neither Agree Nor Disagree	14	8.2
4.0 Agree Somewhat	68	40.0
5.0 Agree Strongly	62	36.5
Missing Data	4	2.4
Total	**170**	**100**
There is a police station in this neighbourhood within easy reach from my dwelling		
1.0 Disagree Strongly	60	35.3
2.0 Disagree Somewhat	17	10.0
3.0 Neither Agree Nor Disagree	13	7.6
4.0 Agree Somewhat	35	20.6
5.0 Agree Strongly	43	25.3
Missing Data	2	1.2
Total	**170**	**100**
This neighbourhood is clean		
1.0 Disagree Strongly	48	28.2
2.0 Disagree Somewhat	52	30.6
3.0 Neither Agree Nor Disagree	22	12.9
4.0 Agree Somewhat	41	24.1
5.0 Agree Strongly	7	4.1
Missing Data	0	0
Total	**170**	**100**
The streets in this neighbourhood are well-maintained		
1.0 Disagree Strongly	47	27.6
2.0 Disagree Somewhat	58	34.1
3.0 Neither Agree Nor Disagree	10	5.9
4.0 Agree Somewhat	42	24.7
5.0 Agree Strongly	13	7.6
Missing Data	0	0
Total	**170**	**100**
This neighbourhood is a safe area to live in		
1.0 Disagree Strongly	43	25.3
2.0 Disagree Somewhat	19	11.2
3.0 Neither Agree Nor Disagree	20	11.8
4.0 Agree Somewhat	57	33.5
5.0 Agree Strongly	25	14.7
Missing Data	6	3.6
Total	**170**	**100**

(Source: Authors' Field Survey, 2011)

4.4 Residents' Evaluation of Selected Neighbourhood Attributes in the two Indigenous Enclaves

The residents were asked to indicate whether certain attributes of their neighbourhood environment were too few, about right or too many. The responses are presented below. Table 5 shows that 72.9% of the respondents stated

that elementary schools were about right in the indigenous areas while 23.5% said that primary schools were too few.

Table 5 reveals that 45.3% of the respondents said hospitals/clinics were too few in the indigenous areas while 51.8% of the respondents said that the hospitals/clinics were about right. The most respondents stated that police stations were about right in these areas. Most of the residents (55.3%) in the indigenous areas said that the city council never picks up waste while 27.1% of the residents said that the city council pick up waste occasionally (See Table 5, Plate .2). This implies that the city council has not fully lived up to its responsibility, so should improve on it services in this regards

Most respondents stated that it is fairly easy to get to shopping facilities to purchase their daily needs (SeeTable 5). Table 5 further shows that 55.3% of the respondents reported that the condition of streets allow people and vehicles to move about with no difficulty at all while 43.5% of the respondents reported that the conditions of streets makes it difficult for people and vehicles to move about.

Plate 2. Garbage Dump Close to Pier Toilet, Amadi-Ama
(Source: Authors' Field Survey, 2011)

Table 5: Evaluation of Selected Neighbourhood Attributes in the Indigenous Enclaves

Neighbourhood Attributes	Indigenous Enclaves	
	N	**%**
Would you say that there are too few elementary schools in this neighborhood, too many, or is the number about right		
1. Too Few	40	23.5
2. About Right	124	72.9
3. Too Many	5	2.9
4. Missing Data	1	.6
Total	**170**	**100**
Considering the location of shopping facilities in this neighborhood, do you think that it is very difficult to get to them for the purchase of your daily needs, rather difficult neither difficult nor easy, fairly easy or very easy?		
1. Very Difficulty	0	0
2. Rather Difficult	23	13.5
3. Neither Difficult Nor Easy	17	10.0
4. Fairly Easy	94	55.3
5. Very Easy	35	20.6
6. Missing Data	1	.6
Total	**170**	**100**
In your opinion, are there too few hospitals/clinics serving this neighborhood, too many. Or is the number about right		
1. Too Few	77	45.3
2. About Right	88	51.8
3. Too Many	1	0 .6
4. Missing Data	4	2.4
Total	**170**	**100**
Do you think that there are too few police stations, too many, or that the number is about right to provide the services necessary for safety here?		
1. Too Few	71	41.8
2. About Right	94	55.3
3. Too Many	5	0
4. Missing Data	0	3.0
Total	**170**	**100**
Does the city council pick up the garbage in this neighborhood very often, often, occasionally, or never?		
1. Never	94	55.3
2. Occasionally	46	27.1
3. Often	26	15.3
4. Very Often	2	1.2
5. Missing Data	2	1.2
Total	**170**	**100**
In your opinion, does the condition of streets in this neighborhood allow people and vehicles to move about with great difficulty, with some difficulty, or with no difficulty at all		
1. With Great Difficulty	24	14.1
2. With Some Difficulty	50	29.4
3. With No Difficulty at all	94	55.3
4. Missing Data	2	1.2
Total	**170**	**100**
Mode	3	

(Source: Authors' Field Survey, 2011)

4.5 Other Neighbourhood Attributes

The study reveals that 28.8% of the residents in Port Harcourt said that the streets are tarred while 55.3% of the residents said it is not tarred. Table 6 reveals that most streets have no drains in the indigenous areas were blocked while drains are blocked in some parts. Only 18.2% of the residents said drains were flowing.

Table 6 reveals that the main source of noise in these areas is from electric generators with a percentage of 64.1%. This is a real menace in these areas of P.H. This is closely followed by noise from automobiles. The study areas are free from noise from industries as revealed in Table 6. The modal distribution reveals that most residents use public transportation and taxi/buses as means of transportation in the city.

Table 6: Other Neighbourhood Attributes

Neighbourhood Attributes	Indigenous Enclave	
	N	**%**
Condition of street surfaces		
1. Tarred	49	28.8
2. Not Tarred	94	55.3
3. Tarred with potholes	27	15.9
4. Missing Data	0	0
Total	**170**	**100**
Condition of Drains		
1. Drains Blocked	54	31.8
2. Drains Flowing	31	18.2
3. No Drains	79	46.5
4. Missing Data	6	3.5
Total	**170**	**100**
Sources of Noise		
1. Noise from automobiles	35	20.6
2. Noise from electric generators	109	64.1
3. Noise from industry	0	0
4. Others (specify)	25	14.7
5. Missing Data	1	.6
Total	**170**	**100**
Means of transportation by household		
1. Public transportation	90	52.9
2. Taxi/buses	52	30.6
3. Private car	28	16.5
4. Missing Data	0.0	0
Total	170	100

(Source: Authors' Field Survey, 2011)

4.6 Neighbourhood Quality Index

Table 7 reveals that 82.9 % of residents in the two indigenous enclaves altogether perceived their neighbourhood to be of medium quality while 6.5% and 7.1% perceived it to be of low and high quality respectively.

Table 7: Neighbourhood Quality Index (Port Harcourt Municipality)

Quality	**Indigenous Enclaves**	
	N	**%**
Low (1)	11	6.5
Medium (2)	141	82.9
High (3)	12	7.1
Missing	6	3.5
Total	**170**	**100**

(Source: Authors' Field Survey, 2011)

4.7 Perceived Residential Quality of Life

Table 8 reveals that 26.5% of the residents in the indigenous areas were unhappy. This is closely followed by residents who had mixed feeling about their residential environment as a whole (25.3%) while only 2.4 % perceived their residential environment as terrible (See Figure 2).

The study also revealed that most residents believed that employment will improve their residential quality of life and this is closely followed by the provision of basic amenities and better housing. One major suggestion of residents on what will improve housing conditions in the neighbourhoods and the city is that government should force landlords to renovate their houses

Table 8: Perceived Residential Quality of Life in the Indigenous Enclaves

Residential quality of life as a whole	N	%
1.Terrible	4	2.4
2.Unhappy	45	26. 5
3.Mostly dissatisfied	18	10.6
4.Mixed	43	25.3
5.Mostly satisfied	28	16.5
6.Pleased	22	12. 9
7.Delighted	7	4.1
8.Missing data	3	1.8
Total	**170**	**100**

(Source: Authors' Field Survey, 2011)

5. DISCUSSION OF FINDINGS

The discussion was based on the following issues:

5.1 Characteristics of the Residential Environment

Only one level of the residential environment was examined in this study, the neighbourhood.

The study reveals that garbage existed on the streets and neighbourhoods. This shows that neighbourhoods were not very clean and the government should intensify effort to clean the environment through its monthly environmental sanitation programme and daily collection of waste should be improved.

The study also reveals that there was no street lighting in the neighbourhoods. This is a serious problem and poses security threats in the neighbourhoods. The study further reveals that neighbourhoods gangs existed in Amadi- Ama and Oroworukwo the two indigenous enclaves. This also poses security threat to the neighbourhoods as the fear of crime may be in the minds of residents. The findings are similar to those of Pacione (2003) who studied the nature and extent of fear of crime among male and female residents of a deprived social housing estate on the edge of Glasgow, and used the information to identify the geography of fear within the area. His research revealed that for both males and females crime was regarded as the second most serious problem in the area. His research further revealed that for most young males the high risk of assault was an accepted part of their lifestyle and living environment and fear of sexual assault for young females. Respondents according to him accepted that they were 'fair game' and an automatic target for local gangs. This is certainly true for the study area.

The study shows that there was no traffic congestion in the neighborhoods studied. The study also reveals that periodic flooding occurred in the neighbourhoods. The problem of flooding in Port Harcourt can be solved as most of the flooding is caused by blocked drains and construction of houses on natural drains. Educating the masses on waste management and good sense of environmental management will fully tackle the problem of periodic flooding. Demolition of structures on natural drains and proper planning will also tackle the problem.

The study reveals that public transportation was readily available to the public, but it was provided by the private sector. The study reveals that the roads were in bad condition in the two indigenous enclaves studied. Most residents in the study area affirmed drains were not available while over a quarter affirmed that the drains were blocked. This is a critical issue as this can contribute to flooding during the rainy season and it is also a health challenge.

The study also reveals that another unbearable problem was noise pollution and this was mainly from private generators for electricity supply as a result of irregularity in electricity supply from Power Holding Company of Nigeria (PHCN). Interestingly, Marans (1979) in his study also found that conditions which were bothersome to the greatest number of neighbourhood residents were noise, heavy traffic, crime, litter and poorly maintained streets.

This study also reveals that the average power supply per day in the neighbourhoods ranged from 3 to 6 hours. This is the reality in the city and government should take concerted effort to increase the power supply in the city and the country in general. The incessant power cuts have increased noise pollution in our neighbourhoods and this also poses health risks as a result of the noise and air pollution.

The study also reveals that there was at least one primary and secondary school in the neighbourhoods and only one fire station in the whole of Port Harcourt municipality. This is grossly inadequate; so more fire stations are needed in the study area. This gross inadequacy of fire stations has lead to the total destruction of buildings by fire in recent times in the city. Marans (1979) also reported inadequacy of public services such as transportation, clinics and shopping facilities in his study of the determinants of neighbourhood quality. The study reveals that shopping facilities such as retail shops existed in the neighbourhoods. Hospitals and clinics were available in the neighbourhoods.

One major finding of this study was the current situation of water supply by the government in the city as a whole. The main source of water supply in the study area is from private boreholes, 90% of the residents affirm

this while only a few of the residents had pipe-borne water from government. This is a critical issue and shows that government provision of this basic and important service is virtually nonexistent. This result is in line with Wokekoro (2005), which stated that the main source of water supply was the borehole in Port Harcourt. This shows that the water supply situation has not improved in the city. In order to ensure public health and safety there must be adequate supply of water. This implies that Target 10 of the Millennium Development Goal (MDG) 7 will not be achieved by the year 2015. MDG 7 urged governments and policy makers to "halve the proportion of people without access to safe drinking water and basic sanitation by 2015". It also implies that the primary goal of the National Housing Policy of 1992 which is to ensure that all Nigerians own or have access to decent, safe and sanitary housing accommodation of affordable cost with secure tenure has not been achieved. These conditions were also observed by Ogionwo (1979) and Izeogu (1989), which shows that the condition has not improved.

Another salient finding of the study pertains to household waste collection and disposal. Slightly over 30% of the respondents in the study area affirmed that waste is dumped at collection points for collection and disposal by government agencies. The dumping of refuse into creeks, drains and roads is a major cause of water pollution, flooding and insanitary environment. The blocked drains become breeding grounds for mosquitoes and subsequently affect the health of residents.

5.2 Residents' Perception of the Residential Environment

One major finding of the study was that most respondents strongly agreed that elementary (primary) schools, and police stations were within easy reach from their dwellings. This shows that access to primary education and police protection was fairly adequate in the neighbourhoods except in Oroworukwo with regard to police protection.

Another finding of the research was that most respondents strongly agreed that their neighbourhoods were well provided with shopping facilities such as local markets, supermarkets and retail shopping outlets. A further finding was that 36.5% of the respondents strongly agreed that there was a hospital or clinic within walking distance from their dwelling while only 2.9% of the respondents strongly disagreed that there was a hospital/clinic within walking distance from their dwellings.

The study also reveals that only 4.1% of the residents in the study area strongly testified to the cleanliness of their neighbourhoods, while over a quarter strongly disagreed as to the cleanliness of their neighbourhoods. Another main finding of the study was that 61.7% of the respondent disagreed that the streets were well maintained in the indigenous enclaves.

Seventy three percent of the respondents affirmed that the number of primary schools were about right in the study area. Fifty two percent of the respondents affirmed that the number of hospitals/clinics were about right. .

One major finding of the study was that most residents across the neighbourhoods rated maintenance of streets, recreational areas, safety of lives and properties, residential planning, provision of housing for the poor, hospitals/clinics, fire stations, police stations, waste collection and disposal very inadequate while most respondents rated public schools, public transport and shopping facilities very adequate. The finding of this study is similar to that of Wokekoro (2005) in terms of street maintenance. Wokekoro (2005) observed streets with potholes (35.9%) which showed lack of street maintenance. The present administration in the state, should be commended for its efforts in road construction and rehabilitation. He should try and fulfill his promise of "Zero Pot Hole" in Port Harcourt before his tenure comes to an end.

The Perceived Neighbourhood Quality (PNQ) index reveals that most neighbourhood attributes were of moderate quality. This implies that neighbourhood attributes in the study area were moderately adequate (See Table 7).

5.3 Perceived Residential Quality Of Life

The study reveals that 26.5 % of the residents were unhappy with their residential environment while only 12.9% were pleased with their residential environment. The study further reveals that most residents believed that employment, provision of basic amenities and housing would improve their residential quality of life.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

In this study the residential quality of life in the indigenous enclaves of Port Harcourt was examined. The paper examined one aspect of the residential environment namely: the neighbourhood.

The study has led to the conclusion that most residents were not satisfied about their residential conditions such as maintenance of streets, hospitals or clinics, safety of lives and property, electricity supply, water supply and waste collection and disposal. The study further revealed that 26.5% of the residents in the study area were unhappy with their residential quality of life and 82.9% of the residents perceived their neighbourhoods to be of medium quality. A key conclusion of the study was that the improvement of neighbourhood residential conditions as perceived by the residents was important in raising residential quality of life, and that in the provision of public insfrastructure and services, the perceptions and preferences of the beneficiaries/target

population must be seriously taken into account to achieve user satisfaction.

6.2 Recommendations

6.2.1 Maintenance of Roads and Streets

The study has shown that most respondents were not satisfied with street maintenance in their neighborhoods. Government should ensure the proper maintenance of roads and streets, taking advantage of funds available in the National Urban Development Bank, assistance from international development agencies and through private-public-partnership (PPP) arrangements.

6.2.2 Safety of Lives and Property

The study reveals that there was virtually no street lighting in the study area. . This is a security issue and this essential service should be provided by government. This is a responsibility of government and should be adequately provided. Neighbourhood vigilante groups should be encouraged to work in collaboration with the police also in securing lives and properties since security is everybody's business.

6.2.3 Neighbourhood Services

The study also reveals that electricity supply and water supply were inadequate. Furthermore it was found that the main source of noise pollution was from the use of electric generators brought about by incessant power cuts in the city. People were very dissatisfied with electricity supply. Regular power supply could be achieved through public-private partnership and current privatization process embarked upon by the Federal Government. Government provision of water supply was virtually nonexistent. Government should partner with the private sector to provide this essential service to the populace. Government should also look into other forms of electricity generation such solar power, biomass, wind, tidal energy which in abundant supply in the country.

The study also found that people were not satisfied with waste collection and disposal. Waste collection should be done on regular basis. Public-Private partnership should also be adopted. The current practice of waste disposal into drains by the residents should be discouraged and appropriate measures should be put in place to punish perpetrators. The monthly environmental sanitation exercise should be used as a public enlightenment tool; during the exercise, the practice of removing waste from drains and putting same on the roadsides should be discouraged.

Finally, the study found that residents believed that residential quality of life would be improved through the provision of basic amenities, good housing and proper sanitation. These basic needs and services should be adequately put in place through properly designed policies and massive education.

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