Quality of Residential-Neighbourhood Environment of Port Harcourt City Local Government Area of Rivers State

Okwakpam, Ikechi Omenuihu
Department of Geography and Environmental studies
Ignatius Ajuru University of Education,
Port Harcourt, Rivers State, Nigeria.

ABSTRACT
The study assesses the quality of urban residential-neighbourhood environment in Port Harcourt city local government area. The study was a household-based cross-sectional survey. The data was collected through primary and secondary sources. Thirty percent (30%) of the twenty (25) contiguous neighbourhood of Port Harcourt city local government area were selected through simple random sampling method to represent the total population of the study area. The study made use of questionnaire designed to elicit information on the respondents' residential-neighbourhood attributes within the study area. A total of three hundred and thirty copies of questionnaires were purposively administered to household-heads in the sampled neighbourhood. A residential quality index (RQI): objective indicators and subjective indicators were constructed. Variables were tabulated for proper classification and results presented in percentages. The study exhibits many attributes that are associated with residential neighbourhood decay which create environmental degradation. Majority of the respondents were not satisfied (low-income 67.6 percent, middle income 73.3 percent and high-income 91.7 percent, respectively) with the drainage condition. The "distance of the dwelling unit" to soak away pit was unsatisfactory for low income group 90.5 percent and middle-income group 96.7 percent, respectively. Most of the neighbourhoods do not meet the recommended standard of 20 -30ft (6 -10m) or more away from the source of drinking water (borehole). The study recommends massive urban renewal scheme; approved method of storage, collection and disposal of solid waste to satisfy minimum health and good living standards.
KEYWORDS: Quality; Urban Residents; Neighbourhood; Environment

I. INTRODUCTION

In recent time, it has been observed that the phenomenal rise in population, spontaneous increases in size of cities have led to poor environmental quality in urban area especially in developing countries. Going by a UN-Habitat assessment more people live in low quality residential-neigbourhood, mostly in the sprawling slums and low-income settlements in developing countries (UN- Habitat, 2009). Overall quality of the residential-neighbourhood environment in most African countries falls short of the expected standard. A growing number of urban residents in Nigeria and Port Harcourt city in particular, suffer from poor state of urban environmental condition. Less affluent population groups often are affected by higher environmental burden in their residential neighbourhood (Braubach & Fairburn, 2010). Provision of appropriate residential-neighbourhood environment, particularly for the urban low-income group is lacking and this poses serious challenge to environment characteristics of a person and those of the environment itself. The scenario has adverse implications on the general wellbeing of the people and portends severe danger to the socioeconomic and physical development of the city. It affects the well-being of the residents, their productivity and manner of living, and decencies of their lives (Kytta, Broberg, Tzoulas & Snabb, 2013).

Residential neighbourhood setting has a large potential to contribute towards providing people with opportunity to live full lives, and contributes towards all aspects of development in the individual, community and societal contexts (Van Wyk, & Van Wyk, 2001; Oladapo, 2006). As a symbol of achievement and social acceptance and as an element of urban growth and income distribution, residential-neighbourhood fulfills a social need which reflects the cultural, social and economic values of a society (Jiboye, 2009). Generally, it sets grade or level of satisfaction of residential environment.

Level of satisfaction is a subjective value concept. This value is defined by value of "residential environmental quality" which contained essential characteristics as individual satisfaction of neighbourhoods. An individual can relate himself socially and functionally to the complex world around him, incorporating not only a shelter but also part of the fabric of the neighbourhood life and of the whole social milieu which touches

upon many facets of economic activity and development: providing social contacts, good image, a sense of belonging and indicator of social status. (Abrams, 1964; Obinna, Okwakpam & Mark, 2008). Thus, total subjective value of residential environmental quality equal sum assessments of characteristics and components of environment (Van poll, 1997).

Quality of residential environment is the total surrounding environment with its analogy facilities and services. It is an environmental quality profile that embraces many factors which include the physical condition of the building and other facilities and services that make living in a particular area conducive (Marans, 2006). A neighbourhood environment is a system of settings in which systems of activities take place that forms a sub-system of the environment. Residential-neighbourhood can therefore be conceptualized as a unit of the environment or multi-dimensional package of goods and services which enhance good living as well as profound quality influence on satisfaction of residents (Jiboye, 2009).

Previous studies have investigated "A residential environmental satisfaction scale (Adriaanse, 2007)"; "Effects of environmental quality on property values in peri-urban neighbourhood of Minna", (Popoola, Jinadu, Liman & Abd'Razack, 2015); "Satisfaction with the neighbourhood environment in public housing in Port Harcourt", (Eziyi, Opoko, & Aduwo, 2015); "Inhabitants rating of neighbourhood in Old Port Harcourt Township" (Wokekoro, 2018). From all these studies, investigation on synthesis of the quality of neighbourhood environment of Port Harcourt City Local Government is lacking, which is needed to provide support for sustainable environmental policies relating to residential neghbourhood. Therefore, the study thrust is hinged on subjective and objective perception of level of satisfaction of the residents of Port Harcourt on their neighbourhood environmental quality.

II. STUDY AREA

The study area is Port Harcourt city Local Government Area. The city of Port Harcourt was created by the British colonial administration between 1912 and 1914. The city was initially an indigenous area, but with the discovery of oil in 1950, Port Harcourt expanded quickly beyond its original boundaries presently about 470km^2. The city of Port Harcourt is an industrialized city with dominant economic activities of oil and gas related industries. Aside the industry activities, commercial activities in Port Harcourt are on a large scale, making the city a nodal point for trade, serving neighboring cities and states within the south-south, south-east, geopolitical regions of Nigeria. Port Harcourt is linked to all parts of the world through its international air and sea ports. There is influx of people into the city as a result of in-migration. Initially the city was a planned city, in recent time; the city has engulfed indigenous enclaves.   Farmlands have been converted for development processes such as residential and commercial purpose. Most of the land has been built-up and there is little or no land left for building residential need.

III. RESEARCH DESIGN

The approach to this study is emphasized on the subjective and objective characteristics (Kesakhen & Dadashpoor, 2012). A household-based cross-sectional survey was adopted in the study. The data was collected through primary (survey, direct observation, interviews and questionnaire) and secondary sources. The target population composes of household members residing in the neighbourhoods of the study area. The study adopted the multistage sampling technique (Obinna & Okwakpam, 2010). Thirty percent (30%) of the total number of the 25 contiguous residential-neighbourhoods that make up the study area were randomly sampled. Consequently, seven (7) neighbourhoods in the study area were selected to represent the total population. The study made use of questionnaire designed to elicit information on the respondents' residential-neighbourhood attributes within the study area. Forty seven questionnaires were purposively administered to household-heads who are usually the most knowledgeable about residential-neighbourhood attributes in each of the sampled neighbourhood, summing up the number to three hundred and thirty (330) respondents. In order to characterize quality of the residential/neighbourhood environment condition, a residential quality index (RQI) was constructed. The study adopted the use of descriptive statistics such as percentages in presentation of the results.

Table: 3.1 Contiguous Residential-Neighbourhood in Port Harcourt city LGA

1. Nkpolu –Oroworukwo	14. Ukukalama
2. Mgbundugu	15.Somiari Ama
3. Otumuonyo	16.Fimie – Ama
4. Oromerezimbu	17.Borikiri
5 Orominieke	18.Ogbunabali
6 Rumuoparaeli	19.Orije old GRA
7 Nkpolu-Orogbum	20.Azuabie

8	Ochiri	21.	Abuloma
9	Ishmeal Orupapo	22.	Ozuboko
10	Bundu	23.	Okuku Ama
11	Town	24.	Elekahia
12	Nkpogu	25	Nembe Waterside Town
13	Amadi-Ama		

IV.   PRESENTATION OF DATA

The variables employed for index construction determine whether a residential-neighbourhood environment is to be regarded as standard or of best quality. Neighbourhood attributes were characterized in the study area to form a neighbourhood quality index (NQI). This was constructed by assessing objective measurement based on scores of each sampled neighbourhood on a number of neighbourhood attributes or variables such as: house type, walling material, source of water, type of toilet, distance of dwelling unit to soak away pit, distance to nearest dwelling unit, drainage condition and house condition. Thus if a house met the desired condition on any variable, a score of one was assigned otherwise the score would be zero.

The residential neighbourhood attribute indicate that only 37.2 percent of the sample house type were of standard or best quality. The walling material was generally of acceptable standard while the respondents' main source of water was from the borehole. The toilet types are predominantly made of water closet. Distance of dwelling unit to soak away pit is 6-10m. Less than 10 percent of the respondents tipped their household refuse into public waste bin. Predominant number of the distance to the nearest dwelling was less than the recommended standard of -5 to 14m. The drainage condition was below the standard of what might be regarded as good drainage accounting for 26.4 percent and the housing condition is about 28.2 percent of the total household sampled in the study area.

4.0 Analysis of research questions
Table: 4.1 Quality of the residential neighbourhood environment of the study area
(Objective indicators)

Attributes	Standard conditions	Frequency	Percentage
House type	-Single family, detached -Blocks of flats (multi-family)	203	37.2
Walling material	-Blocks/burnt bricks	330	100
Source of water	-Internal plumbing/stand pipes	330	100
Toilet type	-Water closet	330	100
Distance of dwelling unit to soak away pit	20 -30ft (6 -10m)	30	9.0
Refuse disposal	-Tipped into public waste bin	31	9.4
Distance to nearest dwelling	-5 to 14m	57	17.3
Drainage condition	-Good (not littered)	87	26.4
House condition	-Good (needs no repair)	93	28.2

Source: Researchers' Fieldwork, 2020**.**

Objective measurements explain very little of the variance in neighborhood satisfaction and the most of the explained variance in satisfaction with neighborhood is accounted for by subjective measurements. Neighborhood satisfaction is analytical framework for collecting subjective information (residents' feelings) about various attributes of the neighborhood. Perception of neighborhood attributes is measured by level of satisfaction.

Table: 4.2 level of satisfaction on residential neighbourhood environment in the study area

Variables	Satisfaction level	Low income >50,000		Middle income 50,000 -150,000		High income < 150,000	
		Freq. (148)	%	Freq. (120)	%	Freq. (72)	%
House type	Satisfied	56	37.8	72	60.0	61	84.8
	Accepted	00	00	7	5.9	4	5.5
	Unsatisfied	92	62.2	41	34.1	7	1.7
Walling material	Satisfied	59	39.9	53	44.1	69	95.8
	Accepted	27	18.2	45	37.5	00	00
	Unsatisfied	62	41.9	22	18.3	3	4.2
Source of water	Satisfied	148	100	120	100	72	100
	Accepted	00	00	00	00	00	00
	Unsatisfied	00	00	00	00	00	00
Waste disposal method	Satisfied	28	18.9	14	11.6	6	8.3
	Accepted	20	13.5	00	00	00	00
	Unsatisfied	100	67.6	106	73.3	66	91.7
Drainage condition	Satisfied	48	32.4	47	39.2	6	8.3
	Accepted	25	16.9	10	8.3	00	00
	Unsatisfied	75	50.7	63	52.5	66	91.7
Distance of the dwelling unit to soak away pit	Satisfied	00	00	4	3.3	5	6.9
	Accepted	14	9.5	00	00	64	88.9
	Unsatisfied	134	90.5	116	96.7	3	4.2
House condition	Satisfied	59	39.9	53	44.1	69	95.8
	Accepted	27	18.2	45	37.5	00	00
	Unsatisfied	62	41.9	22	18.3	3	4.2

Source: Researchers' Fieldwork, 2020.

Majority of the respondents were not satisfied (low-income 67.6 percent, middle income 73.3 percent and high-income 91.7 percent, respectively) with the drainage condition. The study revealed that residents regularly dump their waste on the streets which eventually transport the waste into the gutter, and this clog the gutters and prevents the flow of water, causing the gutter to over flow. The stagnation of water in the gutter creates unsanitary conditions for residents of the neighbourhood and contributes to the degradation of the environment. The "distance of the dwelling unit" to soak away pit was unsatisfactory for low income group 90.5 percent and middle-income group 96.7 percent, respectively. Erroneously, the respondents (high-income, middle income and low-income groups, respectively) were satisfied with the source of water. This is misleading because, the soak way pits in most of the neighbourhoods do not meet the recommended standard of 20 -30ft (6 -10m) or more away from the source of drinking water (borehole). Incidentally a growing number of low income group may suffer endemic diseases (diarrhea, dysentery, hepatitis and typhoid) linked to poor sanitation and contaminated drinking water.

V.   CONCLUSION
The residential neighbourhood exhibits many attributes that is associated with residential neighbourhood decay which create environmental degradation. Lack of suitable drainage constitutes the major environmental challenge. The majority of the soak away pit do not satisfy minimum health standard. The stagnation of water in the gutter creates unsanitary conditions for residents of the neighbourhood and contributes to the degradation of the environment. Satisfaction index, indicate that low-income group of the residents were not satisfied with the neighbourhood quality due to various environmental conditions. This calls for immediate

actions to avert environment health hazards. The degradation can cause waterborne disease and residents susceptible to infections from mosquitoes and other insects.

VI. RECOMMENDATION

1. Government should recognize the income implication of poor residential neighbourhood environment and undertake massive urban renewal scheme that will benefit the people thereby reducing dwelling unit congestion, overcrowding and achieving good sanitation.
2. There should be an awareness focusing on education by helping the residents adapt to an urban life-style.
3. The quality of residential-neighbourhood should satisfy good living standards.
4. There should be an approved method of storage, collection and disposal of solid waste.
5. There should be portable water supply in the neighbourhood.

REFERENCE

[1].   Abrams, C. (1964) Housing in the modern World. Man's struggle for shelter in an urbanizing World. Africa Today, 11(8). 12- 14: Indiana University Press.
[2].   Adriaanse, C.C.M (2007). Measuring residential satisfaction: A residential environmental   satisfaction scale (RESS). J. Housing Built Environ 22: 287-304.
[3].   Balestra, C. & Sultan, J. (2012) "Home sweet home: The determinants of residential satisfaction and its relation with well-being,"OECD Statistics Directorate Working Papers, OECD, Paris.
[4].   Braubach, M. & Fairburn, J. (2010) social inequalities in environmental risks associated with housing and residential location – a review of evidence. European journal of public health 20(1), 36-42.
[5].   Ibem, E. O.; Opoko, P.A.; & Aduwo, E. B. (2015). Satisfaction with neighbourhood environments   in public housing: Evidence from Ogun State, Nigeria. Social Indication Research, 733-757.
[6].   Jiboye, A. D .(2009). The relevance of house-form to housing quality in Nigeria. International Journal of Sustainable Development. 3(2), 29-36.
[7].   Kytta, M.; Broberg, A.; Tzoulas, T. & Snabb, K. (2013). Towards contextual sensitive urban densification: Location-based softGIS knowledge revealing perceived residential   environmental quality. Landscape and Urban Planning 113, 30-46.
[8].   Marans, R. W. (2006).The determinants of neighbourhood quality: An analysis of the 1976 annual housing Survey. A Report Prepared for the U.S. Department of Housing and Urban Development, Office of Policy Development and Research
[9].   Obinna, V.C & Okwakpam, I.O. (2010). Quality of urban residential life among Port Harcourt indigenes: An exploratory study. Journal of Nigeria Environmental Society (JNES), 3(5), 167-179.
[10].   Obinna V. C.; Okwakpam. I. O. & Mark, E. (2008). Housing challenges in the Niger Delta, Nigeria   and policy imperative. Journal of Nigeria Environmental Society (JNES), 4(4), 119-132.
[11].   Ogu, V. I. (2002). Urban residential satisfaction and the planning implications in a Developing World context: The example of Benin City, Nigeria, in International Planning Studies, 7   (1), pp. 37-53.
[12].   Oladapo A. A. (2006) A study of tenant maintenance awareness, Responsibility and Satisfaction   in Institutional Housing in Nigeria". International Journal of Strategic Property Management. Vilnius Gediminas Technical University. Vol.10, pp. 217-231.
[13].   Popoola, N.I.; Jinadu, M.A.;Liman, H.S, & Abd'Razack, N.T.A. (2015). Effects of environmental quality on property rental values in peri-urban neighbourhood of Minna, Niger State. ABTU Journal of Environmental Technology,2(8)
[14].   Van poll, R. (1997). The perceived quality of the urban residential environment, a multi-attrbute evaluation. Rijks University Groningen, Groningen.
[15].   Van WYK, K. and Van Wyk, R. (2001): "The management of housing processes". Conference paper. IHSA Conference, Pietersburg, 10 October. 2001 www.housing.gov.za/.
[16].   Wokekoro, E. (2018) Inhabitants' rating of neighbourhood quality indicators in Old Port-Harcourt Township. British Journal of Environmental Sciences 1(6), PP. 36-50.
[17].   UN- Habitat (2009). "Regulatory framework and strategic urban planning and management". Conference Paper on Housing and Urban Development. Nairobi, 3 -4 April. 2006. Available in www.unhabitat.org.