

# An Analysis of the Impact of Housing Type on Residential Overcrowding in Public Housing Estates in Minna, Nigeria

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## ABSTRACT

This paper sets out to assess residential overcrowding in public housing estates in Minna. Residential overcrowding is one of the indices that can be used to measure housing adequacy. This research was carried out between August and September 2022. The Nigerian Housing Space and Occupancy Standard of 2.20 persons-Per-Room standard was used as the basis for the assessment. Thirty (30) houses were studied in Bosso and F-Layout Housing estates in Minna. Personal observation and interviews were the main methods of data collection from the research areas and the review of existing literature were used as background information. The findings shows that using the persons-per-bedroom standard of 2.20, Bosso Low-cost housing estate has a slightly lower level of overcrowding when compared with F-layout. Thus Bosso has a higher quality when overcrowding is used as the index. This shows that despite the fact that these estates are planned residential settings, overcrowding is fast becoming an issue to be resolved and planned for in the future.

**Keywords:** household size, housing adequacy, housing space standards, residential overcrowding

## I. INTRODUCTION

Housing is one of the three basic needs of mankind and it is the most important for the physical survival of man after the provision of food. Kuroshi (2005) defined housing as the process of providing a large number of residential buildings on a permanent basis with adequate physical infrastructure and social amenities (services), in planned, decent, safe, and sanitary neighbourhoods to meet the basic and special needs of the population.

Therefore, for housing to be referred to as adequate, it should provide protection from the elements, minimize the risk of disease and injury, and contribute to the physical, mental and social

wellbeing of the occupants. Adequate housing contributes to the attainment of physical and moral health of a nation and stimulates the social stability, the work efficiency and the development of the individuals. It is also one of the best indicators of a person's standard of living and of his place in the society.

Housing problem has been generally accepted as being diverse and complex. Within the spectrum of this problem, one can identify both quantitative and qualitative deficiencies. This problem is worldwide and it is of a recurring nature and Nigeria is not exempted. In fact it is doubtful if any nation of the world can satisfactorily meet its housing requirements. The magnitude of the housing needs of the populace in Nigeria rises phenomenally by the day (Massoudi, 2004). This is on account of rapid growth and urbanization occurring in the country, and the lack of a commensurate increase in housing stock which depends on housing needs of the populace.

Awotona (2002) defines housing needs as the number of conventional dwellings that need to be constructed or repaired, in order to bring housing conditions of a particular point of time, to notionally adopted standards. These have many dimensions. Housing needs encompass among other things the total number of dwelling units required, their distribution among the various socio-economic groups and the quality and adequacy of the dwellings and their environment. Also, the magnitude of housing needs in Nigeria is manifested in the number of households residing in substandard housing units (Olotuah, 2005). This is a highly visible phenomenon in the urban areas where there are acute housing shortages and poor quality of existing housing stock. As Odongo (1979) asserts, housing shortages have become an enduring feature of the urbanizing process in Nigeria just as in other parts of the Third World. Factors that limit the number of housing units include high cost of land, insufficient funds, improper distribution of funds and improper

management (Mabogunje, 2020). The inability of housing stock to appropriately cater for these housing needs is a major cause of housing inadequacy.

The problem of inadequate housing is experienced in both urban and rural areas in Nigeria. For example Massoudi (2004) cited NISER in a study of rural housing in the nine Southern States of Nigeria found that the projected demand of housing units on an average of six persons per dwelling unit for the nine states are 5.2 million in 1990, 7.0m in 2,000, 9.5m in 2,010 and 12.7m in the year 2,020. These problems have resulted in residential overcrowding, poor and inadequate social amenities, unsatisfactory and unwholesome environmental conditions and urban squalor, the absence of open space, the overdevelopment of land area leading to the overcrowding of buildings, inaccessibility within residential areas, and in the scarcity and high cost of building materials. All these factors affect housing condition either in the long term or short-term.

Housing conditions are measured by several indicators. These fall into two broad sets. One is the physical and economic characteristics of the housing stock, such as structure types, size of units (number of rooms or bedrooms), age of structures, adequacy of plumbing, presence of physical defects, and cost (rent level or value). Residential overcrowding belongs to a second set of characteristics that measure households' fit to their housing units.

There are quite a number of standards used in measures residential overcrowding. The floor area per person is a key indicator of housing quality that measures the adequacy of living space in dwellings. Floor area is the outcome, to a considerable degree, of market forces, which are in turn shaped by a variety of housing policies. A low value for the indicator is a sign of residential overcrowding. Housing size and housing quality are usually linked and it is shown that cultural values affect sensitivity to crowding.

The most common of these standards include Persons-Per-Room (PPR), Persons-Per-Bedroom (PPB) and Person-Per-Space Standards. The Persons-Per-Room (PPR) standard utilizes rooms and not bedrooms. The Persons-Per-Bedroom (PPB) standard on the other hand reflects rules and standards used with assisted housing. As the name implies, it considers the ratio between the number of persons living in a household and the number of bedrooms available to them. With the PPB measure, residential overcrowding occurs as values increase (e.g., a unit with 6 people and 2

bedrooms is considered more crowded than a similar unit with only 4 people and 2 bedrooms). This is the standard adopted by the Nigerian Housing Space and Occupancy Standard. The United Nations Person-Per-Bedroom Standard is 2.20; the World Health Organization (WHO) stipulates between 1.8 and 3.1, while the Nigerian Government prescribed a National Occupancy Standard of 2.0 persons-per-Bedroom (Okoko, 2001). The National Occupancy Standard of Nigeria is a modification of the British National Occupancy bill. The modification was adopted in July, 1979. This means that the problem of overcrowding occurs at any instance when the standards are exceeded.

The problems of residential overcrowding are the main issues that initiated this research. The problems of residential overcrowding in housing include inadequate access to facilities, which may increase the risk of infectious diseases such as meningitis, acute rheumatic fever, tuberculosis, skin and respiratory infections. According to Okoko (2001) overcrowding can potentially affect health in different ways. Residential overcrowding may increase psychological stress resulting in increased physical or verbal abuse. However, the presence of more people may decrease social isolation, which may have a positive impact on health. Also, Awotona (2022) outlines that as the number of persons within homes increases the number of social contacts increases; privacy decreases; the number of unwanted social interactions increases and activities such as using the bathroom have to be coordinated considering other inhabitants. Pressures arising from these situations may lead to interpersonal aggression, withdrawal from the family, sexually deviant behaviour, psychological distress or physical illness. These are some of the problems that residential overcrowding can cause. The extent to which overcrowding occurs in a neighbourhood can be measured in order to prevent the above-mentioned problems.

The aim of this research therefore, is to assess residential overcrowding in Bosso and F-Layout-Housing Estate in Minna, Niger State using the Nigerian Housing Space and Occupancy Standard as the index.

This research is carried out in Minna. Minna the capital of Niger state is located on latitude 7.7° N and longitude 4.5° E of Greenwich Meridian. The history of the town dates back to the late 18th century and originated as a traditional as well as cultural town which derives its name from the Niger River. Following the creation of Niger State in 1979, Minna assumed the status of a State

capital. Its population based on 2006 census was 1,989,733 and has the largest land mass in Nigeria. Over the years, Minna has witnessed tremendous growth both spatially and in population, but there has not been a corresponding increase in housing needs. Saba (2016) citing the Niger State Urban Development Board 2005 Annual Report stated that while the annual population growth rate in Minna is 0.43%, the growth rate in housing magnitude is only 0.14% per annum. This evidently shows that there has been an increase in housing need without a corresponding increase in housing stock. This is one of the major causes of residential overcrowding in the town.

Minna has both public and private residential estates apart from the private houses owned by individuals. Among the six (6) public housing estates that exist in the town, this research will be using two (2). These include Bosso Housing Estates with 300 housing units and F-Layout Housing Estate with 206 housing units [The number of housing units stated above is as given by the Niger State Urban Development Board's 2006 Pre-Census Demarcation Report of January 2006 as cited by Saba (2016)].

For the purpose of this research, the levels of overcrowding of five (5) different house types were assessed. Data was gathered through personal observation and the use of questionnaire by the researcher. (see Appendix 1). The house-types used are limited to this number because they are the types common to the two housing estates that were

studied. They can be classified into the following five (5) categories as used by Okoko (2001). These include:

- House type I: Single room
- House type II: Rooming house (face-to-face rooms)
- House type III: Single bedroom bungalow
- House type IV: Two or more bedroom bungalow
- House type V: Duplexes

In the assessment of the overcrowding of estates, the Nigerian Housing Space and Occupancy Standard, the following should be taken note of:

- Children below the **age of five (5)** are counted as half (that is 0.5persons). If the person is five years and above, he or she is counted as a whole.
- Any bedroom less than 9m<sup>2</sup> is not counted
- Any bedroom that 18m<sup>2</sup> is counted as two
- Only spaces used for and designated as are counted. Single room apartments that functions as both living and bedrooms are counted.

Based on this standard, it was discovered through the research that in Bosso Low-Cost Housing estate, an average of 2.3Persons-Per-Bedroom. In the estate, single bedroom bungalows (house-type III) are the most overcrowded with 3.5PPB. (See Table 1 below).

**Table 1: Assessment of Overcrowding In Bosso and F-Layout Housing Estates**

Bosso Low-Cost Housing Estate					F-Layout Housing Estate				
House-type	No of House-type	Average Household size	Average No of bedrooms	Average Persons-Per-Bedroom (PPB) per house-type	House-type	No of House-type	Average Household size	Average No of bedrooms	Average Persons-Per-Bedroom (PPB) per house-type
I	7	2.0	1	2.0	I	5	2.5	1	2.5
II	3	2.5	1	2.5	II	5	3.0	2	1.5
III	9	3.5	1	3.5	III	7	3.5	1	3.5
IV	9	6.0	3	2.0	IV	10	5.0	2	2.5

V	2	6.0	4	1.5	V	3	6.0	3	2.0
Average PPB in the Estate				2.3	Average PPB in the Estate				2.4

Source: Researcher’s Survey (2022)

It can also be noted from the table above that house-type V in Bosso Estate which has the highest average number of occupants is the least overcrowded. On the other hand, it can also be observed that house-type III is also the most overcrowded house-type, though the PPB rating for the estate is 2.4 which are slightly above that of Bosso Low-Cost housing estate.

In addition to this, the peculiarities of overcrowding in a particular place can be evaluated

when it is compared with age, marital status and occupancy status. In the study of overcrowding in the area of study, age, marital status and occupancy status were also used in the assessment. This information was gathered through the use of questionnaire administered by the researcher to the houses studied. (see Appendix 1). In Table 2 below, it was noted that overcrowding is more prominent among single youths who are tenants. (See Table 2 below).

**Table 2: Comparison of Overcrowding With Nature of Occupancy, Age and Marital**

House-type	Bosso Low-Cost Housing Estate				F-Layout Housing Estate			
	PPB	Average Nature of occupancy	Average Age of main owner/tenant	Most prevalent Marital status	PPB	Average Nature of occupancy	Average Age of main owner/tenant	Most prevalent Marital status
I	2.0	tenant	31	single	2.5	tenant	24	single
II	2.5	Tenant/owner	29	single	1.5	Tenant	30	single
III	3.5	Tenant	36	single	3.5	Tenant	32	single
IV	2.0	owner	45	married	2.5	owner	42	married
V	1.5	owner	41	married	2.0	owner	51	married

Source: Researcher’s Survey (2022)

Based on the above table, it can be noted also that the nature of occupancy are similar in both estates. This is also similar with age and marital status.

## II. CONCLUSION AND RECOMMENDATIONS

Residential overcrowding has been linked to housing adequacy. The number of persons-per-room correlates adverse health risks. These health conditions have been worsened by often crowded and cramped housing condition. Thus, the less the level of overcrowding, the higher the quality of housing. In this research, it was discovered that, using the persons-per-bedroom standard of 2.20, Bosso Low-cost housing estate has a slightly lower level of overcrowding when compared with F-layout. Thus Bosso has a higher quality when overcrowding is used as the index. This shows that despite the fact that these estates are planned residential settings, overcrowding is fast becoming an issue to be resolved and

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Presented By OLOYE, Rowland Abiodun {M.Tech/SET/2007/1798} planned for in the future. Also, it can be noticed that this study is an instantaneous assessment of housing. Where previous data on overcrowding of a place is available, more deduction will be easily arrived.

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