

An Analysis Of Inner City Decay: A Study Of Some Selected Slums In Jos Metropolis, Plateau State, Nigeria.

Vivan Ezra Lekwot, Ali Andesikuteb Yakubu, Danjuma Andembutop Kwesaba, Abdulrahman Ahmed Sahabo.

Abstract: Slum is a squatter settlement that is formed as a result of infiltration of people particularly into urban areas. The study aimed at identifying slum characteristics and how they contribute to environmental deterioration within the study area, systematic sampling technique was adopted to select households for the study. In analyzing the problems of the selected slums in Jos, a total of 347 well structured questionnaires were distributed to selected households in the study area, after the survey instrument was pretested effectively in a pilot survey, which involved 50 questionnaires were administered and were recovered for the analysis. The results revealed that most of the household size in the selected slums is between 5 to 9 persons, the number of persons per room falls between 6-7 persons per room, this indicate that the average occupancy ratio in the selected slums is quite high, most of the buildings in the selected slums were built between 11 to 15 years ago similarly, the predominant dwelling type in the selected slums are compounds with shared facilities. The toilets are in very bad conditions, the bathrooms are in fairly good conditions. Most of the dwellings were built with cement blocks and roofed with corrugated iron roofing sheets as indicated by the data collected. The walls of most of the dwelling in the selected slums are in bad condition while the roofs and painting of most dwelling. It was observed that major source of water supply in the selected slums is hand dug well and the other sources of water supply include streams, tap, rainwater and buying from water vendors. The study therefore, recommends among other things, the transformation and new development alternatives in the planning.

Index Terms: Slums, Urban growth, Rural-urban migration, Dwellings, Environmental condition Facilities, Squatter settlement.

1 INTRODUCTION

Rapid urban growth is a feature of developing countries during the last forty years, there has been an unprecedented growth in the number and size of large cities and towns. These increasing levels of organization and urban growth are the results of combination of natural increase of urban population and migration to urban areas, the result is a massive increase in the population of the town and pressure on the existing facilities especially housing culminating in the emergence of substandard housing termed as slum settlements. Slums are described as part of cities where housing and living conditions is appallingly poor and inadequate [2]. They are areas which little government attention in terms of provision or maintenance of public facilities and infrastructure is being felt. These are high- density squalid central city tenements to spontaneous squatter settlement without legal recognition which sprawl at the edge of cities. The term 'slum' is used in the Millennium Development Goals (MDGs) in general context to describe a wide range of low-income settlements and or poor human living conditions; these inadequate housing conditions demonstrate the array of manifestations of poverty.

Target 11 of the MDGs, describe typical slums in developing countries as 'unplanned informal settlements where access to services is minimal to non-existent and where overcrowding is the norm. Slum conditions outcome in placing residences at a higher risk of disease, mortality and misfortune'. Informal settlements, squatters, slums, ghetto, shanty towns or whatever name we give to human settlements deprived of basic conditions, are just one of the noticeable signs of poverty and social exclusion that affect the life of nearly one billion of people in today's world population [1]. According to UN-Habitat, slums and urban poverty are not just a manifestation of a population explosion and demographic change, or even vast impersonal forces of globalization, slums must be seen as a result of the failure of housing policies, laws and delivery of national urban policies. Jos metropolis is the largest town in Plateau state and is the state capital, it doubles as the headquarters of Jos South and Jos North local government areas. It is indeed an old town whose growth as an urban nucleus is driven by commercial and mining activities, as a dominant urban center within the state, Jos has continually received influx of migrants from the countryside and a combination of rural- urban migration and high fertility rates of the families has led to a swell in its population. However, the pace of population growth far outstrips the ability of urban authorities (particularly Jos Metropolitan Development Board, Ministry of Housing and Environment and Ministry of Lands, Survey and Town Planning) to provide and maintain the necessary facilities such as housing, drain sewer and water systems, schools and so forth, leaving many people in despicable shanty towns.

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Table 1: Slum Growth and Urban Growth

Region	Urban Growth	Slum formation rate
Sub Sahara Africa	4.6	4.5
Southern Asia	2.9	2.2
Western Asia	2.9	2.7

Source: UN-Habitat, Urban Observatory, 2007

The inadequate provision of such basic infrastructure coupled with unplanned development control measures by planning agencies and unprecedented population surge of slum poses a threat to environment quality and health of slum dwellers. The research is therefore, conditioned to analyze slums and its associated problems on the environment in Tudun Wada, Jenta Adamu, Angwan Rukuba and Gada Biu areas of Jos metropolis.

numerous hillocks with gentle slopes emerging from the ground like mushrooms scattered with huge boulders. Also, volcanic activity 50 million years ago created numerous volcanoes and vast basaltic plateau created from lava flows. This also produces regions of mainly narrow and deep valleys and pediments (surfaces made smooth by erosion) from the middle of rounded hills with sheer rock faces. The phases of volcanic activities involved in the formation of the Plateau have made it one of the mineral rich states in the country. Tin is still mined and processed on the plateau. The drainage pattern of the Jos Plateau is radial and is said to be the hydrological centre of Nigeria as many rivers flow away from the Jos Plateau to other areas.

Table 2: Slum Growth in Developing Countries

Country	Slum annual growth rate %	Slum pop (thousands)	Scenario 2020 with change no
Angola	5.28	3,918	10,677
Kenya	5.88	7,605	23,223
Nigeria	4.96	41,595	76,749
South Africa	0.19	8,376	8,677
Uganda	5.32	3,241	8,904
Tanzania	6.16	11,031	35,561
Brazil	0.34	51,676	55,074
El Salvador	1.89	1,386	1,986

Source: UN-Habitat, Urban Observatory, 2007

2 AIM AND OBJECTIVES

The aim of this study is to analyze slums and their problems in some selected slums in Jos metropolis. The objectives of the study are as follow:

- i. To examine the state of infrastructure in the areas
- ii. To identify factors responsible for slum condition and their implication
- iii. To proffer solutions to improving the living condition of people in the area.

3 STUDY AREA

The Jos city is located in Nigeria’s middle belt, with an area of about 26,899 square kilometers, with population of about 850,000 people based on the result of 2006 Nigerian census figures. It is located between latitude 8°and 10°N, Longitude 7°and 11°east, Barkin-Ladi in the south east, Jos South and Riyom in the south west and Bassa in the north (Plateau State Ministry for lands, survey and town planning). The State is named after the picturesque Jos Plateau, a mountainous area in the north of the state with captivating rock formations. Bare rocks are scattered across the grasslands, which cover the plateau. The altitude ranges from around 1,200 meters to peak of 1,829 metres above sea level. Years of mining have also left the area strewn with deep gorges and tales. Though situated in the tropical zone, a higher altitude means that plateau state has a near temperate climate with an average temperature of between 18 and 22°C. Harmattan winds cause the coldest weather between December and February. The warmest temperatures usually occur in the dry season months of March and April. The mean annual rainfall varies from 131.75cm (52 in) in the southern part to146cm (57 in) on the plateau. The highest rainfall is recorded during the wet season months of July and August. The low temperature of Plateau state has led to a reduced incidence of some tropical diseases such as malaria. Jos Plateau where the city is situated is the source of many rivers in northern Nigeria including the Kaduna, Hadejia, Gongola and Yobe rivers. Jos Plateau is an area made up of young granite which was intruded through an area of older granite rock, making to be about 160 million years old. This creates the unusual scenery of the Jos Plateau. There are

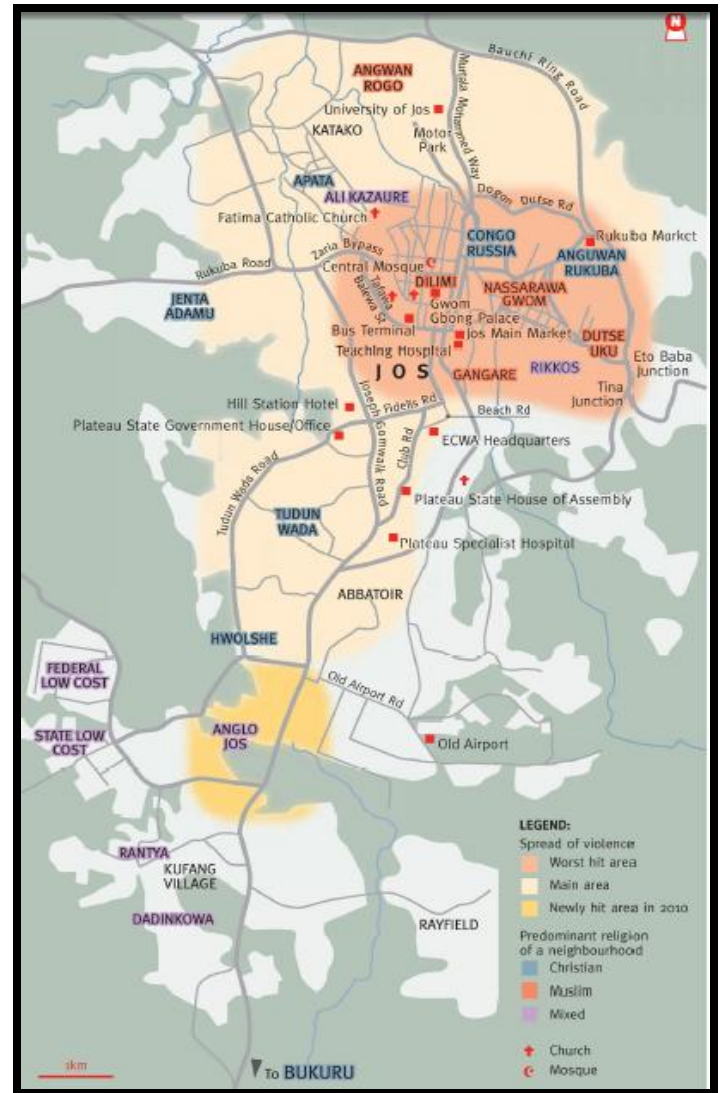


Figure 1: Jos Metropolis

4 MATERIALS AND METHOD

A reconnaissance survey was conducted whereby the area is delineated and the houses in the area were enumerated; questionnaires, measurement, interview and personal observation were the instrument used to acquire data. A total of 347 questionnaires were distributed to the study population after the instrument was protested effectively in a pilot survey, which involved 50 questionnaires. This was added to the subsequent 297 that brought the number to a total of 347.

Systematic sampling technique was used to select the households questionnaires were administered to, as every third house was selected on each street covered in the area to capture the required data for the study. The street guide was well mapped during the reconnaissance survey and pilot study provided a useful direction. Data collected laid emphasis on socio-economic characteristic of respondents, age of buildings, materials and building facilities as toilets, bathrooms and their types, water supply, solid and liquid waste disposal, ventilation, accessibility, pollution, occupancy ratio, land use and disease occurrences. The data collected was compiled, summarized, presented in tables and converted to percentages for easy analysis.

Table 3: Selected Slums and number of households sampled

Selected Slum	Number of households sampled
Tudun wada	61
Jenta Adamu	87
Angwan Rukuba	98
Gada Bui	101
Total	347

Source: Field work 2014

5 RESULTS AND DISCUSSION

This chapter deals with presentation and analysis of data collected in the field. The data collected on specific variables of study involved housing characteristics availability of essential services and infrastructures as well as other land use characteristics are presented in this chapter.

Table 4: SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

Parameters	Tudun wada	Jenta Adamu	Angwan Rukuba	Gada Bui	Total	%
Gender						
Male	52	69	71	88	280	80.69
Female	9	18	27	13	67	19.31
Age						
20-29	7	11	18	27	63	18.15
30-39	9	15	20	9	53	15.27
40-49	34	43	51	59	187	53.89
50-59	8	12	7	5	32	9.22
60+	3	6	2	1	12	3.45
Marital Status						
Single	12	17	24	31	84	24.21
Married	39	61	59	62	221	63.68
Divorced	8	6	11	6	31	8.93
Widowed	2	3	4	2	11	3.17
Others	0	0	0	0	0	0.00
Occupation						
Civil servant	18	23	25	29	95	25.40
Farmer	11	19	21	23	74	21.32
Trader	15	36	38	41	130	37.46
Artisan	9	2	8	5	24	6.91
Unemployed	7	5	3	2	17	4.89
Others	1	2	3	1	7	2.01
Literacy Level						
Vocational	27	31	39	38	135	38.90
Primary	11	28	21	33	93	26.80
Secondary	17	13	19	18	67	19.30
Tertiary	2	4	1	6	13	3.74

Non-formal	4	11	18	6	39	10.42
Others	0	0	0	0	0	0.00
Annual Income (N'000)						
>30	53	75	91	98	317	91.35
31-60	8	12	7	3	30	8.65
61-90	0	0	0	0	0	0.00
<90	0	0	0	0	0	0.00

Source: Field work 2014

From the data in table 4 above it shows that there are more male than female in the study as 81% of the respondents from all the selected slums are male, the table also reveals that most the respondents from all the selected slums fall within the age bracket of 40-49 years as 54% of the respondents are between the ages of 40 to 49 years. The table shows that most of the respondents are married as 64% of the respondents from all the selected slums are married, from the table, the occupational characteristics of the study area revealed that most of the respondents are traders accounting for 37% and are mostly male, there are more male traders in the study areas than female and trading is the most important occupation in the area because of the increase in commercial activities in the area and this could be as a result of the increase in population. In terms of education, most of the respondent 39% have acquired vocational education; this may be due to the fact that most of them could not afford formal education, only about 4% of the respondents had tertiary education, there is the need to raise the educational level higher for a better socio-economic life as 11% have non-formal education, the table also reveals that the male are more educated than the female, the backwardness in female education in the study area should be seen as a very important problem particularly at a time the country is trying to achieve the Millennium Development Goals (MDG) which seek to improve female education. Income distribution in the area shows that, the average household in the selected slums earns less than thirty thousand Naira (N30,000.00) per annum, this reveals that about 91% of the study population earns the mentioned amount which is a clear indication that the earning of the people is quite low, this points to the fact that there is the urgent need for income generating activities for the people in the selected slums, as this is a reflection of inadequate employment situation in the study area.

Table 4 CHARACTERISTICS OF SELECTED SLUMS

Parameters	Tudun Wada	Jenta Adamu	Angwan Rukuba	Gada Bui	Total	%
Household size						
>4	34	31	29	37	131	37.75
5-9	21	54	65	59	199	57.35
10-14	5	2	2	4	13	3.75
<15	1	0	2	1	4	1.15
Number of persons per room						
2-3	6	8	13	11	38	10.95
4-5	14	16	11	19	60	17.29
6-7	37	58	69	65	229	65.99
8-9	4	3	4	5	16	4.61
9+	0	2	1	1	4	1.15
Age of dwelling (Years)						
1-5	8	17	11	19	55	15.85
6-10	4	16	28	21	69	19.88
11-15	41	49	51	54	195	56.19
16-20	6	4	6	6	22	6.34
21+	2	1	2	1	6	1.73
Type of dwelling						

Compound with Shared facilities	51	66	83	97	297	85.60
Semi-detached	7	14	9	3	33	9.51
Detached	3	7	5	1	16	4.61
Others	0	0	1	0	1	0.28
Conditions of dwellings						
Walls						
Good	9	17	12	19	57	16.42
Fair	28	31	42	39	140	40.35
Poor	24	39	44	43	150	43.23
Roof						
Good	7	11	13	29	60	17.29
Fair	32	41	49	48	170	48.99
Bad	22	35	36	24	117	33.71
Painting						
Good	10	23	14	19	66	19.02
Fair	34	42	45	47	168	48.41
Poor	17	22	39	35	113	32.56
Type of building materials						
Cement blocks	33	49	60	48	190	54.76
Mud blocks	19	33	27	39	118	34.00
Stones (hardcore)	7	4	9	10	30	8.64
Others	2	1	2	4	9	2.60
Type of roofing						
Aluminum roofing sheet	8	13	9	6	36	10.37
Corrugated iron roofing sheets	53	74	89	95	311	89.63
Thatch roof	0	0	0	0	0	0.00
Others	0	0	0	0	0	0.00
Condition of facilities in dwelling						
Toilet						
Good	9	15	13	19	56	16.14
Fair	19	18	36	21	94	27.09
Poor	33	54	49	61	197	56.77
Bathroom						
Good	11	28	27	33	99	28.53
Fair	29	47	38	55	169	48.70
Poor	21	12	33	13	79	22.77
Source of water supply						
Stream	13	0	10	1	24	6.92
Hand dug well	21	34	39	53	147	42.36
Rainwater	7	14	23	14	58	16.71
Tap	12	19	17	22	70	20.17
Water vendor	8	20	9	11	48	13.83
Others	0	0	0	0	0	0.00
Ventilation						
Good	6	21	24	11	62	17.87
Fair	19	25	25	32	101	29.11
Poor	36	41	49	58	184	53.02
Waste Disposal						
Open dumps	29	33	51	60	173	49.86
Running streams	11	20	23	12	66	19.02
Drainage	10	19	17	21	67	19.31
Waste collection points	11	15	7	8	41	11.81

Source: Field work 2014

From the data in table 5 above shows that households size that is less than four (4) person is 38%, household with between 5 to 9 persons is 57% , those with between 10 to 14 persons is 4% and those households with more than 15 persons is 1%, it can be concluded that most of the household size in the selected slums is between 5 to 9 persons. As regards number of persons per room, the highest is 66% which falls between 6-7 persons per room, this indicate that the average occupancy ratio in the selected slums is quite high pointing to the fact that those household members that are supposed to be independent are still dependent on their parents and relations as they are either unemployed or underemployed. The table also revealed that most of the buildings in the selected slums were built between 11 to 15 years ago, as the age of dwelling of 11 to 15 years accounts for 56%, similarly, the predominant dwelling type in the selected slums is compounds with shared facilities. The toilets are in very bad conditions as revealed by the table and shown in plate 6 below, the bathrooms are in fair condition as they are fairly good as revealed by the data in the table above. Most of the dwellings were built with cement blocks and roofed with corrugated iron roofing sheets as indicated by the table above. The table revealed that the walls of most of the dwelling in the selected slums are in bad condition accounting 43%, the roofs are fairly good accounting for 49% while the painting of most dwelling are in fairly good condition 48%. The major source of water supply in the selected slums is hand dug well as indicated by the table above the other sources of water supply include streams, tap, rainwater and buying from water vendors. The table revealed that waste is been disposed in open dumps as 50% of the respondents attested to it, this waste disposal method could perhaps be the major cause of the prevalence of diseases in these slums. The clustering of unplanned building in this area has constraint the conducive ventilation, the able has shown a greater proportion of the dwellings had poor ventilation accounting for 53%, only 18% of the dwellings had good ventilation. A greater proportion of the streets in the selected slums that was surveyed were not paved, the unpaved nature of the streets coupled with other conditions such as erosion and absence in the drainages has greatly inhibited access to many buildings in the area, this has compounded the plight of the inhabitants of the selected slums.

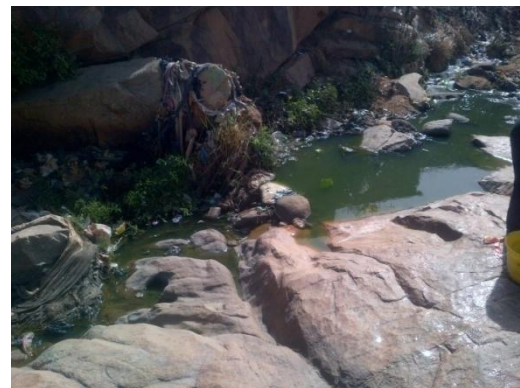


Plate 1: Source of water for domestic use in one of the elected slum



Plate 2: A dilapidated building in one of the selected slums



Plate 6: Condition of pit latrine in one of the slums



Plate 3: Water pipe going through contaminated water in one of the slums

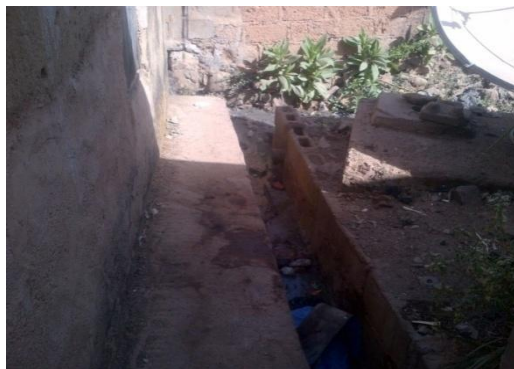


Plate 4: Poor environmental quality of one of the selected slums



Plate 5: Liquid waste disposal in one of the slums

6 CONCLUSION

The deplorable state of the selected slums requires urgent attention to ameliorate the harsh and unhealthy conditions experienced by the slum dwellers, it has become imperative to look for the way forward out of the unprecedented growth rate that generated various problems such as unemployment, lack of inadequate social, medical, educational and recreational facilities, inability to manage urban facilities effectively. Over-utilization of existing inadequate facilities and environmental deterioration. It is the urgent need to look for a way forward that will lead to the development of slums across cities and urban centers.

7 RECOMMENDATIONS

In other to solve the problem of the unhealthy and unpleasant conditions faced by the inhabitants of Tudun Wada, Jenta Adamu, Angwan Rukuba and Gada Biu areas of Jos metropolis, the following should be considered:

- There should be mechanisms of transformation and new development alternatives in the planning, which do not focus solely on the need to evacuate the inhabitants of the areas, but has to do with relocation of inhabitants within the area after re-organization of the settlement. While the new area development approach is the acquisition of lands which is based on the data generated from inventory of existing squatter (slum) settlements after classification.
- Provision of infrastructural facilities in these areas so as to control the compounding issue of population explosion being caused by those in search of job opportunities there by worsening the housing situation in these areas.
- Potential land-owners should go for preparation of legal documents for their lands at the ministry of lands and survey or any authorized ministry or commission that could undertake such assignment of land registration.
- The staff involved in urban development needs to be trained not only in technical matters but also to develop the service level of staff and their altitudes to meet the requirements of inhabitants and others, who need access to information about land rights. The importance of improving efficiency should also be stressed towards improvement conditions of dwellers and enhancing knowledge about slum conditions in Jos metropolis.

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