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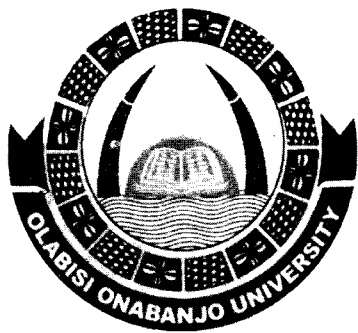


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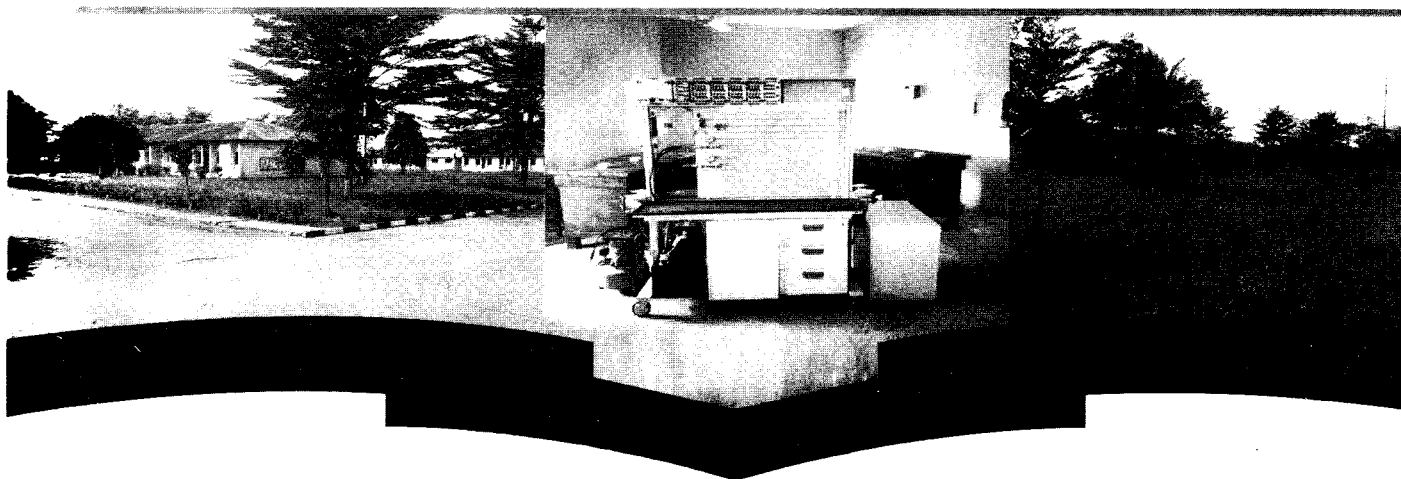




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## Contents:

## Pages

Correlate of Traditional Housing Facilities and Environmental Condition in Ogbomoso North Local Government, Oyo State Nigeria

**Toyobo, A.E. and Bako, A.I**

1-8

Prevalence of Carpal Tunnel Syndrome among Gari-frying workers

**Jaiyesimi A. O., Samuel T. M. Oluwadare P. O.**

11-18

Information and communications Technology and Planning Practice

**Salau, T. I.**

19-25

Investigation of Cement Industry Conformity with Best Practices in Ogun State Nigeria

**Sulaimon M. Adedoyin, Olamide O. Olalekan, Adam O. Kayode, and Nwokocha C. N.**

27-39

Car Body Sculpture: An Experience of Nigerian Sculptor's at the Shell Eco Marathon

**Ken Okoli O.**

39-42

Estimation of Electrical Energy Per Capital in Ogun State Nigeria

**Olaluwoye O. O. and Olasunkanmi O. G.**

43-53

Patterns of Nitrogen Mineralization and nitrification in a rubber (*Hevea Brasiliensis* - Willd Muell-Arg) Plantation agroecosystem in Relation to Age Stands in Southwestern Nigeria

**Adedeji, O. H.**

55-68

Charcoal Production in South-Wertern Nigeria Environmental and Socio-Economic Questions

**Jelili, M. O., Odunola O.O., and Saliu, I**

69-77

Road Crashes on Lagos - Ibadan Expressway: Initiatives for Safety

**Ipingbemi, O. and Omojola O.**

79-86

Spatial Pattern of Disasters in Public Schools in Ibadan, Nigeria

**Bolanle Wahab and Saheed Folarin**

87-102

Ceramic Technology and Electric Power Generation

**Peter, Edem E.**

103-109

The Impact of Urban Managers on Legalisation of Land Tenure in Lagos State Nigeria

**Alabi, A. M**

111-123







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The Journal of engineering and environmental studies is a bi-annual scholarly peer-reviewed journal that publishes quality articles. It is a multidisciplinary journal designed for prompt publications of original and important articles related to contemporary issues in engineering and environmental studies. Contributions are welcome from economics, geography, regional science, urban and regional planning, public finance, sociology, agriculture, engineering, architecture, fine and applied art, environmental planning and management, law, etc.

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Manuscript submitted to journal should typically be outcomes of research effort which emanates from a key problem or issue and seek to contribute new insights and possibly data to existing knowledge. Innovative quantitative and qualitative methodologies are encouraged.

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## Correlate of Traditional Housing Facilities and Environmental Condition in Ogbomoso North Local Government, Oyo-State, Nigeria

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### Abstract

*The goal of the study is to examine the traditional housing, facilities and environmental condition of people living the core area in Ogbomoso North local government. The specific objectives of the study are to: examine the socio-economic characteristics of the respondents, Identify forms of houses found in the study area, identify material and facilities used for the building construction and appraise their solid waste disposal methods. Data employed for the study were obtained from primary and secondary sources. 150 questionnaires were administered using random sampling method to solicit information from respondents. Descriptive statistics were employed to analyze the data. The finding reveals that majority of the respondents were females (68.2%), and those married were (64%) with low income. The people engaged in formal activities. The study further reveals traditional houses (78.4%) were built with concrete blocks and 70.9%) not plastered both inside and outside with some defects such as broken louvers blades, holes in blocks and corrugated zincs, missing doors and window frames. There is also inadequate pipe borne water (12%) poor quality housing and the people rely on open dump solid waste disposal methods. It is therefore suggested that government should subsidize building materials and equipment. There should be urban renewal through upgrading of infrastructural facilities and environmental sanitation of residents in the study area.*

**Keywords:** Housing Quality, Upgrading, Government subsidize, Building materials.

### 1.0 INTRODUCTION

Housing is recognized worldwide as one of the basic necessities of life and a pre-requisite to survival of man (Onibokun, 1983; Abiodun, 1976, Jiboye, 2005). A house is a place which provides shelter, refuge, comfort, security, and dignity. The housing industry can be a stimulus to national economy (Onibokun, 1983). A house also provides the physical framework in which human, social, economic, and cultural resources are realized, enriched and integrated. In the traditional African setting, housing is one of the greatly cherished asset or property. According to the United Nations Development Programme (UNDP, 2005), world population growth exceeds 6.1 billion in 2001 and it

is expected to reach between 7.9 million and 10.9 billion by 2050. Over 90% of the population growth during the next two decades is forecast to occur in the developing countries. Today more than one billion of the world's city residents live in inadequate housing; worldwide, 18% of all urban housing units are non-permanent structures and 25% do not conform to building regulations (Awake 2005; Habitat, 2001 and Ravillin 2007). Between 40 and 70% of the population in most African cities live in informal settlements (Towards sustainable Urban development, 2000). In South Africa, up to 18,5 % of the total population live in



informal settlements in urban areas (Van Wyk, 1996).

The situation in the developing countries where population growth and urbanization are increasing very rapidly and where the gap between housing need and supply is greatest. This condition remains a problem because housing has to satisfy the needs of the people. In general sustainability intends to develop new approaches to manage urban housing development and to integrate energy and environmental issues (Ebsen and Rambol, 2000). The physical environment is considered as the most important component because it is that with which individual, community or population is in direct contact. The major elements of the physical environment as identified by Essagha (2003) include the home, its structural stability, amenity, architecture and location characteristics, relative to the residents. The relationship between the physical (built) environment and human health has been World Health Organization (WHO) Agenda since 2005.

The aim of the study is to examine the traditional housing quality and facilities in the core area of Ogbomoso North Local Government. The specific objectives of the study are to: (i) examine the socio economic characteristic of the respondents, (ii) identify the forms of houses found in the study area, (iii) identify material and facility use for the building construction and (iv) and appraise their solid waste disposal method. This is with a view of making some possible suggestions towards the deplorable traditional housing situation and environmental condition in the study area.

## **2.0 REVIEW OF LITERATURE**

It has been asserted that large scale housing deficiencies and poor social and residential environments in form of slums and squalors characterize most urban centres in the emerging nations of Africa (Onibokun, 1985). Although, many studies have attributed the causes of these housing deficiencies to the rapid urbanization and population growth in many parts of the developing world (Onibokun, 1985, Olanrenwaju, 2003,

Ravalin, 2007). Rather than identifying relevant parameters upon which housing could be developed, the planning practices and urban rehabilitation strategies adopted reflect those of the Western culture. This constitutes a major reason for the failure of such renewal and housing projects from achieving its objectives (Onibokun, 1985, Jiboye, 2009 and Sangosanya 1992).

In Nigeria, there are no accurate data on the nation's housing stock, earlier studies and observations strongly suggest quantitative and qualitative housing problems across the country. (Onibokun, 1983; Abumere, 1987; Agbola, 1998; Adeagbo, 1997). Thus, while Agbola (1988) observed that policymakers in Nigeria are not really aware of the magnitude of the housing problems facing the low income earners in the country. He was of the view that the increasing high rent is a pointer to the fact that there is a decrease in housing stock. Thus, the significant rise in population number and size of Nigerian cities have led to the acute shortage of dwelling units resulting in the overcrowding, high rents, poor urban living conditions, low infrastructure services, deteriorating environment, increasing poverty and rise in urban insecurity (Olawajaju, 2003; Ajiboye, 2005 and Jiboye, 2003).

Britain experienced severe urban decay in the 1970s and 1980s. Major cities like Glasgow in Scotland, the towns of the South Wales valleys, and some of the major English industrial cities like Birmingham, Manchester, Liverpool, Newcastle, and East London were all affected (Kenneth and Jackson (1987). Large French cities are often surrounded by decayed areas. While the city center tends to be occupied mostly by middle- as well as upper-class residents, the city is often surrounded by very large mid to high-rise housing projects. The concentration of poverty and crime radiating from the developments often cause the entire suburb to fall into a state of urban decay as more affluent citizens seek housing in the city, or further out in semi-rural areas (Paul Grogan and Tony Proscio, 2002). In early November 2005, the decaying northern suburbs of Paris were the scene of severe riots sparked in part by the substandard living conditions in public housing projects. (Paul Grogan and Tony Proscio 2002;

Sudhir Alladi Venkatesh 2002).

The main responses to urban decay have been through positive public intervention and policy, through a plethora of initiatives, funding streams, and agencies, using the principles of New Urbanism (or through Urban Renaissance, its UK/European equivalent) (Kalharine Bradbury and Kenneth Small, 2005). The importance of gentrification should not be underestimated and remains the primary means of a 'natural' remedy. In the United States (Robert Caro, 2005), early government policies included "urban renewal" and building of large scale housing projects for the poor. Urban renewal demolished entire neighbourhoods in many inner-cities; in many ways it was a cause of urban decay rather than a remedy. Housing projects became crime infested mistakes. These government efforts are thought by many now to have been misguided. Some cities have rebounded in spite of these policy mistakes for multiple reasons. Today however with many people interested in moving back to the inner cities, gentrification has renewed and restored some of these neighborhoods. Meanwhile some of the inner suburbs built in the 1950s and 60s are beginning the process of decay as those who are living in the inner city are pushed out due to gentrification (Hans Skfter Anderson 2003; Lupton and Power 2003).

In Western Europe, where land is much less in supply and urban areas are generally recognised urban regeneration has become a quasi industry in itself, with hundreds of agencies and charities set up to tackle the issue of urban decay (Hans Skfter Anderson 2003; Lupton and Power 2003). European cities have the benefit of historical organic development patterns already concurrent to the New Urbanist model, and although derelict, most cities have attractive historical quarters and buildings ripe for redevelopment. In the suburban estates and cités the solution is often more drastic with 1960s and 70s state housing projects being totally demolished and rebuilt in a more traditional European urban style, with a mix of housing types, sizes, prices, and tenures, as well as a mix of other uses such as retail or commercial. One of the best examples of this is in Hulme, Manchester, which was cleared of 19th century housing in the 1950s to make way for a large estate of high-rise flats. During the 1990s it was cleared again to make way for new development built along new urbanist

lines. The area is held up as an excellent example of Urban Renaissance (Paul Grogan and Tony, 2002; Sudhir Alladi Venkatesh, 2002). Urban centres lack essential basic amenities such as pipe born water electricity and road network. Where they are provided, these facilities are insufficient or do not function due to neglect by government and thereby could not meet the requirements of the users (Jonshon, 2005; Toyobo et al; 2005).

Indeed, most urban centres were not properly planned having narrow roads. The narrow roads are congested by vehicles, motor cycles that ply along the roads. Waste disposal is also a major problem. There are no planned disposal sites for refuse with a resultant indiscriminate refuse disposal on any available space. The consequences is that some areas are filthy and dirty which emit offensive odours. This makes the inhabitant vulnerable to disease attack. Also drainage facilities are absent in most areas. These make such areas liable to flooding during heavy raining days. In most cases resident are rendered homeless while some residents cannot access their houses with vehicles. (Olawejaju, 2003 and Johnson, 2005)

### 3.0 MATERIALS AND METHODS

#### Brief of the study area

Ogbomosho, the second largest town in Oyo State after the capital lies approximately 8° 07' East of the Greenwich Meridian. The town lies within the derived Savannah region and it is a gateway to the northern part of Nigeria. Ogbomosho North comprises of 10 political wards namely: Aaje Ogunbade, Abogunde, Aguodo/Masifa, Alasa, Isale Afon, Jagun, Okelerin, Osupa, Sabo/Taara, and Saja/Isale Ora. The political wards constitute the core of Ogbomosho North Local Government which is the study area. This constitute the sample frame for the study.

#### Methods Of Data Collection And Analysis

Data were collected from both primary and secondary sources of



information. The secondary source involves literature review on relevant documents relating to housing quality and their environmental standards. The primary sources of data include information from opinion leaders in the study area, administration of questionnaire, oral interview and personal observations. About 150 questionnaire were administered using systematic random sampling procedure to solicit information from respondents. Data gathered from the field were analyzed using descriptive statistics to examine the level of housing condition, facility and solid waste disposal methods.



**Plate 1: Derelict dwelling units in the study area,**

#### **4.0 RESULTS AND DISCUSSIONS**

##### **I. Socio-economic Characteristics of Respondents**

Majority of the respondent were females (68.2%) and males 21.8%. Those who were married among them were (64%), single (11%), widow (15%) and widower 10%. Majority among them earn less than ten thousand naira per month with diverse informal occupational activities such as carpentry, concrete block molders and builders, vulcanizers, tailors, shoe-makers and menders, drivers and mechanics. Also, (25.2%) are farmers and (39.7%) engage on trading. In addition, (51%) of the respondents had primary/secondary schooling leaving certificate and (24.4%) with tertiary educational background. This implies that (24.6%) of the respondents are illiterate. This has greater impact on people life style of living and collective environmental management in the area.

##### **ii. Forms of houses**

Majority of the houses that constituted (63%) were Brazilian mud (face-me-and-face-you), (24%) storey building either with mud or concrete block and (7%) flat houses. Some compound houses have collapsed together to form slums. Those that have no access at all were (18.0%), while buildings that were fairly accessible were 50.7%. It was revealed from field survey that majority of the dwelling units have no building plans. Their development date back the colonial era when there were no comprehensive master plans, layout plan or building plan for Ogbomoso to guide urban development.



**Plate 2: Substandard structure in Masifa Area, Ogbomoso, Nigeria.**

##### **iii. Materials and facilities used for construction in the study area**

Materials used in the study area  
Table 1: shows the materials use for building construction in the area and perception of respondents in term of housing defects Poor housing quality debit the traditional core in the study area which shows (12.6%) sample houses built with mud, not plastered. However, houses without defects were (31.7%), As indicated in table 1, majority of the respondents were satisfied with the housing and environmental condition due to the economic datum of Nigeria.

**Table 1 Materials Used**

SN	VARIABLES	FREQUENCY	PERCENTAGE
a.	Material used for Building		
	(i) Concrete Block	156	78.4
	(ii) Mud	25	12.6
	(iii) Burt Brick	16	8.0
	(iv) Wood	2	1.0
b.	Wall Condition		
	(i) Plastered Inside Only	32	16.1
	(ii) Plastered Outside Only	6	3.0
	(iii) Plastered Inside & Outside	141	70.9
	(iv) Not Plastered	20	10.1
c.	Roofing Material used		
	(i) Corrugated Iron Sheet	162	81.4
	(ii) Thatched	9	4.5
	(iii) Asbestos	18	9.0
	(iv) Aluminum Roofing Sheet	10	5.0
d.	Floor Condition		
	(i) Floored with Concrete	162	81.4
	(ii) Finished with PVC	25	12.6
	(iii) Not Floored	7	3.5
	(iv) Others	5	2.5
e.	Material used for Window		
	(i) Louvre Glass	122	61.4
	(ii) Wood	54	27.1
	(iii) Iron Sheet	11	5.5
	(iv) Sliding Window	12	6.0
f.	Material used for Door		
	(i) Flush Door	45	22.6
	(ii) Wood	106	53.3
	(iii) Iron Sheet	44	22.1
	(iv) Others	4	2.0
g.	Natural Ventilation/Lightening		
	(i) Satisfactory	124	62.3
	(ii) Not Satisfactory	66	33.2
	(iii) Others	9	4.5
h.	General Condition of Building		
	(i) Without any defect	63	31.7
	(ii) With Internal Defects Only	29	14.6
	(iii) With External Defects Only	62	31.2
	(iv) With both Internal & External Defects	41	20.5
	(v) Others	4	2.0
	<b>TOTAL</b>	<b>199</b>	<b>100</b>

Source: Author's Field Work 2014.

### Building Materials Used For Construction

Table 2: revealed material used for housing development in the study area. Majority of the respondent (40.7%) used asbestos ceiling for roofing, (60.7%) used wooden frame doors, (58%) wooden frame windows. The implication is that the people used both local and modern materials in building construction. 55.6% of the houses in the area were not painted. Most traditional houses are not painted in the area and this does not give good visual impression about housing quality. Rather it portray housing decay as depicted in plate: 1 and 2.

**Table 2: Building Materials Used For The Construction**

SN	VARIABLES	FREQUENCY	PERCENTAGE
a.	Type of roof		
i.	Asbestos	61	40.7
ii.	Concrete	58	38.7
iii.	Thatched	2	1.3
iv.	Iron-roofing sheets	29	19.3
b.	Type of window		
i.	Glass	45	30.0
ii.	Wooden	87	58.0
iii.	Sliding	18	12.0
c.	Type of door		
i.	Wooden	91	60.7
ii.	Iron	46	30.7
iii.	Sliding	13	8.7
d.	painting		
i.	House painted	8	44.4
ii.	House not painted	10	55.6

Source: Author's Field Survey, 2014.

### Type Of Facilities

Table 3: shows four different facilities enjoyed by resident in the study area. Electricity recorded the highest (38.7%) of the facility in the area, Hand pump/boreholes (32.7%), good circulatory system road (16.7%) and least with (12.0%) pipe-bore water. Generally, facility enhance urban image thereby increases the standard of living and quality of life of the people.

**Table 3: Type Of Facilities**

Type of facilities	Frequency	Percentage
Electricity	58	38.7
Pipe-bore water	18	12.0
Hand pump/boreholes	49	32.7
Good road	25	16.7
<b>Total</b>	<b>150</b>	<b>100</b>

Source: Author's Field Survey, 2014.



#### iv. Environmental Condition

Waste disposal methods in the area

Table 4 shows mode of waste disposal methods in the study area. Majority of the respondents (45.3%) were those that preferred open dump method of solid waste disposal, 20.0% used dustbin method, 18% stream method and 16.7% through burning. However, environmental sanitation in the area needs immediate attention. From reconnaissance survey of the study area revealed that most compounds were very dirty and the people do not have the hygienic waste disposal methods. This does not give a good visual impression of the quality of housing environment. Plates 3 throw more light to the point.

**Table 4: Mode of waste disposal in the Study Area**

Mode of waste disposal	Frequency	Percentage
Open dump	68	45.3
Stream	27	18.0
Burning	25	16.7
Dustbin	30	20.0
Total	150	100

**Source: Author's field survey, 2014.**

**Plate3: Poor degrading living environment at Isale Ora, Ogbomoso**



**Plate 4: Ttoilet facility in Okeelerin Area**



A cursory look into the study area reveals the occurrence of stagnant water over the place, which serves as breeding grounds for mosquitoes and flies. In addition, most of the gutters are not taken care of by the community and this constitute smelling water as indicated on plate: 3. The terrible odour of urine which could have been discharge there by the inmates or passerby-when one walks near the walls of any building is nothing to write home about. Despite all material used for construction, poor housing quality at the core in Ogbomoso North Local government have existed since the city inception. The resident in the area live under deplorable condition with inadequate basic social facilities and are faced with multidimensional challenges that requires interventions such as clean water supply, improve housing condition and environmental sanitation.

#### Overcrowding

Another characteristics observed in the core is overcrowding arising from over population and insufficient accommodation. The occupancy rate is as high as 6 person per room. Overcrowding is a problem that has social and health effects as corroborated by Asbell 1975 that overcrowding occurs when organisms are brought together in such a number which produce ill effects as a result of congestion. When people are overcrowded in a room may lead to the spread of air borne diseases and the like.

#### 5.0 CONCLUSIONS AND RECOMMENDATIONS

Majority of the respondents were married and engage in informal sector activities and farming. Hence they could not avoid rehabilitating their

dwelling units to meet modern day housing standard. Most houses were substandard because of the nature of serious defects in housing condition and facilities in the area. The area suffer public pipe borne water supply. People rely much on hand pump/borehole water for their domestic purposes. Majority of the people dispose their waste through open dump and this constitute an environmental hazard most especially with human solid waste. There is no proper environmental sanitation in the area. Occupancy rate is very high due to some extended families living with their relatives and this has resulted in overcrowding.

### **Recommendations**

The vicious circle of housing condition and facility as well as environmental quality may remain unless adequate measures are taken. However, to enhance the image thereby ensuring conducive, convenient, esthetic, pleasant and healthy looking environment, government and residents in the area have greater roles to play.

#### **Residents' Role**

**Adequate rooms**  
\* should be occupied by respondents in order to avoid too much people crowding in a room which is very harmful to health.

\* Broken doors and windows should be replaced to ensure security of lives and properties. All bushes in the surroundings should be cleared to debar those that use bushes or open dump for toilet.

\* All open drains should be replaced with closed ones to ensure healthy environment.

\* All the traditional houses should be upgraded and the weaker ones demolished and reconstructed to the modern taste with the inclusion of all necessary facilities and amenities.

#### **Governments' Role**

\* Education should be made accessible and affordable to all and sundry in order for people to get a paid job with high income so that they will be able to afford a good house.

\* Town planners should be vigilant of houses with dilapidated walls in the study area, either by serving them demolition notice or by enforcing renovation since it is a threat on lives and

properties.

\* Site and service scheme should be made more effective to the populace.

\* There is need to put in place a sound urban housing policy that spells out such issue as urban housing finance and building materials for communities.

\* Government should complement the effort of the community on infrastructural development. This should be in addition to site and service schemes and urban housing loans to prospective urban housing developers and Government should enforce environment sanitation in the area.

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