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Spatio-Temporal Analysis of Residential Conditions in Ilorin West LGA: A Case Study of Okelele-Adangba Communities

Bako, A.I., Raheem, W.M. & Aduloju, O.T.

ABSTRACT

Poverty and unemployment are concentrating in the cities due to the urbanization trend. Housing in developing nations and poor parts of developed countries continues to be of insufficient quality and quantity to meet increasing demand. However, this research was perceived with the aim of assessing the residential conditions of Okelele-Adangba community by assessing the infrastructural facilities, housing conditions, sanitary facilities, associated disasters, etc. 119 buildings were sampled through the use of systematic sampling of interval of 5 buildings. The findings show that the study area, exhibit evidence of slum that has undeniable impact on the socio-economic activities. However, the regression analysis performed shows that the calculated F value of 22.26 is by far, greater than the F table value of (2.31) at significant level of 0.05 and degrees of freedom (5,94). which shows the dependency of housing satisfaction on some principle factors. The research concluded the findings with few recommendations like slum upgrading and economic rejuvenation, provision of infrastructure master plan, as the way forward.

INTRODUCTION

The problem of adequate and habitable housing has long been a concern, not only of individuals but of governments as well. Thus, the history of housing is inseparable from the social, economic, and political development of humankind (Listokin & Burchell, 2008). Close and Crabbe (2016) clearly label housing as one of the traditional areas of concern for public health, that has been relatively neglected over recent decades. Housing as a unit of the environment has profound influence on the health, efficiency, social behaviour, satisfaction and general welfare of the community. As Omole (2010) observes residential environment reflects the cultural, social and economic values of a society, as it is the best physical and historical evidence of the civilization of a people.

Housing in developing nations and poor parts of developed countries continues to be of insufficient quality and quantity to meet

increasing demand (Encarta Interactive World Atlas, 2008). However, Slums, illegal dwellings and indecent shelters are proliferating as city planners and city managers are overwhelmed by the unprecedented urbanization trend. The problems are especially acute in Asia and Africa, where the population growth rate far outpaces the global rate (Rizvi, 2016). Indubitably, the cenge of providing affordable housing for low-income city-dwellers is universal, as the intensifying and record-breaking urban congestion is drastically becoming inconceivable. Housing and built environments have profound impacts on human health. WHO (2010) observes in developed countries that 80 – 90% of the day spent in built environments are mostly in the homes.

Apart from the intrinsic value that housing possesses, housing conditions affect a wide range of outcomes, as housing costs make up a large share of the household budget (OECD, 2007b), people particularly those

of low incomes, are often constrained by the level of resources left for other essential expenditures, such as food, healthcare and education. Kennedy (1987) further ascertains housing for the poor suffers in quantity and quality as tenement landlords milk tenants and allow their buildings to deteriorate and become uninhabitable. Housing demand is growing at rates that outstrip the construction of new houses. High housing cost may threaten household material wellbeing and economic security and may generate housing stress that may hamper relations between households' members and impair the development of children (OECD, Housing Condition, 2011).

Agbola (2010) believes three major housing policy streams or strands that were identified by Nigerian government over the past 40 years have failed because they could no longer meet with the demand of time and space. Olawale, Lawal and Alabi (2015) believe, to this effect, that the low-income group in the country is still bedeviled with a myriad of housing problems, notable among which include quantitative deficiency and the inaccessibility to decent housing. One of the ways by which human beings organize in space around themselves is through the organized spatial expansion. Omole (2010) argues that the importance of providing adequate and quality housing in any country cannot be overstated nor disputed in time or space. However, what is being witnessed in Ilorin today is heralded by haphazard development resulting into amoebic pattern of development which shows some deficiency in road and street plans from the past. This has brought about irregularity instead of orderliness into the Ilorin residential neighbourhoods and its immediate satellite settlements.

The residential environment of Okelele - Adangba has been an area of neglect, as no major housing project or is currently

on going that is directed at the low income earners of Okelele-Adangba communities in Ilorin West local government area. The Okelele-Adangba residential environment is already facing a massive housing backlog, and will soon be facing an even bigger housing cenge—compounded by the deterioration of the existing housing stock, infrastructure and the continuing alteration of household sizes in space and time. It is against the backdrop of an ever-worsening urban housing conditions in Okelele-Adangba, that this research tends to examine the spatio-temporal status of residential conditions of these two communities located in Ilorin West and with a view of obviating such problems.

Study Area

Ilorin West is a local government area in Kwara State, Nigeria with its headquarters in the town of Oja Oba. It is located in the transitional zone between northern and southern Nigeria. The Area lies within latitude 8°30'00"N and longitude 4°35'00"E. Ilorin West LGA occupies a land area of 105 km² and according to National Population Census (2006) this local government has a population of 364,666 at the 2006 census, making densest of all the local government in Ilorin (Fig. 1). The Local Government is divided into 12) electoral wards (Adewole, Ajikobi, Alanamu, Badari, Baboko, Magaji-Ngeri, Ogidi, Oko-erin, Oloje, Ojuekun/Sarumi, Ubandawaki and Kwara/Osin/Egbejila) (Oloko-Oba, et al., 2015).

The residential housing conditions and densities are characterized by various types of houses present all over the city. The study area is part the traditional centre of the city (Okelele, Pakata, Adangba, Omoda, Ajikobi, Oloje, Gegele, Sanni-Okin, Eruda, Balogun Fulani, Alanamu, Ita-Adu, etc) comprises mainly of old traditional compounds and tenement houses interspersed with block of

flats all of high-density category (Akogun & Ojo, 2013). The Okelele, Adangba, Gambari, Ipata Oloje, Oko Erin communities are significantly the slum areas of Ilorin West. The medium-density housing estates are found at Oloje, Kulende, Adewole, Irewolede and the mandate estates (Akogun & Ojo, 2013). Low density areas are found in the GRA, Taiwo and parts of Adewole areas where the houses are mainly detached bungalows of two to five bedrooms, duplex and maisonettes. The core areas as labeled above can be best described as socially disadvantaged neighborhoods, with pockets of violence and are dominated by the locals (Abdullahi, Seedat-Khan, and Abdulrahman, 2016).

The commercial activities situated in the study area could be classified as large scale, medium scale and small-scale types (Fakomogbon, 2015). They provide opportunities for the industrious and enterprising inhabitants of the area. The local government is host to Crownhill and Al-Hikmah universities as the only two private colleges in the county.

RESEARCH METHODOLOGY

The necessary data for this study were obtained from primary and secondary sources. Questionnaire administration constitutes the major instrument used in information collection. Map upgrading, building and facility surveys supplemented this research. Semi-secondary data from relevant ministries and government departments, particularly Town Planning Authority in Ilorin, Kwara State and Department of Urban and Regional Planning, University of Ilorin were sufficiently used.

The study found that there are 993 existing buildings in the study area of Okelele and Adangba communities covering about 1.18 square kilometers of land. The sampling design for this study was based on the definition of Fasakin (2000) that average of

seven (7) persons make up a household and average of four (4) households are found in a building. This approximately amounts to 27, 804 persons in both Okelele and Adangba communities. Given this, a 12% sample size was taken out of the 993 buildings population, which gave a hundred and nineteen (119) buildings as the sample size.

Using systematic random sampling approach to select respondents in the area, every 5th house in each of the five districts involved was chosen for the interview and survey. Only one household was interviewed in each of the buildings selected. Each questionnaire contains 51 variables, which included information on socio-economic characteristics, structural condition of buildings, the psychological wellbeing, the level of infrastructure facilities as well as residents' perception.

FINDINGS AND DISCUSSIONS

Housing has been described by OECD (2011), as a major element of people's material living standards. However, the findings took into cognizance a "user's reaction" technique of measuring habitability, which according to Omole (2000) encompasses four major components (Man, shelter dwellings, environment and institutional management). Overall, housing conditions were evidently lamentable in terms of living space and the level of satisfaction derived from household composition, when taken into consideration. This research focuses on the socioeconomic characteristics, the level of livability of individual households, conditions of the buildings, housing facilities, level of infrastructure, wellness of the residents in Okelele-Adangba, the level of decay and the actual and potential disasters. However, nineteen (19) out of the one hundred and nineteen (119) questionnaires distributed could not be retrieved leaving one hundred (100) which were used for the

analysis. This represents 84% of the total expected responses. It was still considered reasonable when taking into consideration the overlapping features of Okelele-Adangba High density areas.

SOCIO-DEMOGRAPHIC CHARACTERISTICS

The questionnaire administration focused mainly on the adults as table 1 shows that 85% of respondents are above the age of 18 years while the remaining 15% fell below 18 years. All the people sampled were 100% Muslims and Yoruba speaking ethnic group. This is so because Okelele-Adangba communities are part of the traditional cores of the city of Ilorin which is dominated mainly by the Muslims who founded the city in the 19th century. The gender distribution shows that 60% males and 40% respondents were females. Table 1 shows the marital status as 70% of the respondents were married, while 6% were divorced, 4% widowed and 20% were single. For educational background, 65% respondents never had education or only had primary school certificate, while 10% and 25% respondents only had secondary school leaving certificate and tertiary certificates respectively. As pointed out by SGCAS (2010), there exist complex links between housing and educational level, as Okelele-Adangba communities are aesthetical displeasing and unpleasant and this may be due to lack of proper education.

This research shows that 5%, 5% and 35% respondents are currently unemployed, students and self-employed respectively, while the remaining 55% of the respondents are involved in trading (Figure 1). This aligns with the findings of (Fakomogbon, 2015), who labelled Ilorin west residents as a very enterprising area of Ilorin metropolis and identified the local weaving cottage industry of *Aso Oke* as being the most creative

economic engagement of the inhabitants of Okelele – Adangba communities.

The income distribution of the study area is lamentable and evidently one of the major cause of poor residential condition as this research observed in figure 1, that 35% respondents earned below ₦5000, 30% between ₦5000 - ₦10,000, while the remaining 25% and 10% to be earning between ₦10,000- ₦20,000 and above ₦20,000 respectively. The level of income of individuals is believed to have a direct correlation with their wellbeing (Bako, Aduloju & Abubakar-Kamar, 2017). However, poverty remains a feature of contemporary Okelele-Adangba community today, as Johnstone and McWilliams (2005) perceive it to be an urban phenomenon in terms of extent and intensity. The standard of living of Okelele-Adangba is nothing to write home about and residents finds it difficult to afford decent housing. An interviewee was quoted saying: "I have accepted my faith, my income cannot afford decent housing. I have to stick to my forefather's house I inherited."

Table 1: Socio-demographic characteristics of respondents.

Variable	%
Gender distribution	
Male	60
Female	40
Total	100
Age Distribution	
Below 18 Years	15
18-40 Years	45
41-60 Years	40
Total	100
Religion	
Christianity	0
Islam	100
Traditional	0
Total	100

Variable	%
Ethnic Group	
Yoruba	100
Others	0
Total	100
Single	20
Married	70
Divorced	6
Widowed	4
Total	100

Source: Field Survey, 2017

Level of housing condition and sanitary facilities

This section focuses on the level of housing condition and the general sanitary facilities. From observation alone, inference can be drawn on the state of quagmire the housing conditions and general sanitary facilities of Okelele and Adangba communities were during the field survey. Table 2 shows what was gathered from respondents of the Okelele and communities on the housing and sanitary conditions. The Study found that 92% of the houses in the study area are inheritances, while the remaining 8% are self-owned. This clearly affirms what that Okelele and Adangba communities remain one of the traditional core areas of contemporary Ilorin Metropolis. Nevertheless, the occupancy ratio of the study area was put at 20% of respondents at between 1 – 2 persons per room, while the remaining 50%, 20% and 10% fell between 3 – 4 persons per room, 5 – 6 persons per room and above 7 persons per rooms respectively. This reaffirms that overcrowding exists in the areas labelled as slum. Furthermore, taking the age of buildings into consideration, it was observed that 10% of the buildings were below 20years of age, while the remaining 90% buildings were over 20 years of age. These findings were further consolidated with

a discussant of over 50years of age saying "this house, I inherited from my fore fathers is older than me, cannot give a specific date this house was built". This shows that majority of the houses in the study area have been existing for a long time. As Omole (2000) opines, the life expectancy of a building should not be more than 60) years. However, 70% of the buildings were observed to have leaking roofs, while the remaining 30% have used extensive repairs. The study found that 90% of the buildings were mud blocks and the remaining 10% were constructed with cement blocks. Figure 2, shows that the structure of 70% of the buildings examine need major repairs while the remaining 30% need to be pulled down.

Figure 2 shows the type of residential dwellings in the study area, as 90% respondents owned up to live in a tenement (Brazilian) form of dwellings while the remaining 6% and 4% respondents claimed to be living in a Flat and Duplex respectively. However, taking the sanitary facilities into reckoning, table 2 shows that 80% respondent claimed to have toilet facilities while the remaining 20% were rigid with truth enough to claim not to have any toilet facility whatsoever, contributing to the open defecation in the study area. Subsequently, out of the 80% of the respondents who claimed to have toilet facilities, only had 25% who uses water closet while the remaining 45% and 30% use Pit latrine and Water-assisted Pit latrine respectively. This regrettably shows the level of access to sanitation in Okelele and Adangba communities, as UNICEF (2008) posits; access to sanitation is a *sine qua non* in preventing diseases spread by unsanitary conditions and by water contaminated with human waste. Good sanitary condition is a minimum requirement for human health and well-being. The study found that 72.4% of the buildings assessed had cracks while the remaining 27.6% were

without evident cracks (Plate I). This clearly shows that majority of the inhabitants live in dilapidated and dangerous accommodations. It is not wrong to say that building collapse are disasters waiting to happen.

Accordingly, it was observed that most of the bathrooms and kitchens attached to the buildings are far below the acceptable standard. They are mostly grossly inadequate or inconveniently located (Plate 3). Many of the bathrooms are just small enclosures, some of which are made of non-durable materials like bamboo, rusted iron sheets, or planks at the backyard (Plate II). Furthermore, the interflow of sewage from different bathrooms and kitchens is uncontrolled and due to lack of soak away pits and septic tanks, the stench of smell in these areas is certainly unacceptable to good living. The use of firewood and charcoal for cooking is prevalent hence many of the buildings are forced to locate their kitchens at the backyard or sometimes as the focal point of the local compound called *agbole*, except for the few ones that used kerosene stoves as sup-

plement to cook at the passage or right inside their rooms.



Plate 1: Dilapidated mudhouse, Ile Baale, Okelele.

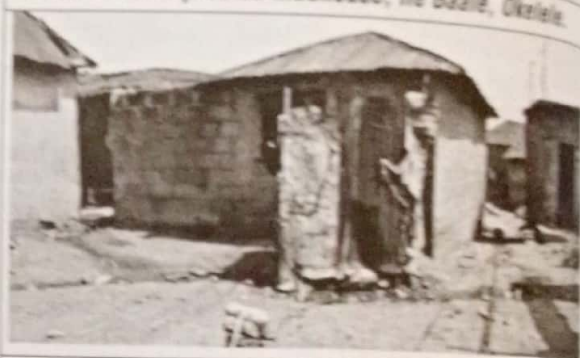


Plate 2: Retarded outhouse in the study area.

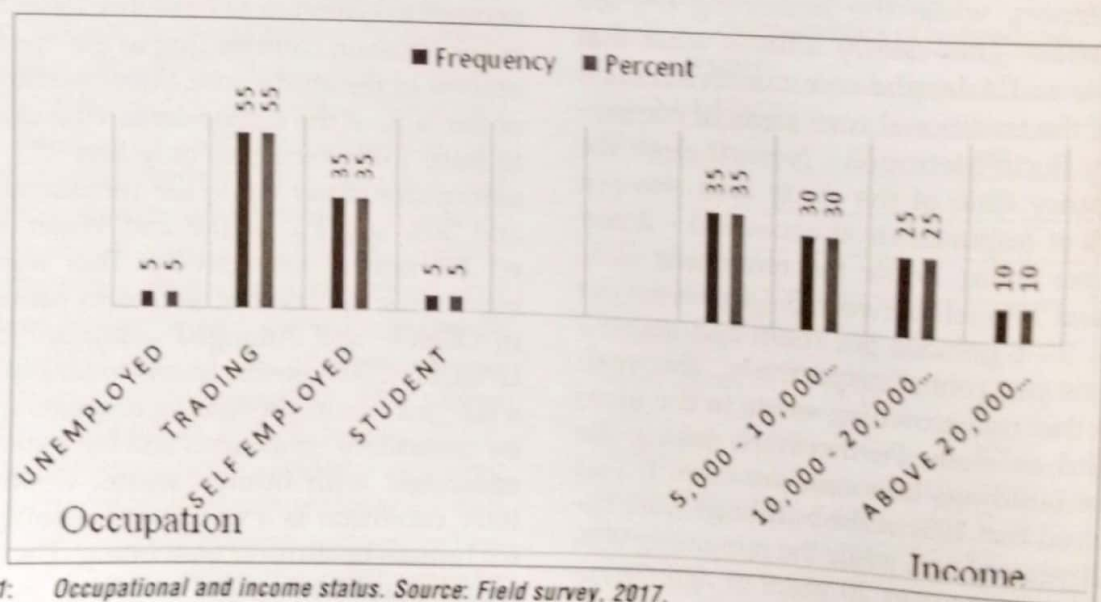


Fig. 1: Occupational and income status. Source: Field survey, 2017.



Plate 3: Ramshackle kitchens in Isale-Baale, and Tankatu streets, Okelele.

Table 2: Housing condition in Okelele-Adangba communities

Character	(%)
Housing ownership	
Self-owned	8
Inheritance	92
Total	100
Occupancy ratio	
1-2	20
3-4	50
5-6	20
7-8	10
Total	100
Age of residential buildings	
15-20 years	10
Above 20 years	90
Total	100
Roofing condition	
Leaking	70
Patched	30
Total	100
Toilet facilities	
Yes	80
No	20
Evidence of cracks	
Yes	72.4
No	27.6
Total	100

Character	(%)
Type of wall	
Mud blocks	90
Cement blocks	10
Total	100

Source: Field Survey, 2017

REGRESSION ANALYSIS OF PRINCIPLE FACTORS

In determining housing satisfaction and comfortability (dependent variable) in Okelele - Adangba communities, the multiple regression analysis was employed using the 'entre method' with five (5) principal factors (violence, infrastructure, hazards & disasters, pollution and appearance of the environment) as the independent variables. The model summary in Table 3 specifies the coefficient of determination (R^2) value of 0.542 indicating 54% variance in housing satisfaction was explained by the model and subsequently, Adjusted R^2 value of 0.518 representing 52% of the housing satisfaction. The result indicates that R^2 is high showing that most of the variations in housing satisfaction were moderately explained by the predictor variables. However, this value can be considered reliable and reasonable. This is because they are consistent well above the acceptable range of 15% as postulated by Mitchell and Carson (1989) and further ascertained by Akinyode (2017). This, they believe is acceptable in social sciences when cross-sectional data are taken into consideration. The study rejects the null hypothesis as it was observed that the calculated F value of 22.259 is by far greater than the table F value of (2.31) at 0.05 significance level and degrees of freedom (5,94) (table 4). As ascertain Panneerselvam (2014); Bako, Aduleju and Abubakar-Kamar (2017), this simply implies that the regression is highly significant. It should be noted that, three of the predictor variables (pollution level, ap-

pearance of the environment and infrastructure) were all significant with their p values = 0, which is less than 0.05 significance level (Table 5). This clearly shows that the predictors have a huge effect on the level of satisfaction and livability of residents of Okelele and Adangba communities. Furthermore, the result of ANOVA from table 4 shows the P value is 0 which is less than 0.05, which also proves the above fact.

ASSESSMENT OF

INFRASTRUCTURE FACILITIES AND ENVIRONMENTAL CONDITIONS

Adequate urban infrastructure is seen as the pivot of economic and social development of any community or nation (Bako, Aduloju & Abubakar-Kamar, 2017). The elements of infrastructure include the systems of transportation, power generation, sewage and solid waste disposal, communications, open space, education, and health. The in-

Table 3: Model summary^a

Model	R	R Square	Adj. R Sq.	Std. Error of Est.	Durbin-Watson
1	.736 ^a	.542	.518	.522	2.058

a. Predictors: (constant), violence, infrastructure, hazards & disasters, pollution and appearance of the environment. b. Dependent Variable: Level of Satisfaction

Table 4: ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.359	5	6.072	22.259	.000 ^a
	Residual	25.641	94	.273		
	Total	56.000	99			

a. Predictors: (constant), violence, infrastructure, hazards & disasters, pollution and appearance of the environment. b. Dependent Variable: Level of Satisfaction

Table 5: Coefficients^a

Model B		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta			
1	(Constant)	.872	.627		1.391	.168
	Env. appearance	.795	.142	.425	5.581	.000
	Pollution level	-.423	.078	-.452	-5.408	.000
	Infrastructure	.359	.084	.432	4.292	.000
	Hazard & disasters	.128	.142	.084	.900	.370
	Violence	-.231	.109	-.151	-2.116	.037

a. Dependent variable: level of satisfaction

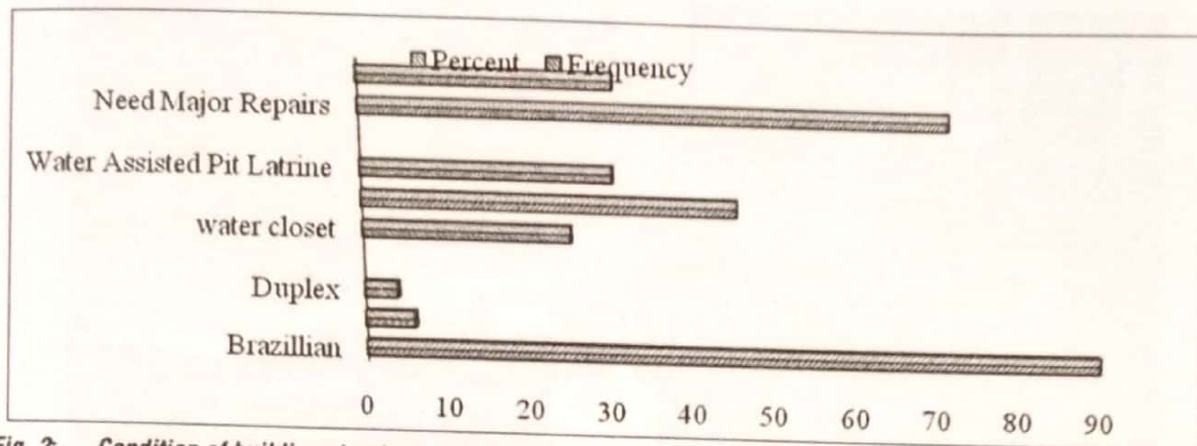


Fig. 2: Condition of building structure, toilet facility and forms of dwelling structure. Source: Field Survey, 2017.

situation shows that Okelele and Adangba have a prevalence of these diseases because of the filthy environment that provides a conducive environment for the disease-carrying ventures (Fig. 3).

The presence of both potential and actual environmental hazards in the study area was also assessed. Sixty percent of the respondents believed the prevalent hazard in the study area to be flooding, while the remaining 40% chose severe thunderstorm (Figure 3). It can be deduced that the flooding events in the study area are induced majorly by drainage channel blockages and or absence of drainages (Plate 5). It is suggested that to forestall this problem, drainages in the area should be cleared periodically and new ones constructed to help drain areas that have none.

Pollution in the study area affects mainly the air and land/soil as shown in table 6. The major source of the air pollution is observed to be from vehicular emission that also comes with heavy stench and filth from vehicular oil wastes.

The main source of power supply is from IBEDC (Ibadan Electricity Distribution Company) where 90% of respondents depend solely on it. Only 10% indicated the use of generating plants as alterna-

frastructural distribution in the study areas relative to space and time has been found to be grossly inadequate, as figure 3 has shown. The study shows that 20% of the respondents believe that access to potable water is the most important singular item of infrastructure missing in the study area, while 40%, 30% and 10% voted for effective solid waste collection and disposal system, power supply and others (all infrastructure) respectively. The provision of infrastructure remains the backbone of any livable community as a discussant clearly shares his views, "My family has to trek over 40 minutes to get drinkable water." Certainly, this by far does not meet the WHO and UNICEF (2008) prescribed standard of access within a range of 200 meters for potable water in urban areas.

From the mere observation of the environment alone, one can deduce that effective solid waste collection and disposal system is unambiguously absent (Plate 4). All these lead to poor housing quality as studies have found that poor quality housing can cause psychological stress (Dunn, 2002) and can negatively impact self-esteem. Malaria was rated by 90% of the inhabitants as the most prevalent disease while the remaining 10% rated Typhoid fever and other diseases. This



Plate 4: Water stress and shortages in Adangba.

tive source of power. An important aspect of urban livability is indeed the supply of power and adequate access roads. Unfortunately as in many communities in Nigeria, many of the respondents lamented the poor power supply situation. Furthermore, 82% of the houses sampled were only accessible by footpath and this is due to the contiguous nature of the buildings in this area, while the remaining 9% each could only be accessed by tarred and untarred roads respectively. The study found that total kilometre of tarred road in the communities is measured to be a paltry 0.059 km² serving a

land mass of 1.18km² of Okelele and Adangba communities. This is a far cry from the 15 to 20% required as a standard required for circulation in city planning.

Table 6: Assessment of infrastructure facilities and environmental conditions

Character	%
Electricity (source)	
Government (IBEDC)	90
Generator	10
Total	100

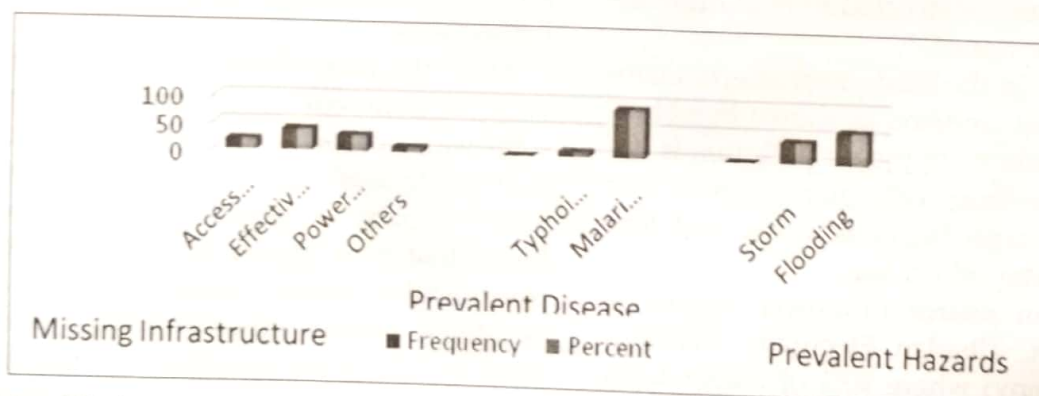


Fig. 3: Missing infrastructure, prevalent disease and prevalent hazards. Source: Field Survey, 2017

Character	%
Prevalent pollution	
Land/Soil	80
Air	20
Total	100
Accessibility (road condition)	
Footpath	82
Tarred road	9
Untarred	9
Total	100
Open space	
Yes (available)	88.7
No (not available)	11.3
Total	100
Assessment of environment	
Rowdy	21.1



Plate 5: Haphazard refuse dumpsite, Tanka-Tu, Okelele.

Character	%
Dirty	78.9
Total	100

Source: Field Survey, 2017

Recreational open space is considered one of the infrastructures that helps to define the level of livability in a city. In assessing the open space facilities in the area, the study found that 88.7% of those interviewed indicated that there are no open spaces for recreation, while the remaining 11.3% accept the *Agboole* in the compounds as viable recreational open space. In the assessment of the general environmental conviviality, less than 21.1% of the sampled respondents agreed that their environment is rowdy, probably because of its closeness to the CBD, particularly the Emir market. Overall 78.9% who affirmed that the environment is dirty and from our observation the Okelele



Plate 6: Blocked and foul-smelling drainage, Adangba.
 Source: Field Survey, 2017.

and Adangba communities constitute an extremely filthy and raucous neighborhoods. This was further buttressed by a respondent who anonymously confirmed the cleanliness of neighbourhood to be nothing to write home about especially during the rainy season, he said "residents with no toilet routinely roll out stashed feces, and stuff it into drainages whenever it is raining, for running water to wash away.

RECOMMENDATIONS AND CONCLUSIONS

Housing is a numbers game, the more people in any city or town, the greater the need to improve housing environment (Rizvi, 2016). To this effect, the following recommendations are put forward to assist government in formulating policy guidelines.

Slum upgrading and economic rejuvenation

The study area should be declared a slum. Consequently a slum upgrading program should be appropriately instituted in Okelele-Adangba communities. The recommended approach should be a combination of rehabilitation of infrastructure and projects aimed at economic rejuvenation that will diversify the communities' major economic activities to include other crafts and trades beyond the weaving of *Aso Oke*. One of the findings of this work shows that 70% of the buildings in the residential environment need repairs. It is therefore believed that programs aimed at homes renovation will help to relieve overcrowding in buildings. The improvement of the existing roads and the construction of new ones should be introduced to increase circulation. Indeed we suggest that economic rejuvenation should be institutionalized in order to compliment the rehabilitation and renovation of infrastructure, as this will invariably help in removing the sources of the urban decay

program. Not doing this is tantamount to just treating the symptoms alone.

PUBLIC AWARENESS

The findings through regression analysis further shows that the satisfaction of residents of Okelele – Adangba community depends significantly on three (3) principal factors (pollution level, infrastructure and appearance of the urban scenes of Okelele – Adangba community). In presenting the pollution and appearance of the environment, Bako, Aduloju and Abubakar-Kamar(2017) believe public understanding of science is a necessity and a veritable tool in stimulating the consciousness of individuals. As stakeholders, government and non-governmental organizations can organize programmes on the need to take care of one's environment and further emphasize the slogan 'health is wealth'. Jingles on radio and T.V sets help in connecting to the micro and macro level and invariably changing the mind set and mentality of people as regards how our precious environment can be saved from degradation due to carelessness of use. In achieving this feat, awareness through government organs, Corps members of National Youth Service Corps (NYSC) as vanguards, could all be used to promote the case environmental sustainability.

Reintroduction of sanitary inspectors

In order to improve on the level of environmental upkeep and hygiene, the old-styled sanitary inspectors called *Wole-wole* may be reintroduced. This will help to stem flooding caused by blockage of stream channels with domestic wastes and also uplift the sanitary level of the environment under study. There is a great need to check the attitude of dumping wastes in drains, constructing houses without toilet facilities and inappropriate flushing of feces in drainag-

es believing that runoffs from rainy spells would wash them away.

Joint environmental management plan

This research is also recommending collaboration between the state government and private companies in the form of public-private partnership (PPP). With a solid Memorandum of Understanding (MOU) government may be able to find a willing partner that will manage solid waste collection system. The private sector in the municipal solid waste sector in developing countries is partly driven by more stringent environmental standards and there is therefore the belief that the private sector can play a significant role in improving environmental and hygiene standards. Therefore, PPP in many other states like Ondo State could be effective as regards solid wastes collection, disposal and administration of the laws surrounding the failure of the public especially in Okelele – Adangba community to comply. If this is instituted in Kwara State, land/soil pollution and indiscriminate dumping of municipal solid waste will become a thing of the past.

Provision of infrastructure masterplan (IMP)

Infrastructure is the backbone of any livable city, as it encompasses all indicators of liveability. Therefore, this research is suggesting an infrastructure masterplan of 10-15 years for Okelele-Adangba community of study as this will help in complementing the existing land use masterplan. From the findings of this research most of the valuable infrastructure like good roads, potable water supply, sewage collection system, solid waste collection and management and others are clearly missing. The proposed IMP will support and ensure that there is enough infrastructure capacity in the right

areas of the Okelele-Adangba community at the right service levels and at the right time to accommodate development and re-development until 2032.

CONCLUSION

The quality of our housing is certainly an indication of societal wellbeing. The extents to which we have preserved our natural habitats and managed our built environment play great roles in preventing a global environmental collapse and promote sustainable environmental development. As number of people living on the planet is rising every second, as the World Population Clock shows, the cultural characteristics of cities reflect both historical and contemporary ways of living. In assessing the residential conditions of Okelele – Adangba communities relative to space and time however, it is lamentable, as this research as pointed out that vital infrastructural facilities are clearly missing, occupancy ratio in homes are well above the acceptable minimum standard and income level cannot cater for the residential environment.

The massive housing shortage in Okelele-Adangba communities is made worse by the absence of adequate, habitable housing environment and the apathy of stakeholders in addressing housing-related issues. The heartrending situation of Okelele – Adangba communities require an infusion of political leadership that goes far beyond political sloganeering. It is imperative that political leadership steps up, in a determined manner to take on this cenge, by mobilizing urban planners, academic scholars, local governments and regulatory authorities. Equally important is the need for knowledge-sharing in order to be able to apply best practices in the efforts at turning around the livability fortunes of the two communities.

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