A Comparative Analysis of the Relationship between Housing Quality and Neighbourhood Type in Selected Formal and Informal Residential Neighbourhoods of Minna, Niger State

Musa Dalil¹ and Usman, Mohammad Yamman²

¹Department of Urban and Regional Planning, Federal University of Technology, Minna.
²Department of Urban and Regional Planning, The Federal Polytechnic, Bida.

ABSTRACT

The importance of qualitative housing units and by extension, the general environment on the life of individuals, communities and even nations at large, can never be over-emphasized. But unfortunately, achieving these have become nearly impossible, especially in the third world countries, despite the adoption of various national and international policy frameworks like Agenda 21 and the UN Habitat II. Thus, human settlements have become the avenues through which the physical environment is abused and misused to the detriment of the present and future generations. Among the chief problems bedevilling human settlements is the non implementation of development plans leading to the poor state of housing units and the surrounding environment, which in one way or the other, affects the residents psychologically and health-wise. Therefore, this paper assessed the relationship between housing quality and neighbourhood types in the relatively new formal and informal neighbourhoods of Minna. In order to achieve this, four neighbourhoods were randomly selected from each of the formal and informal areas. Consequently, a total of 97 questionnaires (representing 10% of the total population i.e. the housing units) were proportionally administered and the phi-coefficient technique of hypothesis testing was employed. The result of this showed that there is no statistically significant relationship between neighbourhood types and housing quality, i.e. the housing and environmental conditions of the selected formal and informal residential neighbourhoods are not statistically significantly different. Therefore, the paper recommended the computerisation of all land titles and documents in Minna in order to have a comprehensive data bank on land matters. It also recommended the development of a more pragmatic housing policy and programme where resources from both the public and private sectors would be mobilized in order to massively improve the conditions of the existing housing stock as well as the construction of new ones.

Introduction

Man, it is said, is greatly influenced by his environment; he is thus considered as a product of his environment. But the condition of his immediate physical environment (especially housing) could greatly affect him negatively or positively. In view of this, it is generally believed that a healthy housing unit should be part and parcel of the modern man’s environment. Owing to this, the role of a healthy housing unit as an important agent of enhancing human development cannot be overemphasized. This is because, it is supposed to address humans’ health, social, physical and cultural needs. Jinadu (2004) also emphasized the need for the provision and availability of the facilities and services that would ensure that these needs are met.

But over the years, especially in the developing countries, housing units have not been able to guarantee the aforementioned human needs. This could be as a result of the high poverty levels, cost of building materials, the problem of land acquisition, lack of/non-availability of viable mortgage institutions and the inability of governments to sustain their various housing policies and programmes. This problem is evident not just in the housing industry, but also in land administration and management. Thus, ensuring the effective administration and management of land has become an herculean task due to the non implementation/availability of master plans and the problem of multi jurisdictional function of land management, (i.e., the influence of the traditional institutions and many government agencies on land matters within the same jurisdiction, thereby leading to conflicts and lack of coordination).

Despite these challenges faced by the housing sector in virtually every developing country, especially in sub-Saharan Africa (Groves, 2004), housing is still considered as an indispensable “human need”. Thus it was declared by the United Nations (UN) as well as many nations of the world (Leckie, 2007), as a basic human right which governments and Non Governmental Organisations (NGOs) must ensure its attainment by all. Nigeria has also, at one time or the other developed different National Housing Policies and Programmes, but it is...
still struggling to ensure the provision of this all-important component of the human environment to its citizenry.

Owing to this, the tripartite of government, private institutions and individuals, have been at the forefront of housing provision in Nigeria, but this has only succeeded in causing the problem of land dichotomy between the formal ("government layouts") and the informal ("native lands") neighbourhoods. This paper was therefore premised on the comparative study of the relationship between housing quality and neighbourhood type in some relatively new formal and informal (that were hitherto designated as formal) neighbourhoods of Minna. It will as well assess the negative effects of human activities on the environment in both types of neighbourhoods.

**Aim and objectives**

The aim of this study is to comparatively analyse the relationship between neighbourhood type and housing quality in the formal and informal neighbourhoods of Minna and the objectives are:

i. Measure and compare the quality of housing units between the selected formal and informal residential neighbourhoods of Minna;

ii. Analyse the negative effects of human activities on the environment in both types of neighbourhoods and;

iii. Identify the problems faced by the agencies in charge of housing and environmental management issues.

**Hypothesis**

$H_0$: There is no statistically significant relationship between neighbourhood type and housing quality in the formal and informal residential neighbourhoods of Minna.

$H_1$: There is statistically significant relationship between neighbourhood type and housing quality in the formal and informal residential neighbourhoods of Minna.

**Background information on the study area**

Minna, the capital of Niger State, lies on latitude 9°36' N and longitude 6°33'E; the State is bordered to the North by Zamfara State, Northwest by Kebbi State, South by Kogi State, Southwest by Kwara State, while Kaduna State and FCT borders Niger State to both Northeast and Southwest respectively.

**Materials and methods**

In this research work, both primary and secondary sources of data collection were employed to obtain useful information needed for the study.

- **The Primary Sources** – these sources which included questionnaire and reconnaissance survey were employed to obtain data directly from the field, and the data were basically used in the data analysis section of the paper.

- **The Secondary Sources** - these included sources like maps and information sourced from relevant textbooks, newspapers, journals and the internet.

**Sampling Procedure**

- **Questionnaire** - Two types of questionnaires - structured (close) and unstructured (open) - were developed and administered at the household level as well as on a representative of each of the following public agencies: Niger State Ministry of Lands and Housing; Urban Development Board; Housing Corporation and Environmental Protection Agency.

- **Reconnaissance Survey (Site Visitation)** - This was carried out in order to allow for an independent assessment of the housing and environmental qualities in the selected neighbourhoods.

- **Sampling Technique** - In order to achieve a fair and balanced result, the sampling frame of four clusters was randomly selected each from the formal and informal residential neighbourhoods of Minna. The Random Sampling Technique of questionnaire administration was then used in sampling 10% of each of the clusters, which constituted a total of 113 housing units, with the informal having 69 while the formal neighbourhoods had 44 housing units respectively.

**Method of Data Analysis And Presentation**

The data obtained from the structured questionnaires were retrieved and analyzed using the Scientific Package for Social Science (SPSS), and thereafter, presented graphically by the use of charts. Also, the unstructured primary data of the research and the observed outcome of the reconnaissance survey were collated and analysed. But in order to find the relationship between housing condition and the neighbourhood type, the Phi Coefficient statistical test was used.

**Results**

This section analyzes and presents the data collected through the administration of questionnaires and the reconnaissance survey exercise carried out in this research. But of the 113 questionnaires that were sent out, 97 were filled and returned (representing 85.8%), while the remaining 16 questionnaires (4 and 12 from the formal and informal neighbourhoods respectively) were not returned.

**Housing and environmental quality of the neighbourhoods**

**Building condition**

The aim of this was not to assess the structural conditions of the buildings but rather, their physical appearance; and the criteria used were the wall, roofing, floor, door, ceiling, toilet and bathroom conditions. But it was virtually impossible to adequately assess some of these variables because the incremental system of housing unit development is a visible feature in most third world settlements (Kamau, 2005). This system involves the occupation of a house just after the erection of the super structure and the building is thereafter completed bit-by-bit. But based on the earlier stated criteria, 87.5% of the housing units in the formal neighbourhoods were adjudged to be in good condition as against the 42.1% in the informal areas.

![Fig. 1.1 Building Condition](image)

Negative effects of human activities on the environment in both types of neighbourhoods

**Poor drainages**

Owing to the state of Nigeria’s economy and other factors, emphases are laid by the people on just having a roof over their heads rather than residing in healthy housing accommodations that would guarantee their comfort and well being. Therefore, one of the most notably absent feature in the neighbourhoods was that of drainage systems, except for those along the major streets. Thus, waste water is discharged from the houses unto the untarred roads, leading to the washing away of the road surfaces.
This also causes the ponding of water which favours the breeding of mosquitoes or results in the emission of stench, as well as an eye-sore. So also, rainwater helps in the washing away of the road surfaces owing to the lack of drainage systems.

Consequently, of the 97 houses sampled, only 10, representing 10.3% of the total had drainage systems barely covering the length of the houses, while their contents are eventually emptied into the streets.

Improper Waste Disposal

As confirmed by the State Environmental Protection Agency, the whole of Minna is not covered by their activities. Also, the concept of the 3Rs- Reduce, Reuse and Recycle is not in force in Minna, but rather, there is only waste transfer from points of generation to the points of disposal. Thus 90.0% and 93.0% of the residents of the formal and informal neighbourhoods respectively dump their domestically generated wastes in open spaces, which in most instances were not necessarily designated for that purpose. This possesses great health risk to the residents because those sites serve as breeding ground for rodents, reptiles and insects.

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The problems faced by the MDAS in charge of housing and environmental management issues

1. The incessant court cases ensuing between the MDAs and the natives, as regards land acquisition and compensation;
2. Non implementation of layout plans due to lack of supervision on the part of the MDAs;
3. Unprecedented increase in the number of the informal neighbourhoods in the last couple of years which is as a direct consequence of the inability of the public sector to ensure effective housing delivery in the State and the illegal activities of the native land owners;
4. Non coordination of planning activities between the MDAs and the natives and;
5. The problem of lack of political will and excessive political interference in their operations as well as inadequate budgetary allocation.

Hypothesis Testing

As earlier stated, the Phi Coefficient was used in determining the statistical relationship between neighbourhood types and housing quality; but the efficiency of water sources and availability of drainage channels were not considered because they are universally problematic in virtually every Nigerian settlement. But based on the observed variables, (see figure 1.1), table 1.3 was computed.

<table>
<thead>
<tr>
<th>Neighbourhood Type</th>
<th>Good Condition</th>
<th>Poor Condition</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal neighbourhoods</td>
<td>35</td>
<td>5</td>
<td>40</td>
</tr>
<tr>
<td>Informal neighbourhoods</td>
<td>24</td>
<td>33</td>
<td>57</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>38</td>
<td>97</td>
</tr>
</tbody>
</table>

\[ \phi = \frac{AD - BC}{\sqrt{(A + B)(C + D)(A + C)(B + D)}} \]

Therefore \( \phi = 0.46 \).

\( \phi \) is then converted to \( \chi^2 \) (chi-square) distribution using the formula: \( \chi^2 = \phi^2 N \); Where \( N \) is 97, i.e. the number of samples
Therefore, \( \chi^2 = 0.2116 \times 97 \)
\( \chi^2 = 1.9044 \)

The following formula \( df = (r-1)(c-1) \) was used to calculate the degree of freedom.
Where \( df \) = degree of free; \( r \) = number of rows; \( c \) = number of columns
\( df = (2-1)(2-1) = 1 \)
The critical \( \chi^2 \) value at \( df = 1 \) and \( \alpha = 0.05 \) is 3.84

**Decision**: the calculated value (1.9) is less than the critical value (3.84), therefore, \( Ho \) is accepted.

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Plate I: This access road has been made almost inaccessibility as a result of gully erosion at MTP 90 (Bosso Low Cost Extension)

Plate II: A drainage network filled with dirt and litters at former MTP 47 (opp. Mona Juice/Mandela)

Plate III: A collapsed drainage network at MTP 3 (Morris Fertilizer)
Plate IV: A vacant plot of land converted into a refuse dump site at former MTP 59A (Top Medical road)

Interpretation: the alternate hypothesis is rejected and the null hypothesis is accepted. That is there is no statistically significant relationship between neighbourhood type and housing quality. In other words, housing and environmental conditions of the selected formal and informal residential neighbourhoods are not statistically significantly different.

Conclusion
It is of paramount importance that human settlements are guarded jealously in every facet, in order to ensure their sustainability. This has become necessary because settlements are riddled with many problems, which if left untracked, would grow in proportion and complexion owing to economic advancement or poverty. Thus, Nigeria should as a matter of urgency, develop a more pragmatic housing and environmental standards policy in order to ensure that its citizenry have access to human-friendly environments as well as affordable housing units.

Recommendations
Although, a number of problems have led to the present state of affairs in the human settlement development process in Minna, arresting them would require the adoption of the following:

1. The arousal of the necessary political will as well as developing the capacity-building mechanisms of both the public and private sector enterprises in the built environment in order to effectively implement the environmental/housing policy and programmes;
2. The development of a data bank that would regulate human activities within space and the computerization of land titles and documents through GIS;
3. Conveying “town hall” meetings at regular intervals in order to ensure the protection of the environment as well as sensitise the stakeholders and the general public on the importance of adhering to the building plans and standards and;
4. The review of Minna master plan and the encouragement of synergy between the MDAs involved in land administration and management.

References