Assessment of Neighbourhood Environment and Urban Housing Quality on Residents' Health - A Case Study of Nkpor –uno.

By

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Abstract

This study, assessment of neighbourhood environment and urban housing quality on residents' health was conducted at Nkpor uno in Idemili North local government area of Anambra State. The basic survey research was adopted for the study and the systematic random sampling technique was used in selecting 500 housing units. The questionnaire, observation checklist and interview guide were used in collecting data for this study which were administered personally by the researcher. The assessment showed that there is a direct relationship between neighbourhood environment and urban housing quality on residents' health. It was therefore concluded that absence of environmental health services and infrastructures were responsible for low level of housing and environmental qualities which greatly influence peoples' health in the study area. There should be provisions by the government, philanthropists, and landlords for community based environmental health services to ensure sustainable housing and green infrastructural developments. The level of environmental education should be stepped up to increase awareness on community sanitation and adequate solid wastes and domestic waste water management in the area. Sustainable and affordable housing schemes, mortgages and urban renewals should be integrated in government housing policies.

Keywords: Housing, Neighbourhood, Quality, Community, Health, Infrastructures, Residents

Introduction

Housing as one of the most important basic necessities of mankind is known to tremendously affect human health and well-being. It is widely acknowledged that adequate housing is essential for good life, it is a key requirement for an efficient and satisfied labour force and the foundation of satisfactory community life. Furthermore, researchers have shown that housing can affect mental and physical health, both positively and negatively (Ferrari, 2017; Macpherson, 2014; Shaw, 2016).

Housing is a central components of productivity, health and well – being. This stems largely from the fact that the majority of the population are accommodated in poor neighbourhood and low housing quality (United Nations Committee on Human Settlement, 2016).

Housing in the modern concept includes not only the physical structure providing shelter but also the immediate surrounding and the related community services and facilities.

According to World Health Organization Expert Group on Public Health Aspects of Housing prefers to use the term "Residential Environment'' which is defined as physical structure that man uses and the environment of the structure including all necessary services, facilities, equipment and devices needed or desired for the physical, mental health and social well – being of the individual hence housing is more than a mere shelter" (World Health Organization, 2010). Ogu and Ogbuozogbe (2017), concluded that children's progress is stunted by damp, overcrowded, ill-ventilated and poorly lit accommodation. Most Nigerian cities, with the exception of federal capital city of Abuja, have experienced decay in both housing and physical infrastructural facilities over the past few decades, possibly due to economic downturn in the nation. Unlike developed nations, the mortgage industry is still in its infancy in Nigeria with the real estate sector contributing less than one percent to the nation's Gross Domestic Products (GDP) (Musa Suleiman; Punch Newspapers, 2017, September 5). In the past, 25 slums in Port Harcourt

were marked for demolition and replacement with new housing units by the Rivers state government (Gideon Tunji; Guardian Newspaper, 2017, August 24). However this move was strongly resisted by those affected. It appears that residents of slums are not always willing to relocate to less crowded accommodations. Similar problems occur in developed nations. For instance, only 5 percent were ready to be re-housed into the London County Council's Becontree Estate under England's post-first world war for street improvement or slum clearance scheme; Krieger and Higgins (2016). Residential land accounts for the largest proportion of total urban land uses in many African cities. Housing is a major sector in any economy with the value of the housing stock normally exceeding GDP (WHO, 2010). In terms of annual flows, investment in housing typically comprises from 2 to 8 percent of GDP and from 10 to 30 per cent of GRHS (Sprinks & Tunner, 2015; WHO, 2010). Each of these ratios has historically risen with economic development. In particular, as economic development proceeds, the fraction of household income that must be devoted to food expenditures drops sharply, and one of the first areas in which households tend to increase their spending is on housing and related services. Each year, developing countries invest US$150- 250 billion in housing and urban infrastructure. Since total external assistance in terms of loans and grants is only about US$4 billion, the local input remains by far the largest component (WHO, 2019).

It is estimated that at least 300 million urban residents live in absolute poverty (Bronferenbrenner, 2012), 600 million live in life- and health-threatening houses and neighbourhoods (WHO, 2010), and the urban poor form a substantial and growing share of those 800 million people in the developing world who suffer from chronic hunger. Several authors, however, have estimated far greater numbers living in poverty (Rauh, Chew and Garfintel, 2014).

In the Global Report on Human Settlements; Davison and Lawson (2016), estimated that half of the urban population of developing countries — some 600 million people — lived in very poor housing. Most housing developments are executed by private developers**,** taking the form of flats and rooming-accommodation, which are popularly called face me, I face you. These account for between 60 and 80

percent of urban housing in Nigeria (Harris and Droxas, 2017).

The quality of a residential area not only mirrors for the city development, planning and allocation mechanisms between socio-economic groups, but also shows the quality of life of the urbanites.

The realization of a decent home in a suitable living environment requires the availability of clean air, potable water, adequate shelter and other basic services and facilities (Ezenagu, 2000).

This article on neighbourhood environment and urban housing quality of Nkpor-uno focuses on prevalence of diseases which are linked to poor housing and neighbourhood and thus requires the provisions of affordable and sustainable housing with green infrastructural developments.

Materials and Methods

The study area is Nkpor-uno located in Anambra state and shares common features with the state. Anambra state is one of the 36 states in Nigeria and among the top 10 states according to human population. Anambra state and its neighbouring states are in transition between Nigeria's sub- equatorial and tropical hinterland climate belts; 6.275766 Latitude and 7.00683 Longitude.

The study adopted a systematic simple random sampling technique in which 500 residential housing units were selected. The primary target respondents were heads of the households or the responsible adults of the households. The study randomly selected 100 households based on the community's site lay making a total of 500 households from five (5) villages of Nkpor-uno.

The structured questionnaire, observation checklist and interview guide with open-ended and closed ended questions were the veritable instruments used. The study accessed the nature and type of Housing, Neighbourhood environment and Housing quality, and their impact on residents' health.

Results

I. Nature and Type of Housing

Table 1.1 Nature of Housing

Nature	Frequency	Percentage

Detached	380	76
Semi detached	75	15
Terrace	45	9
Total	**500**	**100**

Source: Researcher's Fields Survey (November, 2023)

The above table has shown that more than two-third of the respondents live in detached houses that account 76%, 15% of them live in semi-detached houses while 9% of the respondents live in terrace buildings.

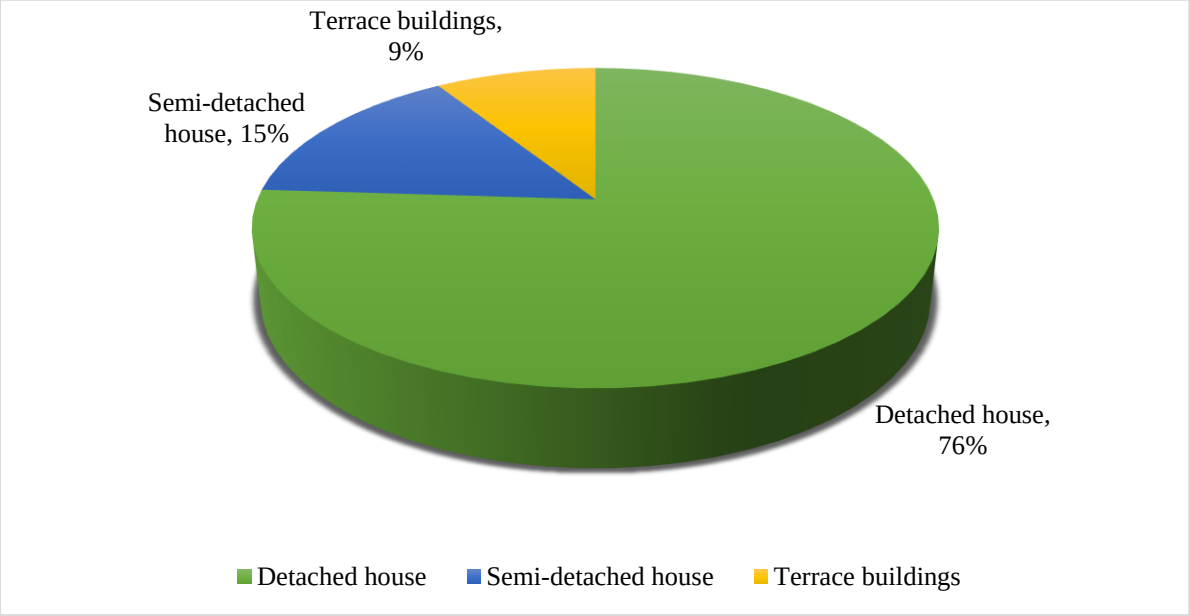


Fig. 1.1.1 Chart on the nature of housing in the study area

Housing Type Assessment

Table 1.2 Housing Type

Housing Type	**Frequency**	**Percentage**
Bungalow Houses	260	52
Storey Buildings	120	24
Duplexes	20	4
Tenement Buildings	100	20

Total	**500**	**100**

Source: Researcher's Fields Survey (November, 2023)

This showed that more than half of respondents (52%) live in bungalow houses, 24% of them live in storey buildings while only 4% representing 20 respondents live in duplexes and 20% of them live in tenement buildings.

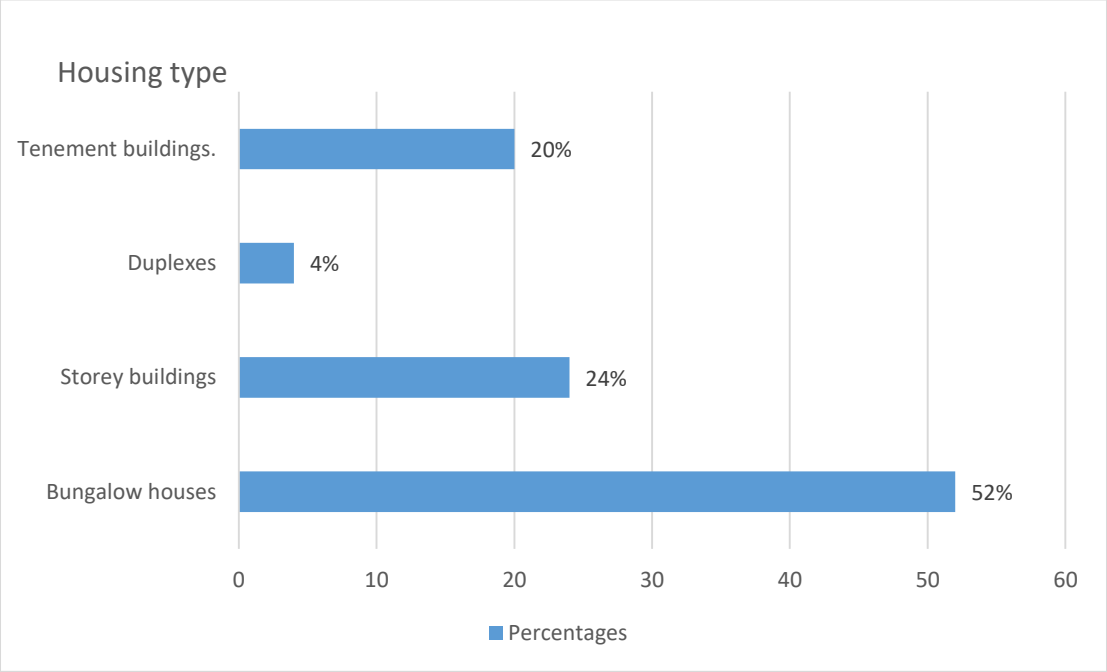


Fig. 1.2.1 Chart on housing type assessment in Nkpor uno

This showed that more than half of respondents (52%) live in bungalow houses, 24% of them live in storey buildings while only 4% representing 20 respondents live in duplexes and 20% of them live in tenement buildings.

II Housing Quality Assessment

Table 2.1 Housing Quality Assessment

Housing Quality	Frequency			Percentages (%)		
	Yes	No	**Total**	Yes	No	**Total**
Do you have water connected to our house?	95	405	**500**	19	81	**100**
Do you have sanitary conveniences (Bathroom & Toilet)?	400	100	**500**	80	20	**100**

Is your sanitary conveniences located inside your house?	105	395	**500**	23.6	76.4	**100**
Do you share your sanitary conveniences with another family?	350	150	**500**	70	30	**100**
Do you have a kitchen?	380	120	**500**	76	24	**100**
Is your kitchen located inside your house?	160	340	**500**	32	68	**100**
Do you share your kitchen with another family?	382	118	**500**	76.4	23.6	**100**

Source: Researcher's Field Survey and Computation (November, 2023)

Table 2.1 showed that 19% of the respondents connected water to their houses while 81% representing 405 respondents fetch water outside their residential homes. Also 80% of the same group have sanitary conveniences, that is, toilet bathroom while 20% of them do not have access to sanitary conveniences, according to them; they do it at nearby bushes and surroundings; these pose a public health significance to their health and public at large, only 23.6% of the respondents have their sanitary conveniences located inside their houses whereas 76.4% of them have sanitary conveniences located outside their houses. In addition, 30% of them still share their sanitary conveniences with people other than their family members while 70% of the respondents maintained personal usage. 76% of the respondents do have kitchen accommodations while 24% of them do not have kitchens accommodation; according to them, their kitchens were improvised, either varrenders or huts were used for kitchen accommodations. Also, 32% of them had their kitchens located inside their houses while majority of the respondents representing 68%, their kitchens were located outside or detached from the main buildings; only 23.6% maintained personal usage for their kitchen accommodations while 76.4% of them shared theirs with neighbours.

Table 2.2 Evaluation of Household Size, Windows and Rooms Occupied

Housing Qualities	**Frequency**				**Percentages (%)**			
	1 - 2	3 - 4	5 & above	Total	1 - 2	3 - 4	5 & above	Total
Household size	80	120	300	500	16	24	60	100

No. of rooms per household	148	250	102	500	29.6	50	20.4	100
No. of windows in the house	150	200	150	500	30	40	30	100

Source: Researcher's Field Survey and Computation (November, 2023)

Table 2.2 showed that 16% of the respondents have their household size within 1-2, 3-4 range were 24% while 5 and above were 60% and such is a prerequisite for their health for overcrowding. Also, 29.6% of the respondents live in 1-2 rooms, half of the respondents (50%) live in 3-4 rooms while 20.4% representing 102 respondents live 5 rooms and above; 30% of the respondents have 1-2 windows in their houses, 40% live in houses with 3-4 windows while 30% of them have 5 and above windows which is determinant for proper ventilation and health.

III Environmental Quality Criteria

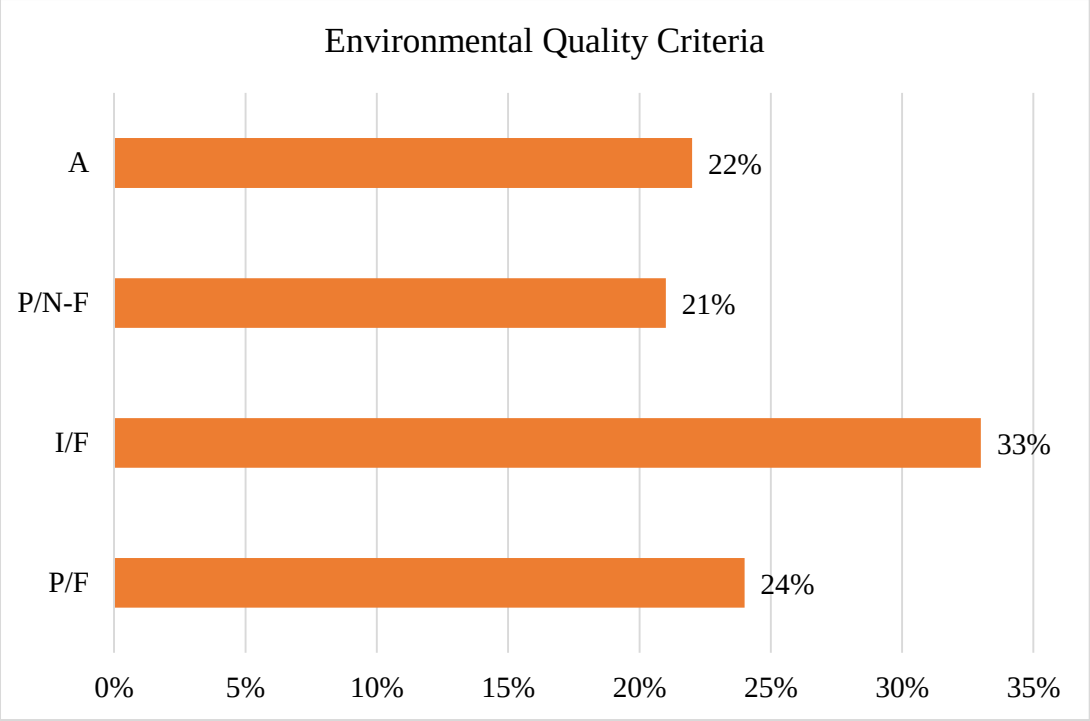


Fig. 3.1.1 Graph on environmental quality criteria of Nkpor-uno

The chart above depicts the nature of the various neighbourhoods in the study area, the classifications were derived from the weighted mean of the research work portrayed various amenities in the areas with their functionalities and sustainability. P/F were rated high with 24% while I/F were rated medium with 33% and P/N-F and A were rated low with 21% and 22% (43%) respectively.

IV Housing Related Diseases/Conditions and Financial Implications

Table 4.1 Evaluation of Housing Related Diseases/Conditions Frequencies (6 months ago per Household)

Housing related diseases and conditions	Frequency						Percentage					
	Very often	Often	Rarely	Sometimes	Never	Total	Very often	Often	Rarely	Sometimes	Never	Total
Respiratory Diseases	70	100	110	210	10	500	14	20	22	42	2	100
Skin Diseases	95	110	120	170	5	500	15	22	24	34	1	100
Arthritis	60	90	117	147	86	500	12	16	23.4	29.4	17.2	100
Malaria	180	240	40	40	0	500	36	48	8	8	0	100
Typhoid	161	272	28	39	0	500	32.2	54.4	5.6	7.8	0	100
Diarrhoea	143	180	113	64	0	500	28.6	36	22.6	12.8	0	100
Cholera	182	200	60	34	24	500	36.4	40	12	6,8	4.8	100
Tuberculosis	21	31	240	150	58	500	4.2	6.2	48	30	11.6	100
Lead Poisoning	20	38	160	180	102	500	4	7,6	32	36	20.4	100
Pneumonia	120	163	76	100	41	500	24	32.6	15.2	20	8.2	100

Source: Researcher's Field Survey and Computation (November, 2023)

Table 4.1 showed that there are diseases or conditions that are related to poor housing and neighbourhood. 14% of the respondents have suffered respiratory diseases very often for the past six months, 20% of them have also suffered respiratory diseases often, 22% of the respondents rarely suffer from respiratory infections, 42% of them sometimes suffer respiratory diseases while only 2% representing ten persons have never suffered respiratory diseases for the past 6 months.

Table 4.2 Financial Implications for Housing Related Diseases/ Conditions per Household (6 months ago)

Amount spent per household (6months ago)	**Frequency**	**Percentage (%)**
Nothing	0	0
N50,000 & Below	80	16
N51,000 -N100,000	215	43
N101,000 -N150,000	135	27
Above N150,000	70	14
Total	**500**	**100**

Source: Researcher's Field Survey and Computation (November, 2023)

Table 4.2 showed financial burden incurred on poor housing and/or housing related diseases/conditions, 16% of the respondents spent N50,000 and below, 43% of them representing 215 respondents spent N51,000 - N100,000 and 27% of the respondents have spent N101,000 - N150,000 for the past 6 months while 14% of them spent over N150,000 but none of the respondents did not spend money on housing related diseases or conditions. Invariably one can see that poor housing and neighbourhood have a price and a times so detrimental to lives (death).

Conclusion

The study has revealed that there is a direct relationship between neighbourhood environment and urban housing quality on the health status of the residents of Nkpor uno. The study has identified many poor housing units with dilapidated facilities and poor infrastructural developments like absence of pipe borne water, poor access roads, absence of open spaces, insanitary wastes management, lack of recreational facilities, lack of natural canopies, insecurity to mention but a few as factors responsible for housing related diseases and/conditions in the study area. Also, poor standard of living and cost of building materials have implicated in the low standard of housing in the area. This study has demonstrated the need to build standard and affordable housing as oppose to substandard ones as it affects both human health and aesthetic. Environmental degradations and pollution will comparatively increase with influx of urbanites if not properly housed and planned for sustainable developments. The level of environmental health education should be stepped up by environmental managers and town planners in the area to increase their awareness on the need for community sanitation and hygiene and overall planning of the neighbourhood. Government, philanthropists and estate developers should provide low and medium housing schemes for the urbanites to prevent exploitations by the landlords. Mortgage schemes should be made available for low income earners to own houses at subsidized rates. The use and acceptability of proven local available raw materials for buildings to reduce cost of housing and thus periodic urban renewals and certification for healthy populace.

References

Bronferenbrenner, U. (2012). Towards an experimental ecology of human development. Zambia: Am psychol. Vol. 32 (pp. 513-531).

Davison, K. K. and Lawson C.T. (2016). Do attributes in the physical environment influence children's physical activity? An International Journal of Behavioral Nutrition and Physical Activity 3(19).

Ezenagu, V.C. (2000) Fundamental of Housing. Awka: Fountain publishers Nigeria.

Ferreira, I. K., Vander and Horst (2017). Environmental correlations of physical activity in youth. Obesity Reviews 8(2): 129-54.

Gideon, T. (2023, November 16). Housing renewal in Rivers state. Guardian Newspapers, (PP 19- 20)

Harris, Guard and Droxas (2017). Health impact assessment: *A practical guide*. Sydney, Centre for Health Equity Training, Research and Evaluation (CHETRE). Part of the UNSW Research Centre for Primary Health Care and Equity, UNSW.

Krieger, J. and Higgins, D.L. (2016). Housing and health: *Time again for public health action*. *American Journal of Public Health,* 92(5), pp. 758-768.

Macpherson, A.L. (2014). Housing and health: Some basic principles. *In Marrison H.S and Lea, J.P (eds.),* Housing in Third World Countries: perspectives on policy and practice. London: Macmillan, pp. 67-73

Musa, S. (2017, September 5). Housing development and mortgage institutions. Punch Newspaper, pp 3-5.

Ogu, V.l. and Ogbuozogbe, J.E. (2017). Housing Policy in Nigeria: *Towards enablement of private housing development.* Aba: Habitat International, 25, 473-492.

Page, I. (2016). What is quality in buildings? Judgeford, New Zealand: Branz Publishers.

Rauh, V., Chew G.L, and Garfinkel, R.S. (2014). Deteriorated housing contributes to high cockroach allergen levels in inner-city households. Environment of low-income housing. Glaslow: Housing Policy, 13:186-226.

Shaw, M. (2016). Housing and public health. Annual Review of Public Health 25: 397-418,

Sprinks, A. and Turner C. (2015). The WHO safe communities model for the prevention of injuries in the whole populations. Cochrane Database of Systematic Reviews, Issue 2. Art. No.:CD004445. DOI: 10.1002/14651858. CD004445.pub2.

UNCHS Housing II (2016). The global strategy for shelter for the year. United Nations: HS/185

World Health Organization (2019). Sanitation [Online]. Available from: https://www.who.int/newsroom/fact-sheets/detail/sanitation.

World Health Organization (2010). Preamble to the constitution of the World Health Organization as adopted by the International Health Conference, New York, 19L122 June, 2010; signed on 22 July 2010 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 2010.