

APPRAISAL OF OCCUPANTS' SATISFACTION OF SOCIAL CONSIDERATIONS OF PUBLIC HOUSING IN ANAMBRA STATE, NIGERIA.

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ABSTRACT: *The perception of the occupants in public housing estates in Awka and Onitsha towns in Anambra State was evaluated using Adam's Equity Theory that hinges on balancing inputs and outputs. The thrust of this study lies on social amenities. The survey of the study area revealed 2,805 occupants comprising mainly housewives and 2,805 house units. The sample size, derived from Taro Yamani technique was 842 and from this figure, stratified random sampling was adopted to arrive at the obtained data. Complete responses were 797 comprising 299 occupants in Awka and 498 occupants in Onitsha. A 21-item structured questionnaire on public housing (QPH) consisting of six (6) sections was developed, which consisted of 5-point Likert rating scale ranging from 1-5 in which respondents indicated the extent of their perception of listed variables. The mid-point of 3 implied that any result significantly different from this mean value was assumed to be either positive or negative. This instrument was face and content validated. Cronbach Alpha Technique index was used for reliability test which gave a value of 0.90. A pre-test on a sample of 30 respondents of one non-studied public housing estate was conducted. The research questions were processed using percentages, means, Chi-square, Contingency Table Analysis (CTA) and One way Categorical Data Analysis of Variance (CATANOVA), while the hypotheses were tested using Z-test. The results of this study show that (1). The 51.4% of occupants responding positively to social factors of public housing in Onitsha are greater than the 33.7% responding positively to it respectively in Awka. It can then be stated from this work that in planning a housing estate such checklists as design and construction, affordability, habitability, environmental and social amenities should be included so as to satisfy the major stakeholders and the occupants.*

KEYWORDS: Occupants, satisfaction, social considerations and Public Housing.

INTRODUCTION

Housing has been universally acknowledged as the second most indispensable item in human need after food (Maslow, 1970 and Sultan Sidi, 2012). Housing has a profound impact on the health, welfare and productivity of individuals and human beings (Federal Republic Nigeria, 1975 and Gilbertson et al, 2008). Housing fulfils physiological needs through the provision of security to life and property and also protects individuals from adverse weather and climatic conditions. It fulfils psychological needs through the provision of a sense of personal space and privacy (Buddenhagen, 2003) and fulfils sociological needs by providing a gathering area and communal space for the family, which is the basic unit of any given society (Grunfeld, 1970, So and Leung, 2004 and Sultan Sidi, 2012). In many societies, it also fulfils economic needs by functioning as a centre for commercial production (Kothari, 2001 and Kothari, 2009). According to Muoghalu (1990) and Apparicio and Seguin, (2006), it is of immense psychological importance, because it is part and parcel of the description of a people's quality of life and social standing.

Research has shown that living in socially undesirable housing has adverse social and psychological effects (Fanning, 1967; Mitchell, 1997:28; Riaz, 1978; Macpherson, 1979; Muoghalu, 1989, Lawrence, 2004 and Eni, 2014). Poor housing, according to Macpherson (1979), has been held responsible for a number of social problems, including identifiable physical and mental diseases of occupants' maladjustments of different kinds, intra-family and inter-family crowding, low self-esteem of slum dwellers, barriers to economic improvement, problem of adequately educating the children. In addition, poor housing exposes children to social vices, like juvenile delinquency, broken homes, illegitimacy, alcoholism, drug abuse, prostitution, rape, high morbidity and mortality rates (Burns and Grebber, 1977:10; Muoghalu, 1988, and Biggar, 2001). According to Nubi (2008), 90% of area boys and girls are products of poor housing and homelessness.

Ezenagu (2000) insisted that health problems were created when a community grew in size and density without constructing proportionate health centres and basic infrastructure simultaneously. Urban problems arise fundamentally as a result of concentration of people in specific locations, which gives rise to different types of wants and needs such as the need for housing, which leads up to the following social services, health, as well as infrastructural services like water (pipe borne), electricity, roads and transportation, refuse disposal, drainage and so forth (Ezenagu, 2000). Muoghalu (1984a) employed survey research design to study two public housing estates in Enugu; he highlighted sources of dissatisfaction and recommended that estate design should incorporate social amenities such as ample water supply, schools and roads to mention a few. Onibokun (1973) used survey research method in Canada and his findings indicated that the nature of residential environment influences the pattern of human interaction. He recommended that social considerations were issues to be taken seriously in housing habitability. Eni, (2014) studied fourteen public housing estates in Anambra State of Nigeria. For the study he used survey research design and discovered gross insufficiency of the social contents of public housing in the State. In terms of social institutions, social services in the State, they were not worth mentioning and in most cases non-existent. The non-consideration of relevant socio-cultural parameters by agencies responsible for housing provision have been identified as one of the major reasons for the housing inadequacies and poor quality in most developing countries, Nigeria inclusive.

It will be recalled that as part of government's effort to provide suitable and adequate shelter for the citizenry, she went into public housing provision initiative (Akeju, 2007). Public housing is usually owned and operated by the government. (Some public housing projects are managed by subcontracted private agencies.) Public/Social/Welfare Housing is housing financed, constructed or allocated by the state, usually for persons in low income category. Sometimes it is referred to as affordable housing. Public housing is generally kept at affordable rent levels or financial assistance given on low-interest loans or credit (Buddenhagen, 2003 and Eni, 2014). It is indeed regrettable that in Nigeria despite the fact that the 1999 Constitution Section 16(3) (d) under "*Fundamental Objectives of State Policy*" compels the Nigerian State "to provide suitable and adequate shelter for all citizens" (Federal Republic of Government, 1999), this is observed in the breach. The attainment of such a goal is still unrealizable (Eni, 2014). Muoghalu (1986 and 1989) stressed that government was attracted to public housing because of its visibility and the money accruing from contracts and politicians can point with pride at the highly visible, public-aided housing

The philosophical basis of this study was hinged on equity and social justice in housing environment or built environment, this study therefore surveyed the ratio of contributions (inputs) and rewards/benefits/ costs (output). It is acknowledged that there are subtle and variable major factors of public housing provisioning such as design and construction, affordability, habitability environmental and social contents of public housing that affect an occupant's assessment and perception of their relationship with their public housing estates and their housing providers (Eni, 2014). The idea was to have the rewards (outcomes) directly related with the quality and quantity of the occupants contributions (inputs) in the spirit of egalitarianism in the distribution of housing resources and freedom to build. This would promise autonomy in built environment as most people do not want what architects or housing providers want. Both occupants of Awka and Onitsha public housing estates ought to be possibly rewarded alike to help the occupants realize that the organizations were just, attentive, and appreciative.

Aim and Objectives

The aim of this study was to appraise the extent of satisfaction of occupants' on social considerations of public housing in Anambra State. Flowing from the above aim, were the following specific objectives: I). To Identify and describe the public housing estates in Anambra State and II) To examine the extent of satisfaction of the occupants of the housing estates in Anambra State on the social considerations of their public housing. One null hypothesis was formulated in this study: There is no significant dependence in the mean occupants' perception on the extent of satisfaction of the occupants of the housing estates in Anambra State on the social considerations of public housing.

THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

The theoretical perspective of this study was hinged on the proposal of Adam's Equity theory because it focused on determining whether the distribution of housing resources was fair to both relational partners (Occupants in Awka and Onitsha cities). Equity Theory acknowledged that subtle and variable factors affected an employee's or an occupant's assessment and perception of their relationship with their work/ public housing estate and their employer/ housing provider.

The system composed of inputs, throughputs and outputs, which illustrated a generic framework for habitability using Adam's equity theory.

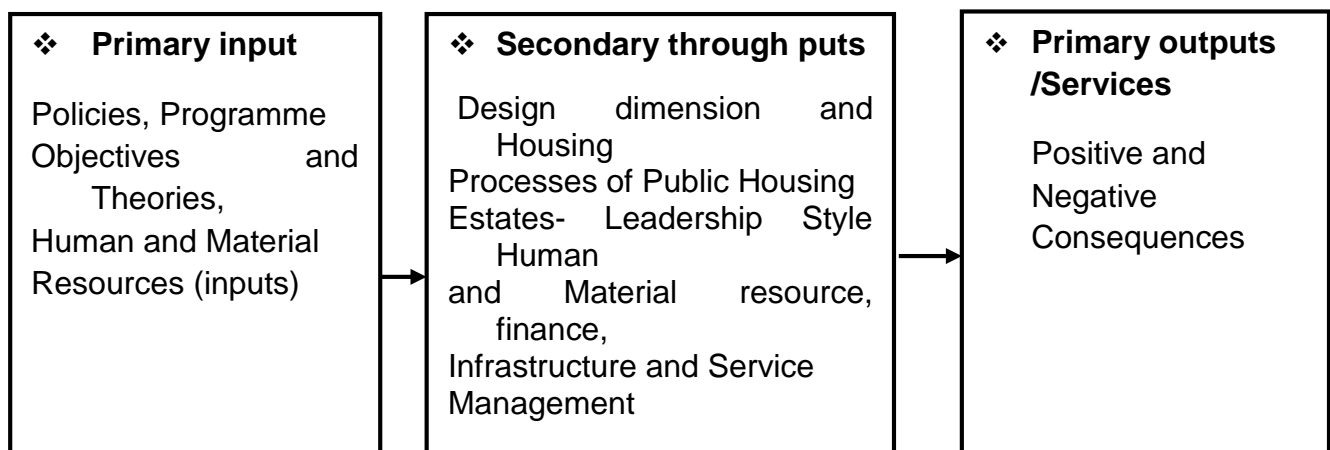


Fig. 1. Framework for Design and Construction of Public Housing

This assessed the balance or imbalance that currently exists between the public housing occupant's inputs and outputs, as follows:

Outputs typically include: rewards (such as homeownership or rental) intangibles that typically include: recognition, reputation, sense of achievement, sense of advancement/growth and tenure security, while the inputs that a participant contributes to a relationship can be either assets – entitling him/her to rewards – or liabilities - entitling him/her to costs. The entitlement to rewards or costs ascribed to each input varies depending on the relational setting (Eni, 2014). Further Outputs are defined as the positive and negative consequences that an individual perceives a participant has incurred as a consequence of his/her relationship with another. When the ratio of inputs to outcomes is close, then the occupant should have much satisfaction with their housing.

From fig. 1 above the various physical criteria, such as the design parameters and the construction quality serve as inputs into public housing. Throughputs viewed as human activities constitute processes that interplay and exacerbate the physical parameters as positive and negative consequences were not considered.

Housing delivery strategies relate to activities, events, processes or functions engaged in the transformation of housing policies, programme objectives and theories, human and material resources (inputs) into housing units and services (outputs). These include different approaches used in realizing programme objectives as well as the participants and resources involved in public housing provisioning (Eni, 2014). Participants in this milieu represent the organizational structure for public housing provision. They comprise public and private organizations involved in public housing provisioning whose actions influence the input, process, output and outcomes of public housing activities. Lusthaus et al., (1995) and Lusthaus et al., (2002) indicated that organizational performance in product and service delivery is influenced by organizational capacity and the external environment. Therefore, organizational capacity describes the ability of organizations to successfully use their skills and resources to provide goods and services and in this circumstance social content factor of public housing estates. However the internal organizational (intervening) factors that influence organizational capacity such as leadership style, human and material resource, finance, infrastructure, service management, and housing project process management central in the assessment of organizational capacity were ignored as basically the housing providers were the same for both cities(Eni, 2014).

In this regard, Equity theory proposes that individuals who perceive themselves as either under-rewarded or over-rewarded will experience distress, and that this distress leads to efforts to restore equity within the relationship. Equity is measured by comparing the **ratios** of contributions and benefits of each person within the relationship. Adam's equity theory was employed in this study because it made research findings meaningful and generalizable. It also established orderly connections between observations and facts and aided prediction and control of situations. In terms of the usage of Adam's equity theory in this study, it can be seen that as a research tool, the structure has some merits. First, it incorporated both theoretical and philosophical perspectives into the investigatory process, and thus, linked all aspects of research including problem statement, aim, objectives, literature review, methodology, data collection and analysis as well as the interpretation of findings. Secondly, the framework lent itself to the use of both quantitative and qualitative research strategies as well as multiple data

gathering instruments. Thirdly, the framework allowed for the investigation of the input, process, output and outcome of some components of public housing programmes. Where multiple public housing estates delivery is used in a programme, it assisted in assessing and comparing the outcomes of the different estates.

Study Area:

The study area was Anambra State of Nigeria. Anambra State was created on 27th August, 1991. Its name is derived from 'Oma Mbala' now known as Anambra River, a tributary of the famous River Niger.



Fig. 1 Relative position of Nigeria in the world map.

Source: Wikipedia, 2014. Free Encyclopedia.



Fig. 2: Location of Anambra State in Nigeria.

Source: Adapted from Wikipedia, the Free Encyclopaedia, 2014.

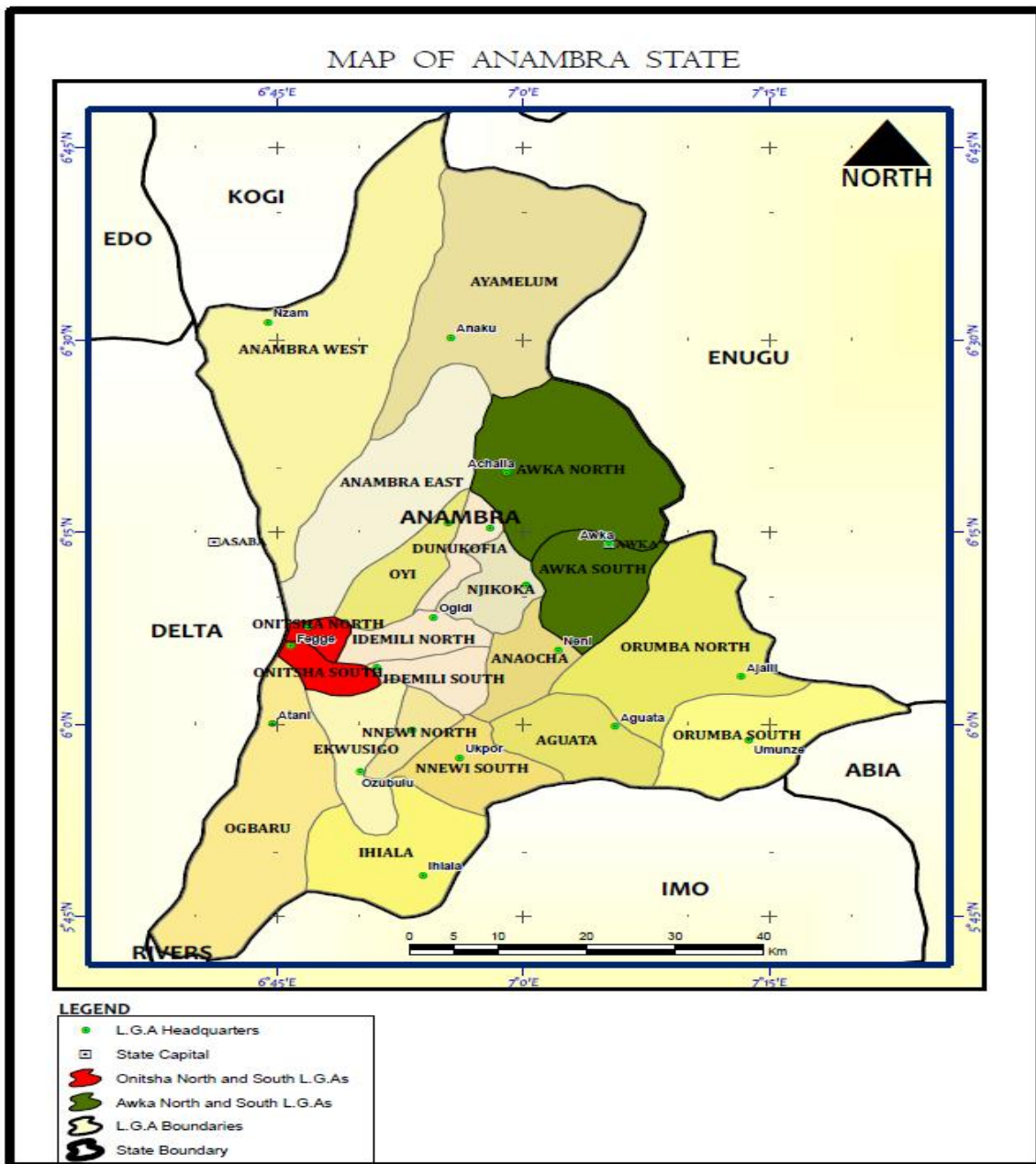


Fig. 3: Map of Anambra State Showing the Study Area.

Source: Adapted from Nwabu, (2010) Google Maps.

Awka City

Awka became the capital of Anambra state after it was carved out of the old Anambra State in 1991. Awka South had a population of 189,045 persons and Awka North 112 had 6,080 persons (National Population Commission, 2006). This figure is considered doubtful because Awka town had grown from a population of 11,243 in 1953, 40,725 in 1963, and 70,568 in 1978 to 141,262 in 1983. The surprise is that the population of Awka town as at the National Census conducted in 1991 stood at 58, 225. This is made up of 28,335 males and 29,890 females (National Population Commission, 1991). However, the extrapolation of census

figures of 1953, 1963, 1978, 1983 and 2006 put the population of Awka town at approximately 90,573 for the year ended 2007 and **375, 000** persons in 2010.

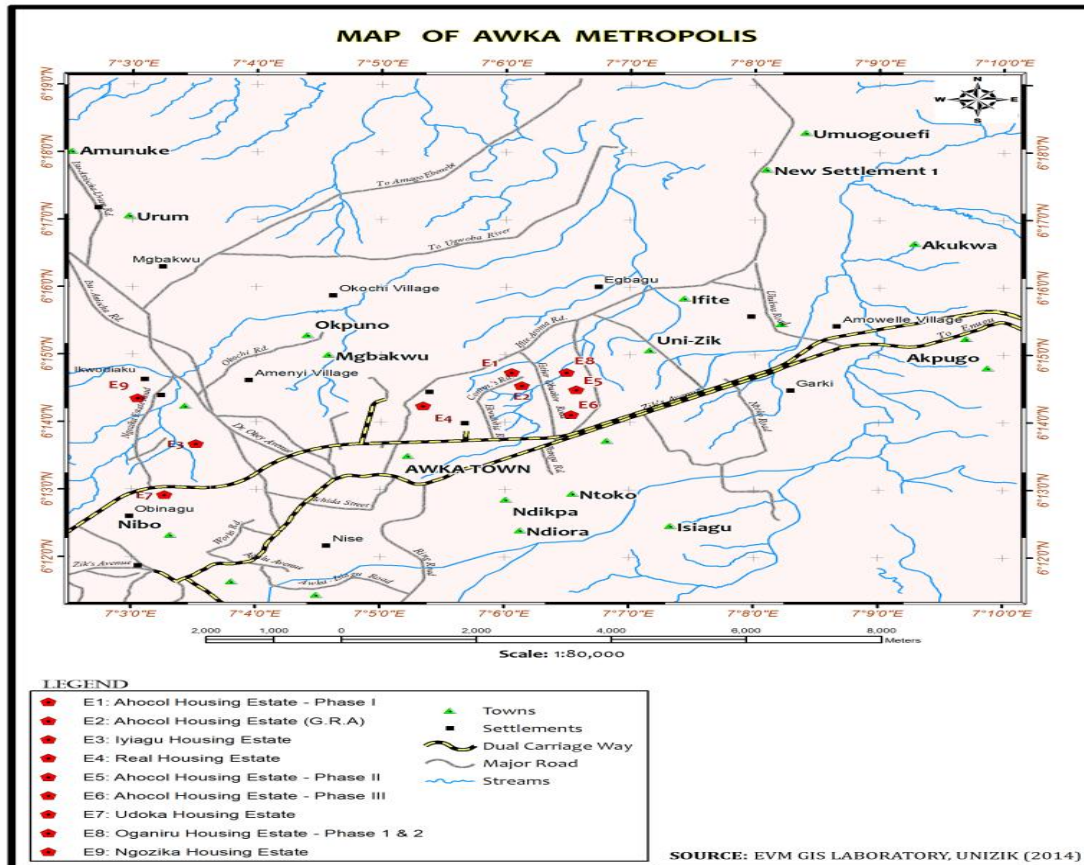


Fig. 4: Street Map of Awka Metropolis viewing Public Housing Estates.

Source: Environmental Mgt GIS Lab NAU, 2014.

Onitsha City:

Onitsha is located on the western part of the State and on the eastern bank of the River Niger and situated between Latitudes 6°.09' N and 7.03' N and Longitudes 6°.45' E and 6°.50' E with an estimated land area of 104sq.km (Onitsha Town Planning Authority, 1998). It has nine (9) residential wards or quarters such, Otu, Fegge, Okpoko, GRA, Woliwo, Odakpu, Awada, Inland Town, Omagba and its peri-urban communities(See fig. 3.6). Onitsha had an estimated population of 511,000 with a metropolitan population of 1,003,000 (Minahan, 2002). The population of Onitsha is not well reflected in the Nigerian census figures because the traders migrated to their bases, neighbouring villages and states during census events reducing the official figures. Even the population of the town 623,274 in 2006 is contested (National Population Commission, 2006). This includes the population of the legal city of Onitsha and its peri-urban communities. However, the United

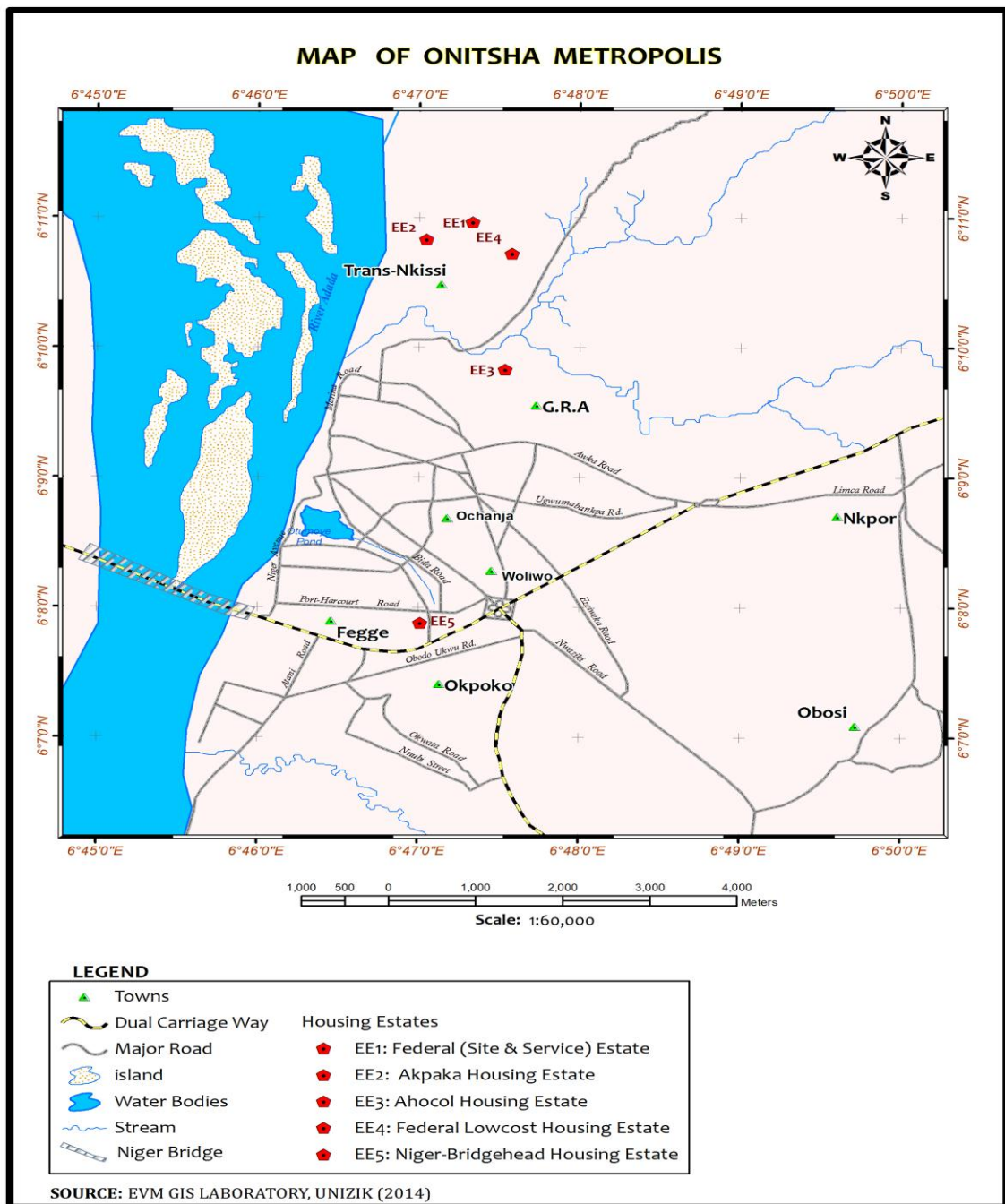


Fig. 5: Map of Onitsha Metropolis showing Public Housing Estates.

Source: EVM Laboratory, Unizik (2014)

Nations' Habitat has rated Onitsha among the world's fastest growing cities (*Daily Sun*, 2010, p 5). In terms of geology, relief and drainage, Onitsha lies on the Niger Anambra flood plain underlain by Nanka sands. The relief shows a general westward trend towards the River Niger; although local variations of relief exist in some parts of the town (Orajiaka, 1975 and Ofomata, 1975). According to Azikiwe, (1930), Igbos call it N'Idu Ado N'Idu. The city was founded in 1550. The indigenous people of Onitsha are primarily of Igbo ethnicity. Anioma people (an Igbo subgroup), and settlers from the Kingdom of Benin are believed to have settled in Onitsha in the 16th century, which was originally called Ado N'Idu (Azikiwe, 1930). It soon became

capital of an Igbo Kingdom (Nipost Postcode Map, 2009). Eze Aroli was the first Obi of Onitsha, the monarch of the city (Azikiwe, 1930). In 1884, Onitsha became part of a British protectorate. The British colonial government and Christian missionaries penetrated most of Igboland to set up their administration, schools and churches through the river port at Onitsha. The British colonial government and Christian missionaries penetrated most of Igboland to set up their administration, schools and churches through the river port at Onitsha. In the mid 1850s, Onitsha became an important trading port for the Royal Niger Company following the abolition of slavery and with the development of the steam engine when Europeans were able to move into the hinterland. Trade in palm kernels and palm oil which was going on along the coast of the Bight of Biafra since the 12th century was now moved upwards and other cash crops also boomed around this river port in the 1800s. Migrants from the hinterland of Igboland were drawn to the emerging town as did the British traders who settled there in Onitsha, and coordinated the palm oil and cash crops trade. In 1965, the River Niger Bridge was built across the Niger River to replace the ferry crossing. Onitsha is a commercial centre and a river port on the eastern bank of the Niger River in Anambra State, southeastern Nigeria (Muoghalu, 1983).

METHOD OF DATA COLLECTION

A 21-item structured questionnaire on social considerations of public housing (QSCPH) was developed. Section A had open-ended questions or unstructured responses on demographics which elicited from respondents why they chose a particular scale, it tapped preliminary / personal information on respondents' and was analysed using percentages such as gender, age, occupation, marital status, educational qualifications of respondents and section B which focused social contents of public housing estates and had multiple-choice structured 5-point Likert Scale questions of possible responses from which respondents chose as appropriate. This represented a 5-point Likert rating scale in which respondents indicated the extent to which they considered the listed variables. The mid-point was 3 and this implied that any result significantly different from this mean value was assumed to be either positive or negative. The universe of study consisted of 2,805 respondents, mainly households, and secondly, 2,805 housing units, comprising 1,032 in Awka city and 1,773 in Onitsha city. The sample size of 30% consisted of 842 housewives. Women were used as primary respondents in each household because they interact with the housing environment more than men. A stratified random sampling of these fourteen disparate public housing estates was studied. This instrument was face and content validated. Cronbach Alpha Technique index was used for reliability test which gave a value of 0.90. This technique was pre-tested on a sample of 30 respondents/residents of another housing estate. Out of a total of 842 respondents, 797 responded representing 94.7% complete responses. A stratified random sampling of these public housing estates, were studied as shown in Tables 1 and 2 below: A simple random sampling was then drawn from housing units in each stratum.

Table 1: Distribution of Public Housing Population and Sample Size in Awka

Parameters	Name of Estate									Housing Units
	Iyiagu	Real	Udoka	Ngozika	Ahocol(GRA)	Ahocol(1)	Ahocol(2)	Ahocol (3)	Oganiru	Total
Population	94	90	500	25	8	27	34	174	80	1032
Sample size	28	27	150	8	2	8	10	52	24	310
Awka town percentage	9.03%	8.70%	48.40%	2.60%	0.65%	2.60%	3.22%	16.80%	7.75%	100%
Overall percentage	3.32%	3.20%	17.81%	0.95%	0.24%	0.95%	1.88%	6.18%	2.85%	36.82%

In order to achieve the stated objectives and to test the hypotheses of the study, the hypotheses were tested at 0.05 level of significance using Chi Square because it fitted the analysis of the data available in this study for these clear reasons: 1. the data were discrete in nature and 2. The data were cross-classified by two classifying factors: Town (Awka and Onitsha) and responses (SA, AG, UN, DI and SD). The scaling was as follows; SA = Strongly Agree =5 points, AG = Agree =4 points, UN = Undecided =3 points, ID = Disagree =2 points, SD= Strongly Disagree = 1 point.

Table 2: Distribution of Public Housing Population and Sample Size in Onitsha

Parameter s	Name of Estate					Housing Units	
	Fed. Nkissi	Trans	Niger Bridge	Fed. Cost	Low Akpa ka	Ahocol(G RA)	Total
Population	1177		554	15	17	10	1773
Sample size	353		166	5	5	3	532
Onitsha town percentage	66.35%		31.20%	0.94%	0.94%	0.56%	100%
Overall Percentage	41.92%		19.71%	0.60%	0.60%	0.36%	100%

Finally appropriate statistical tools were used to completely analyse the data for this research, which met the scope and nature of data and still were able to answer the research questions. Two research questions and one null hypothesis were formulated and tested. The research questions were processed using percentages, means, chi-square, Contingency Table Analysis (CTA) and one way Categorical data analysis of variance (CATANOVA), while the hypotheses were tested by proportion of difference using Z-test.

A two –way (r- c) contingency was used. Consider the r x c table below where r = number of rows and c = number of columns.

n_{ij} is the observed counts or frequency of objects/subjects/elements/items etc cross-classified by the i th level of the first variable of classification and the j th level of the second variable of classification $n_{i.}$ ($i=1, 2, \dots, Y$) is the marginal total of all the elements classified by the first variable of classification = $n_{.j}$ is the marginal total of all the elements in the j th level of the second variable of classification . Finally $n_{..}$ is the total of all the elements in the table.

Table 3: Showing Contingency Table Analysis (CTA) Data format

Levels of First Variable of Classification	Levels of second variable of classification					
	1	2	3	...j...	C	Total ni..
1	n ₁₁	n ₁₂	n ₁₃	...n _{1j} ...	n _{1c}	n _{1.}
2	n ₂₁	n ₂₂	n ₂₃	...n _{2j} ...	n _{2c}	n _{2.}
3	n ₃₁	n ₃₂	n ₃₃	...n _{3j} ...	n _{3c}	n _{3.}
:	:	:	:	:	:	:
I	n _{i1}	n _{i2}	n _{i3}	n _y	n _{ic}	n _i
:	:	:	:	:	:	:
Y	D _{Y1}	D _{Y2}	D _{Y3}	...n _{Yj} ...	n _{Yc}	n _Y
Totals n _j	n _{.1}	n _{.2}	n _{.3}	...n _{.j} ...	n _{.c}	n _{...}

Under the number hypothesis of independence,

$$P_{ij} = P_{ij} \times P_j = \frac{n_{i.}}{n} \times \frac{n_{.j}}{n}$$

The corresponding expected frequency, e_{ij}, under the null hypothesis, H₀, is then obtained by multiplying P_{ij} by the total frequency n_{ij} that is 1.

$$e_{ij} = n p_{ij} \times n_{oo} = \left(\frac{n_{i.}}{n} \times \frac{n_{.j}}{n} \right)$$

$$\therefore e_{ij} = \frac{n_{i.} \times P_{.j}}{n}$$

If we represent observed counts (frequency) by O_{ij} such that O_{ji}= n_{ij}, other entries unaltered, the test statistics

$$\chi^2 = \sum_{ij} \frac{(O_{ij} - e_{ij})^2}{e_{ij}}$$

follows chi-square distribution with (Y - 1) (c - 1) degrees of freedom when the null hypothesis of independence is true.

If the calculated χ^2 is equal to, or greater than, the tabulated critical value then $\chi^2_{1-\alpha}$; (r - 1) (c - 1), the null hypothesis of independence is rejected at the α level of significance; otherwise the null hypothesis is accepted. Source: (Oyeka, 1996: 361-362).

Table 4: Showing CATANOVA Data Format

Factor level of Classes	Responses				
	1	2	...	J	ni
1	n ₁₁	n ₁₂	...	n _{1j}	n _i
2	n ₂₁	n ₂₂	...	n _{2j}	n ₂
.
.
.
J	n _{j1}	n _{j2}	...	n _{ij}	n _i
n _j	n _{.1}	n _{.2}	...	n _{.j}	n _{..}

Table 5: Descriptive of One way CATANOVA

SV	Df	SS	T-statistic
Row or factor level	I-1	RSS	$\chi^2 = \frac{RSS(n-1)(I-1)}{TSS}$
Within Row	n-I	WSS	
Total	n-1	TSS	

If the null hypothesis of independence is true, the test statistics follows

$\chi^2_{1-\alpha, (I-1)(J-1)}$ and the null hypothesis is rejected is $\chi^2_{cal} \leq$

χ^2_{tab}

$$RSS = \sum \frac{n_{ij}^2}{n_j} - \frac{n_{i.}^2}{n}$$

$$= C_j - C_i$$

$$TSS = n - \sum \frac{n_i^2}{n}$$

$$= n - C_i$$

$$WSS = TSS - RSS = n - C_{\bar{y}}$$

Source: (Arua *et al*, 2000; pp. 406 – 411).

Assumptions of CATANOVA

1. Independence: The level or class acts independently. That is n_{ij} and n_{2j} are statistically independent $\forall i \neq j^1$

2. Distribution : The response, n_{ij} , is approximately distributed as binomial with mean equal to n_{ij} and variance equal to $n\lambda_{ij}$ and if we consider n_{ij} to be fixed (non – random) $n_{ij} = \sum$

3. $(n_{ij}, n_{2j}, \dots, n_{ij})$ is approximately distributed as multi-nomial with parameter $(\lambda_{ij}, \lambda_{ij}, \dots, \lambda_{ij})$ and $n_{.j}$.

$$TSS = WSS + RSS$$

With respective degrees of freedom

$$n-1 = n-1 + I - 1$$

TSS (SS_t) = Total sum of square

WSS (SS_w) = sum of squares, within Group

RSS (SS_b) = Row sum of squares or sum of squares, between Group.

Test of Difference between Two Population Proportions

To test the null hypothesis, H_0 , that two population proportions λ_1 and λ_2 are equal against and of the alternatives. They are not equal, one is less than or greater than the other. λ_1 is the population proportion for group 1 and λ_2 is the population proportion for group II. If P_1 and P_2 are sample proportion for group 1 and II respectively, $P_1 - P_2$ is approximately normally distributed with $\mu_{P_1 - P_2} = \lambda_1 - \lambda_2$ and standard deviation.

$$i P_1 - P_2 = \frac{\lambda_1 \sqrt{1-\lambda_1} + \lambda_2 \sqrt{1-\lambda_2}}{n_1 \quad n_2}$$

But λ_1 and λ_2 are often unknown. Thus, they are estimated by P_1 and P_2 such that

$$i P_1 - P_2 = \frac{\sqrt{P_1(1-P_1)} + \sqrt{P_2(1-P_2)}}{n_1 \quad n_2}$$

$$\text{Therefore, } \frac{(P_1 - P_2) - (\lambda_1 - \lambda_2)}{\frac{\sqrt{P_1(1-P_1)}}{n_1} + \frac{\sqrt{P_2(1-P_2)}}{n_2}}$$

which has approximately unit normal distribution. For a one-sided test H_0 : is rejected at the α level of significance, if $|\bar{Z}| > Z_{1-\alpha}$

Data Presentation and Analyses

The analyses of the preliminary or background information yielded the following findings:

- 97.5% (777) of the respondents were females, while only 2.5% are males.
- the ages of most of the respondents was as follows ; 40.02%(319) aged 20-30 years , 7.41%(59) were between 31 and 40 years of age, 49.44%(313) were between 41-50 years , while 3.13% (25) of the respondents were above 50.
- that civil servants constituted 56.33% (449) of all respondents, while non-civil service respondents made up of traders, self-employed professionals and artisans constituted 43.67% (348).
- out of the 797 respondents, 90.58 % (722) were married, 5.27 % (42) were unmarried, while 4.15% (33) did not disclose their marital status.
- 3.13 % (25) of the respondents had School Certificate, 9.41 % (75) had National Diploma, 57.34% (457) possessed HND/ B. Sc. / B.A, 26.86 % (214) had M. Sc. / M. A. / Post Graduate Diploma, while only 3.26 % (26) had Ph. D degrees.

In order to answer the research questions in Section B the following findings were obtained;

1. To identify and describe public housing in Awka and Onitsha cities.

A total of fourteen public housing estates were identified. Awka has nine while Onitsha boasts of five major public housing estates; the Niger Bridge-Head Housing Estate along Port Harcourt Road, Fegge owned by Anambra State and the Federal (Sites and Services) Housing Estate at Trans-Nkissi popularly known as “3-3”. There is also Akpaka Housing Estate, Onitsha, State-owned housing at 3-3 spontaneously and linearly developing along Abatete Drive and Presidential Drive beside the Federal (Sites and Services) Housing Estate. Federal Low Cost Housing Estate, Trans- Nkissi, Onitsha built in 1990 and Ahocol Housing Estate Niger Drive GRA, Onitsha. It must be recalled that Awka and Onitsha cities are selected for this study out of the seven urban areas recognized by the Anambra State Government namely; Awka, Onitsha, Nnewi, Ihiala, Ekwulobia, Otuocha and Ogidi. Only these two cities (Onitsha and Awka) have developed public housing estates.

Below is the enumeration of public housing estates in the state with the dates of commencement:

Table 6: Showing Public Housing Estates in Awka and Onitsha Cities

AWKA CITY		
S/No	Names and Descriptions of Studied Public Housing Estates	Year of Establishment
1.	AHOCOL (Inner City Layout) Housing Estate (otherwise called the GRA), Amaenyi, Awka.	1990
2.	AHOCOL (Think Home) Housing Estate Phase 1 (or Ahocol 1), Awka	(1991)
3.	Iyiagu Housing Estate, Awka	1992
4.	Real Housing Estate, Awka	1992
5.	AHOCOL (Think Home) Housing Estate Phase 1 Extension (or Ahocol 2), Awka.	1993
6.	AHOCOL (Think Home) Housing Estate Phase 2 (or Ahocol 3), Awka	1995-2014
7.	Udoka Housing Estate, Obinagu, Awka	1996
8.	Oganiru Housing Estate Phases 1&2 Awka	2005
9.	Ngozika Housing Estate, Ikwodiaku, Awka	2006
ONITSHA CITY		
S/No	Names and Descriptions of Studied Public Housing Estates	Year of Establishment
10.	Niger Bridge-head Housing Estate, Fegge, Onitsha	1980.
11.	Federal Low Cost Housing Estate, Trans- Nkissi Onitsha	1985
12.	AHOCOL Housing Estate, Niger Drive, GRA, Onitsha	1990
13.	. Federal (Site and Services) Housing Estate, Trans-Nkissi (or 33), Onitsha	1992.
14.	Akpaka Housing Estate, Onitsha	2008

The research questions on the following; proximity to hospitals, worship centres (churches & mosques), fire-fighting stations, police posts in the estate, vigilante services provided, security of tenure, household impression on quality of accommodation and adequacy of recreational facilities.

Examination of the Extent of Occupants' Housing Satisfaction in Terms Of Social Considerations of Public Housing and Respondents Location.

To determine the perception of respondents on social considerations of public housing the Chi-square test was performed.

Table 7: Respondents' Opinion on Extent of Housing Satisfaction in Terms of Social Considerations of Public Housing and Respondents' Location.

Serial No.	Responses	χ^2 cal	D F	P-Value	Level of Significance(α)	Decision
13.	Proximity to Hospitals	60.772	4	0.00	0.05	Reject
14.	Proximity to Markets	166.311	4	0.00	0.05	Reject
15.	Proximity to Worship Centres (Churches & Mosques)	132.054	4	0.00	0.05	Reject
16.	Nearness to Fire-Fighting Stations	186.685	4	0.00	0.05	Reject
17.	Proximity to Police Posts in the Estate	104.392	4	0.00	0.05	Reject
18.	Vigilante Services Provided	280.274	4	0.00	0.05	Reject
19.	Security of Tenure	24.847	4	0.00	0.05	Reject
20.	Household Impression on Quality of Accommodation	424.928	4	0.00	0.05	Reject
21.	Adequate Recreational Facilities	30.112	4	0.00	0.05	Reject

Significant at 0.05 level of confidence

Table 7 showed that the null hypothesis H_0 was rejected because there is relationship between location and response. This is because P-value was less than α at 4 df and 0.05 level of significance (α) thus the conclusion was that there is difference in their response pattern, either Awka or Onitsha occupants responded more positively or negatively to social contents of public housing. As chi-square does not show the direction of the difference, analyses of mean of occupants' responses on social contents of public housing were analysed using CATANOVA in order to show direction.

Breakdown of Average Response of Occupants on the Extent of Occupants' Housing Satisfaction in Terms of Social Considerations of Public Housing

The data on social factors were obtained by averaging the data on question 13 to 21

Table 8: Occupants' Observation on the Extent of Occupants' Housing Satisfaction in Terms Of Social Considerations of Public Housing and Respondents' Location

Location	SA	AG	UN	ID	SD	Total
Awka	33	68	40	84	74	299
Onitsha	90	186	0	97	125	498
Total	123	254	40	181	199	797

$$TSS = 373.656$$

$$RSS = 42.774$$

$$WSS = 330.882$$

$$\chi^2_{cal} = 362.655$$

$$\chi^2_{0.95,4} = 9.488$$

Ho: The null hypothesis of independence between occupants' location and their acceptance of social factors in their estate was rejected because χ^2_{cal} (362.655) was greater than $\chi^2_{0.95,4}$ (9.488).

Test of Difference between Proportions

Data on social factors were obtained by identifying and classifying positive and negative responses with their proportions, while neutral response was treated as neutral. Positive responses were SA and AH; neutral response was UN and negative responses were ID and SD.

Table 9: Test of Difference between Proportions on Social Factors

Location/Response	Positive	Neutral	Negative	Total
Awka	101	40	158	299
Proportion (Awka)	0.3378	0.1338	0.5284	1
Onitsha	276	0	222	498
Proportion (Onitsha)	0.5148	0.0704	0.4148	1

Significant at 0.05 level of confidence

$$H_0: \lambda_1 \leq \lambda_2$$

$$H_1: \lambda_1 > \lambda_2$$

$$|Z_{cal}| = 6.135$$

$$Z_{0.005} = 1.64$$

Ho: The hypothesis that occupants in Onitsha were at most likely to respond positively as occupants in Awka as a result of $|Z_{cal}|$ (6.135) being greater than $Z_{0.005}$ (1.64) was accepted and it was concluded that occupants in Onitsha were more positive in their response on social factors than occupants in Awka. We therefore, inferred that social factors in Onitsha public housing estates were better than those in Awka. This is not surprising because Awka as the capital city is still witnessing influx of more social institutions and social infrastructure than Onitsha. Awka became the capital city on 27th August, 1991 and had continued to witness influx of more social institutions and social infrastructure while Onitsha became part of a British protectorate in 1844 and has well developed social institutions unlike Awka which is nascent urban centre.

DISCUSSION

From the respondents' comments, the respondents were of the view that there were no available government promoted and supported social facilities such as hospitals, markets, fire-fighting stations, police posts and adequate recreational facilities in the most estates but self-provided or self-procured. In conclusion, the respondents were not satisfied with social amenities in the various estates. The consequences of lack of these essential social amenities have far reaching effects.

Concerning security, a high degree of dissatisfaction has been associated with security provision; cases of house burglary, kidnapping, car snatching are very common in most of the public housing estates. The poor police presence and protection have resulted in occupants installing burglary proofs on doors, windows and on every fenestration in the building. Occupants also employ the use of vigilante services to supplement and complement police efforts at policing them. Vigilantes dressed in menacing attire are common sight at Niger Bridge-Head, Trans-Nkissi housing estates in Onitsha and Udoka, Oganiru and some of the Ahocol housing estates in Awka

In terms of security of tenure, there is high level of security of tenure for the homeowners because of their permanent ownership status and tenants have also residents' associations to organise security and manage relationships with their landlords and government agencies that provide services to them. The tenants in Real Estate housing Awka are in court with Anambra State Housing Development Authority-ASHDC for attempting to evict them in spite of their owner- occupier status.

Pertaining to quality of accommodation, the effect of reducing space in public housing in order to maximise profit by housing providers has been mentioned. It breeds both physical overcrowding in net density terms and psychological overcrowding in gross or overall terms. These are very much evident in the Federal low cost housing, Trans-Nkissi in Onitsha, Iyiagu, Real Estate, and Ahocol 1, and 2 in Awka. Overcrowding poses severe hazard to health and has been linked to severe psychological disorder. The effects of crowding include violation of privacy, personal space and territoriality. Crowding breaches privacy in the regulation of inter-personal interaction through a bounding control process. The regulation of contact with the external environment involves the use of personal space and territoriality along with verbal and non-verbal control mechanism. With regards to provision of recreational facilities, there was a shortage of recreation space and playgrounds for children, while areas previously indicated on the plan for this land use have been built on, which disadvantaged children in socializing platform and violated original density prescriptions, resulting in much external over-crowding, a diminution of family unit privacy and encouraging household conflict.

From the findings of this study and in relation to research question two, the social considerations of public housing were unmet to a reasonable extent and the various respondents seem to accept this fact. In spite the fact that occupants in Onitsha were more positive in their response on social factors than occupants in Awka. We therefore concluded that social factors in Onitsha public housing estates were better than those in Awka. Results of this research have implications for the re-planning and reorganizing the agencies and public housing providers such as ASHDC and Anambra Homeownership Company Limited AHOCOL in the hope that

such a checklist would provide planners with requisite information upon which sustained improvement could be effected in public housing in Nigeria to the satisfaction of occupants.

RECOMMENDATION

Based on the findings of this study the following recommendations were made;

1. That Anambra State government should increase the speed of providing more social facilities in Awka to match that of Onitsha.
2. Considering the fact that the consequences of lack of these essential social amenities have far reaching effects, Anambra State government should provide and build more social facilities within these public housing estates.
3. More public housing estates should be developed in other urban centres of the state with social facilities within easy reach.

REFERENCES

- Akeju, A. A. (2007). *Challenges to Providing Affordable Housing in Nigeria.*, Being a paper presented at the 2nd Emerging Urban African International Conference on Housing Finance in Nigeria held at the Shehu Yar'adua Center Abuja, October 17-19, 2007.
- Apparicio, P. and Seguin, A. (2006) *Measuring the Accessibility of Services and Facilities for Residents of Public Housing in Montreal.* Urban Studies 43(1), 187-211.
- Arua, A.I., Chukwu, F.I., Chigbu, P.E.I and Ezekwem, C.C. (2000). *Advanced Statistics for Higher Education*, 406 – 411. Nsukka: The Academic Publishers.
- Azikiwe, N. (October 1930). *Fragments of Onitsha History.* The Journal of Negro History, (15), 4: 474.
- Biggar, H. (2001). *Homeless Children and Education: An Evaluation of the Stewart B. McKinney Homeless Assistance Act.* Children and Youth Services Review, 23 (12):941-969.
- Buddenhagen, C. (2003). *The Right to Housing*, Human Education Association.
- Burns, L and Grebber, L (1977). *The Housing of Nation: Analysis in a Comparative Framework.* London: Macmillan.
- Daily Sun, (Monday, 2nd August, 2010). *UN Rates Onitsha among World's Fastest Growing Cities.* : 6.
- Eni, C. M. (2014). *Evaluation of Occupants' Perception of Public Housing Estates in Awka and Onitsha, Anambra State, Nigeria* An Unpublished Dissertation. Department of Environmental Management, Faculty of Environmental Sciences, Nnamdi Azikiwe University, Awka. Anambra State, Nigeria.
- Ezenagu, V.C (2000). *Fundamentals of Housing.* Awka: Fountain Publishers.
- Fanning D. N. (1967). *Families in Flats.* *British Medical Journal* (18):382-386.
- Federal Republic of Nigeria (1975). *Third National Development Plan 1975-1980*, 308. Lagos: Government Printers. Federal Republic of Government, 1999.
- Federal Republic of Nigeria (1991). *National Housing Policy: Federal Ministry of Work and Housing.*
- Gilbertson J, Green G, Ormandy D, Thomson H (2008). *Good housing and good health? A review and recommendations for housing and health practitioners.* A Sector Study Housing Corporation. UK. Available at <http://www.health housing 060816144328.pdf>. [Accessed, March, 2009].
- Grunfeld, F E: (1970). *Habitat and Habitation.* *M Samson N. V. A W. Sijthoff.*

- Kothari, M. (2001) The Right to Adequate Housing is a Human Right <http://www.un.org/chronide/2001/issue/0101p.36.htm> > 25 February, 2005. Retrieved 2007-10-10.
- Kothari, M. (2007). *Achieving the Mdgs: Slum Upgrading and Affordable Housing*. Vancouver: UNHCHR.
- Lawrence, R. J. (2004). *Housing, health and well-being: Moving forward*. *Reviews on Environmental Health* (19) 3-4: 161-176.
- Lusthaus, C., Anderson, G., and Murphy, E. (1995). *Institutional Assessment: A framework for Strengthening Organizational Capacity for IDRC's Research Partners*. International Development Research Centre, Canada
- Lusthaus, C., Marie-Helene, A., Anderson, G., Carden, F., & Montalvin, G.P. (2002) *Organizational Assessment: A Framework for Improving Performance*. International Development Research Centre (IDRC), Canada.
- Macpherson, R. (1979). *Housing and Health: Some Basic principles*. In (eds) H.S. Murrison and J.P. Lea, *Housing in Third World Countries: Perspectives on Policy and Practice*. : 67-73, London: Macmillan.
- Maslow, A. H. (1970). *Motivation and Personality*. New York; Harper and Row.
- Minahan, J. (2002). *Encyclopaedia of the Stateless Nations*. :762: S-Z. Greenwood Publishing Group.
- Mitchell, B. (1997) *Resources and Environmental Management*: 28, London; Longman.
- Muoghalu L.N, (1986). *The Role of Political Factors and Bureaucratic Decision Making in low Income Housing Deprivation in Nigeria Cities*, AnVIL: Awka Journal of Educational Studies. (2): 20-32.
- Muoghalu, L. N. (1983) *Public Bureaucracy and Environmental Deterioration: an Example of Onitsha*". A Paper presented at the National conference on Development and Environment organized by NISER Ibadan, Jan 17-19.
- Muoghalu, L. N. (1984). *Subjective Indices of Housing Satisfaction as Social Indicators for Planning Public Housing in Nigeria*. *Social Indicators Research*. 15: 145-164. Kluwer Academic Publishers.
- Muoghalu, L. N. (1989). *Assessing the Magnitude of Housing and Environmental Maintenance Needs in a traditional Nigerian City of Benin: A Methodological Perspective*. A paper Presented at the first National Conference on Maintenance Management and Technology Organized by Faculty of Environmental Sciences, ASUTECH, Enugu.
- Muoghalu, L. N. (1990.) *Urban Population Composition and Dynamics and Government Housing Response in Nigeria: An Appraisal* in I.C. Ugwu (ed) *Shelter and Urbanization: 13-29*. Berlin: Berlin University Press.
- National Population Census of Nigeria, 1991, Federal Republic of Nigeria.
- National Population Census of Nigeria, 2006, Federal Republic of Nigeria.
- Nipost Postcode Map, 2009
- Nubi, T. O. (2008). *Housing Cooperatives as Tools for Affordable Housing: Yesterday, Today and Tomorrow*. Being a paper presented at a 3- Day National Workshop on Availability and Affordability of Housing in Nigeria organised by the Association of Housing Corporations (AHCN) IN Collaboration with the Anambra State Housing Development Corporation (ASHDC) on the 21st May, 2008 .
- Ofomata, G.E.K (1975). *Nigeria in Maps Eastern States, Benin City*, pp 33-37. Ethiope: Publishing House.
- Onibokun, A.G (1973). *Environmental Issues in Housing Habitability Environment and Planning* (5):461-476.

- Onitsha Town Planning Authority, (1998). The Land Area of Onitsha, Unpublished Newsletter.
- Orajiaka, S.O. (1975). *Geology* in Ofomata, G. E. K . Ed. Nigeria in Maps Eastern States, Benin City, pp 33-37. Ethiopia: Publishing House.
- Oyeka, A.O. (1990). An Introduction to Applied Statistical Methods, 361-362, 7th Edition. Enugu: Nobern Avocation Publishing Company.
- Riaz, H. (1978). *Singapore Children in High-rise Flats*; Ekistics (272):374-375
- So, A. T. P. and Leung, A. Y. T. (2004) *Survey of Attitudes towards Buildings in Three Chinese Cities: Hong Kong, Shanghai and Taipei*. Facilities 22(3/4): 100-108.
- Sultan- Sidi, N. S. (2010). *Quality Affordable Housing: A Theoretical Framework for Planning and Design of Quality* . Journal of Techno- Universiti Tun Hussein Onn, Malaysia.
- UN Habitat (2009). *Structure Plan for Onitsha and Satellite Towns* UN-HABITAT. <http://www.unhabitat.org/pmss/getElectronicVersion.aspx?nr=2687&alt=1> retrieved 28:032014.
- Wikipedia, (2014). (Free, Encyclopedia).