

ESTABLISHMENT OF STRATEGIES FOR IMPROVING AFFORDABLE AND HABITABLE PUBLIC HOUSING PROVISION IN ANAMBRA STATE, NIGERIA**Eni, Chikadibia Michael (Arc., Dr.)**

Department of Architectural-Technology, Federal Polytechnic, Oko. P.M.B. 021, Aguata, Anambra State, Nigeria

ABSTRACT: *This view of this study was based on the establishment of strategies for improving affordable and habitable public housing provision in Anambra state, Nigeria. This study utilized a survey research design in the collection of data. The universe of study consisted of 2,805 occupants comprising mainly households, and 2,805 house units, comprising 1,032 in Awka city and 1,773 in Onitsha city. The sample size of 30% (842) was used as derived from Taro Yamani technique. A stratified random sampling of these disparate public housing estates based on their proportion to population was studied. A 16-item structured questionnaire on establishment of strategies for improving affordable and habitable public housing provision in Anambra state, Nigeria (QSAHPH) was developed. This instrument was face and content validated. Cronbach Alpha Technique index was used for reliability test which gave a value of 0.90. The data were obtained by pulling all positive responses for each group of occupants (Awka or Onitsha) as positive responses and as negative responses and their proportions obtained and filled below pooled observations (counts). Undecided responses were left as neutral. Complete responses were 797 comprising 299 occupants in Awka and 498 occupants in Onitsha. The research questions were processed using percentages. The major finding of the study was (1). Hence, the inference is that occupants in Awka perceived this dimension of public housing more positively than occupants in Onitsha. This difference between the two cities needs to be addressed in order to validate the Adam's equity requirements in the built environment.*

KEYWORDS: Establishment, Strategies, public housing, Nigeria

INTRODUCTION

The United Nations estimates that there are over 100 million homeless people who are forced to live with no shelter at all (Buddenhagen, 2003) and over 1 billion people worldwide who are inadequately housed (UNCHR, 2001, Buddenhagen, 2003 and Cronley, 2010). A UN-Habitat (2009) estimate had indicated that more than one billion of the world's city residents live in low quality housing, mostly in the sprawling slums and squatter settlements in developing nations. In Lagos, many homeless people live "as homes" under public bridges and flyovers on the high ways (Ehingbeti 2008). More recent United Nations study put the overall Nigerian housing deficit at 17 million units while Nigeria National Bureau of Statistics estimated between 12 and 14 million housing units. As of 2009, there was a deficit of 16 million housing units in Nigerian urban centres (Kolawale, 2009).

The above statistics are evidence of the difficulty governments have in guaranteeing access to housing for their citizens. However, as part of government's effort to provide suitable and adequate shelter for the citizenry, she went into public housing provision initiative (Akeju, 2007 and Obeng-Odoom, 2009). Public housing is usually owned and operated by the government although some public housing projects are managed by subcontracted private

agencies. Public Housing is housing financed, constructed and 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 Sengupta and Sharma, 2008). 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). The attainment of such a goal is still unrealizable.

In many states of the Federation different public housing schemes abound ranging from low-cost, middle-class and upper-class housing projects. These were meant to cushion the effect of dearth of housing (Obeng-Odoom, 2009 and Eni, 2014). However, Muoghalu (1986 and 1989) stressed that government is 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 projects as a measure of their concern for people and their social accomplishment.

Review of related Literature on Strategies to improve Public Housing in Nigeria.

Ademiluyi (2010) revealed that Nigeria’s impressive housing policies and programs are rarely implemented or are haphazardly implemented. The housing delivery strategy in the country is, therefore, a classical example of politics of many words, but little action. According to Onibukun, (1982), the past efforts of (federal) government show a wide gap between the target set and level of achievement. There is some disparity between the supply of housing stock and a quantity “needed” usually typified as numeric or quantitative deficits (Muoghalu, 1998 and Madubuko, 2002). There is politicization which leads to low income housing being allocated to the rich.

The World Bank argued for a new approach to urban development which incorporated various forms of aided self-help (World Bank, 1972, Bala and Bustani, undated). The two ‘packages’ which received the most support were sites and services scheme, and upgrading schemes. Essentially, the first provided low-income beneficiaries with serviced plots including tenure security and help to build their own houses. The second approach helped house-owners in existing squatter areas obtain tenure to their land, and to improve their dwellings. Many of these sites exist all over the country essentially provided by the government. In spite of the fact that they may help to improve tenure security, the programme is capital-intensive in nature and the initial target population, low-income, usually do not benefit from them. Aluko (2002) opined that the cost attached to each plot is usually beyond the reach of the urban poor. Ademiluyi (2010) suggested that urgent steps need to be taken to bring about the much needed improvement and transformation in the Nigerian housing sector. It also advised the government to back up its many lofty initiatives and efforts with necessary political will and commitment, using cooperatives, development agents, and partnerships through Public Private Sector Participation (PPP). In terms of strategies to improve public housing in Nigeria, some of the problems have been identified such as there is little or no access to housing fund. Poor housing delivery has been attributed to inadequate mechanisms and systems for land allocation, funding, mortgage institutions and infrastructure. Mortgage facilities for residential housing development are not easy to come by. To this end, the issue of providing, improving and sustaining design and construction contents of public housing became a crucial issue. It was the above scenario that led to the articulation of the problem of this research.

Problem of this study.

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 with low income. Sometimes it is referred to as affordable housing. Public housing is generally kept at affordable rent levels or financial assistance with low-interest loans or credit (Buddenhagen, 2003). The public housing estates studied were either owned by the Federal government or Anambra State government. Low income households face a housing crisis, if adequate housing is unaffordable. Evaluation was therefore imperative for ensuring a steady supply of affordable and habitable public housing estates in Awka and Onitsha Urban Areas of Anambra State. Therefore evaluation can be seen as the assessment of how a program achieves its intended goals (Cochran and Malone, 1995). While other stages of policy process look towards a future goal to be achieved; evaluation looks backward in order to assess the operation of a program with a view to providing feedback. This criticism permits modifications in the policy to improve its efficiency. Evaluation also pinpoints unintended effects of a policy and allows fine-tuning in the implementation process to avoid those that are unwanted. The main problem of this study is establishment of strategies for improving affordable and habitable public housing provision in Anambra state, Nigeria.

Frame of reference

To tackle the assessment of this public housing provisioning factor, a frame of reference that identified it were established in form of an aim and objectives. The specific objectives were to:

- I). Identify and describe the public housing estates in Awka and Onitsha cities,
- II). establish strategies for improving affordable and habitable public housing provision in Anambra state, Nigeria.

Research Questions

This study sought answers to the following research questions: What were the strategies for achieving production of improved habitable and affordable public housing in Awka and Onitsha Urban Areas of Anambra State?

Method of Data Presentation: The data obtained from the study were presented in form of tables, figures, pictures, percentages and chart but were analyzed using weighted means and t-test statistics.

(1) Percentage of the items in sections B, C, D, and E, of the questionnaire were used to answer the research questions contained in the study.

Formula for the use of percentages

$$\text{Percentages (\%)} = \frac{F}{N} \times 100$$

Where $F = \frac{\text{Total number of frequencies}}{\text{Total number of Respondents}} \times 100$

Decision rule: - Any item was regarded as Agree if it has a percentage score of 50% and above. Any item with less than 50% was regarded as Disagree.

(2) Some data collected from respondents were analyzed using weighted mean and t-test statistics

Study Area: The study area, Awka and Onitsha cities are located in 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, the Free Encyclopedia, 2014.



Scale 1:50,000.

Fig. 2. Location of Anambra State in Nigeria.

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

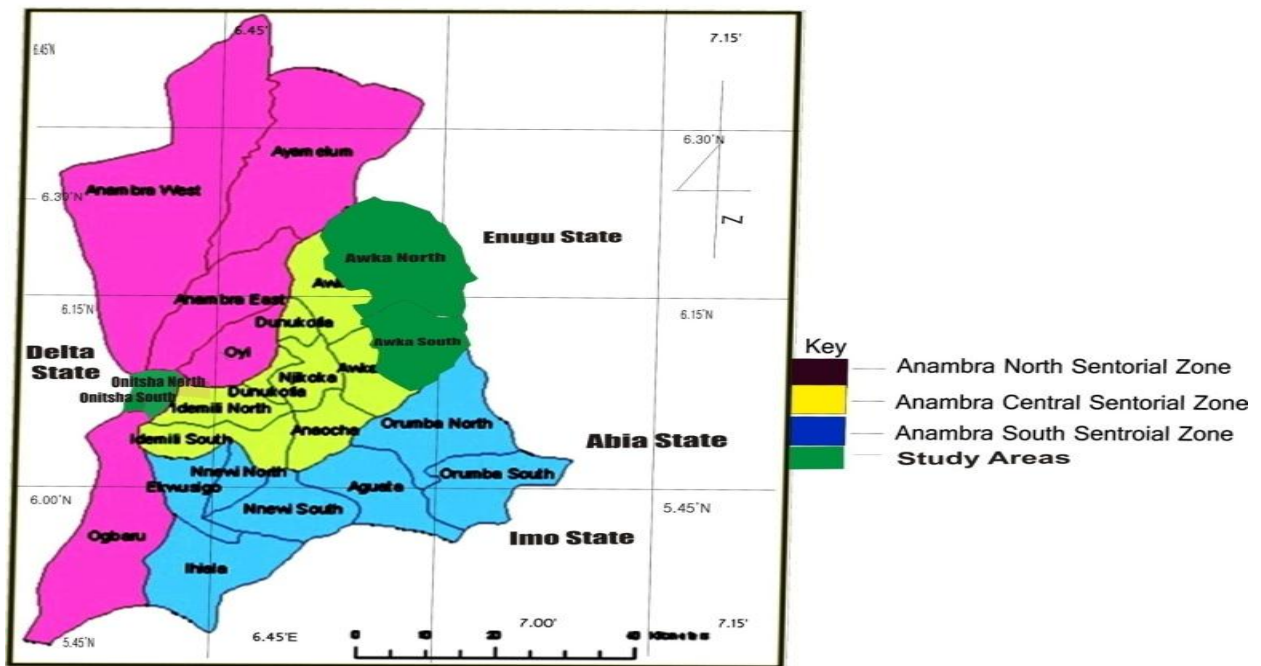


Fig. 3. Map of Anambra State Showing the Study Area.
Source: Adapted from Nwabu, (2010) Google Maps.

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.

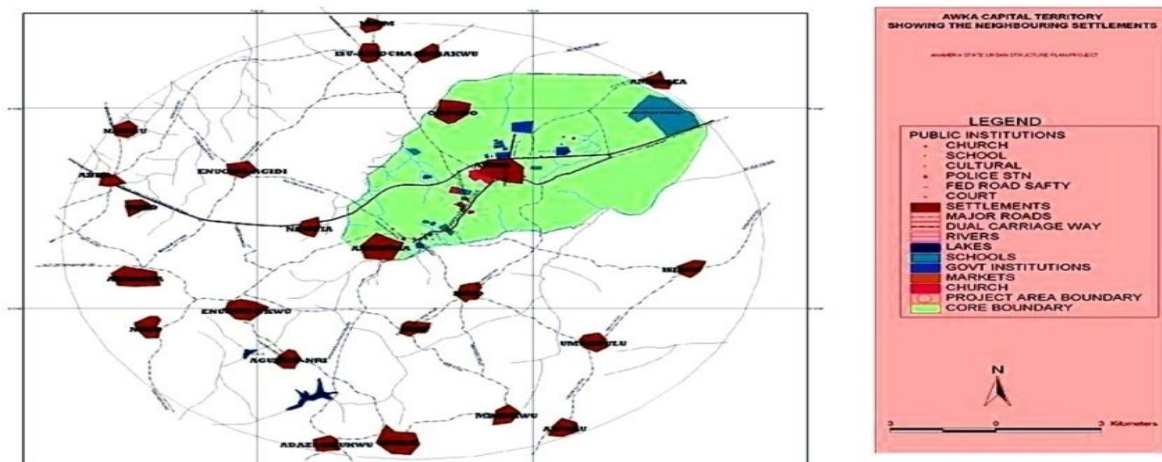


Fig. 4 Awka Capital Territory Showing Neighbouring Settlements.
Source: Adapted from Google Maps/ UN Habitat, Awka p.22.

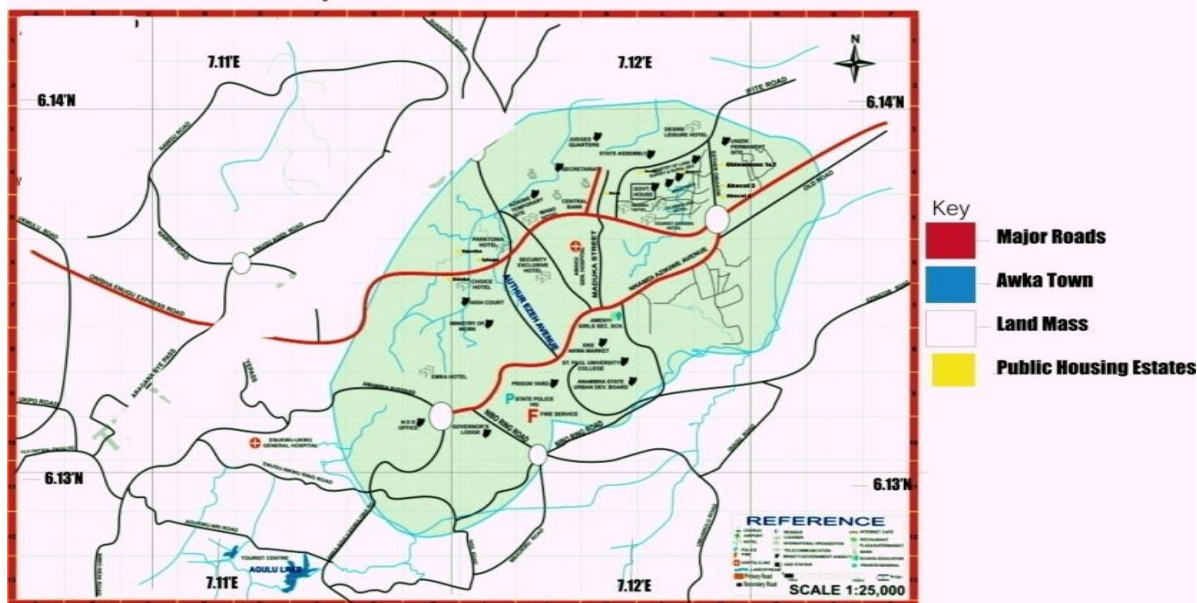


Fig 5. Street Map of Awka Showing Public Housing Estates.

Source: Adapted from Google Maps/ UN Habitat, Awka p.22.

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 $6^{\circ}.09' N$ and $7^{\circ}.03' N$ and Longitudes $6^{\circ}.45' E$ and $6^{\circ}.50' E$ 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 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.

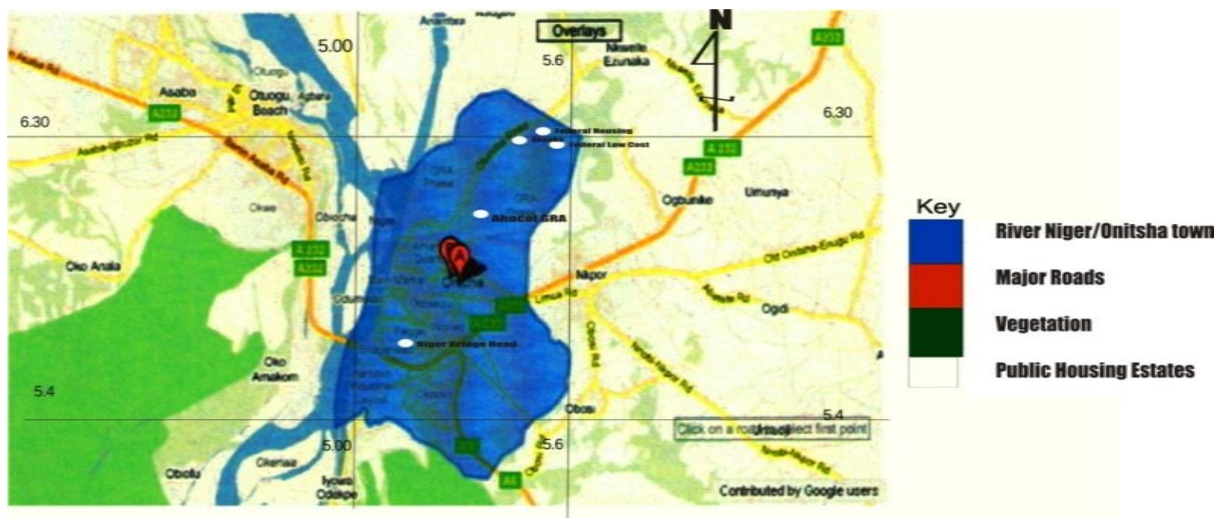


Fig. 6 Map of Onitsha City Showing Locations of the Public housing Estates

Source: Adapted from Google Maps / UN Habitat, Onitsha, pp. 20C and 20D

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).

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 16-item structured questionnaire on strategies for improving affordable and habitable public housing (QSAHPH) 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 on strategies for improving affordable and habitable public housing. The universe of study consisted of 2,805 respondents comprising mainly households, and secondly, 2,805 house units, comprising 1,032 in Awka town and 1,773 in Onitsha town. 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. A simple random sampling was then drawn from housing units in each stratum.

Method of Data Collection

The population or the universe of the study consisted of the number of housing units in all the public housing estates in Awka and Onitsha by type namely; Iyiagu 94, Real 90, Udoka 500, Ngozika 25, Ahocol (GRA) 8, Ahocol (1) 27, Ahocol (2) 34, Ahocol (3) 174 and Oganiru 80 making a total of 1032 housing units in Awka and Trans Nkissi Federal Housing 1177, Niger Bridge Housing 554, Federal Low Cost Housing 15, Akpaka Housing 17, and Ahocol (GRA) 10 making a total of 1773 housing units in Onitsha as shown on Tables 4.1 and 4.2.

Table: 4.1: Distribution of Public Housing Estates in Awka by House Unit

House types	Iyiagu	Real Estate	Udoka	Ngozik a	Ahocol GRA	Ahocol 1	Ahocol 2	Ahocol 3	Oganiru 1&2	Total Population
Proposed units	117	117	540	500	8	27	34	200	200	1743
Actual No built	94	90	500	25	8	27	34	174	80	1032
4- bedroom bungalow	Nil	15	Nil	20	4	7	7	Nil	18	71
3- bedroom bungalow	20	26	Nil	5	4	7	6	Nil	17	85
2-bedroom bungalow	50	12	Nil	Nil	Nil	7	4	Nil	Nil	73
1-bedroom	24	10	Nil	Nil	Nil	Nil	Nil	Nil	Nil	34
3-bedroom Executive bungalow	Nil	11	Nil	Nil	Nil	Nil	Nil	15	Nil	26
2-B/r semi detached	Nil	16	Nil	Nil	Nil	Nil	Nil	Nil	Nil	16
Duplexes	Nil	Nil	182	Nil	Nil	6	Nil	10	10	208
Flats	Nil	Nil	278	Nil	Nil	Nil	Nil	15	Nil	293
Boys quarters	Nil	Nil	40	Nil	Nil	Nil	17	87	20	164
Mansion	Nil	Nil	Nil	Nil	Nil	Nil	Nil	47	15	62
Total =1032	94	90	500	25	8	27	34	174	80	1032

Table 2: Distribution of Public Housing Estates in Onitsha by House Type

House types	Fed (sites&services) Housing	Niger Bridgehead	Fed.Low-Cost Housing	Akpaka housing	Ahocol housing, GRA	Total
Proposed units	1569	850	N/A	N/A	10	2429
Actual No built	1177	554	15	17	10	1773
4-bedroom bungalow	110	Nil	Nil	Nil	10	120
3-bedroom bungalow	Nil	20	Nil	Nil	Nil	20
2-bedroom bungalow	Nil	Nil	10	Nil	Nil	10
1-bedroom bungalow	Nil	Nil	5	Nil	Nil	5
3-bedroom executive bungalow	Nil	Nil	Nil	Nil	Nil	Nil
2-B/r semi detached	Nil	Nil	Nil	Nil	Nil	Nil
Duplexes	344	514	Nil	17	Nil	875
Flats	552	20	Nil	Nil	Nil	572
Boys quarters	171	Nil	Nil	Nil	Nil	171
Total =1773	1177	554	15	17	10	1773

Altogether, there was a total of 2,805 housing units in Awka and Onitsha public housing estates. Secondly, occupants of public housing estates in the state drawn from the 2,805

housing units in Awka and Onitsha, professionals drawn from private developers (PEDs), numbering fifty (50) and available staff of Anambra State Housing Development Corporation (ASHDC) numbering fifty (50) and non-professionals regarded as Non Estate Occupants (NEOs) numbering fifty (50) were included in the study. The distribution of these individuals is as shown on Tables 4.4 and 4.5. Altogether, a total population of 2,955 persons made up of 1032 (Awka), 1773 (Onitsha) and 50 each from ASHDC/AHOCOL, NEOs and PEDs, were involved.

Sample Size and Sampling Procedure

The sample size of 30% was used as derived from Yaro Yamani technique as shown $N/1+N(e)^2$ Where S=Sample size, N= Population size, e= margin of error assumed(0.05), 1=Theoretical constant. According to Oyeka (1990) and Anaekwe (2007), it is statistically accepted that a sample size of 30% and above is large although this depends on absolute proportion, while less than 30 is considered small. It is approximately at this sample size of 30% that the magnitude of students' critical values for small sample approaches the Z- critical of normal probability table for large samples. However Z-test was used in the analyses of results.

Stratified random sampling was used. The population was divided into strata (sub-population or disparate estates). After the division, random sampling was done in each estate to select the sample size of 30%. Sample sizes were chosen from each estate in proportion to its population.

Table: 3: Distribution of Population and Sample size.

Serial No	Categories	Population	Sample Size (30 %)
1.	Occupants	2,805	842
	Total	2, 805	842

Table 3 shows that the sample size consisted of 842 housewives, 15 PEDs, 15 NEOs and

15 staff of ASHDC/AHOCOL making a total of 887 respondents. For example, Iyigu housing estate in Awka has a population of 94 housing units out of the total population of housing in Awka (1032) and Onitsha (1773). Each estate have a proportion proper to it because of the number of units it contains for example, for Awka contains $1032/2805*842 = 310$ and Onitsha $1773/2805 * 842 = 532$ and $310 + 532 = 842$. Yet another way of looking at the proportionality is by computing for each estate, for example, for Niger Bridge-Head estate, it is $554/1773*532/1 = 166$ etc. Alternatively, proportionality can be computed using house types which is even more reasonable as interviewees will express different perceptions for different house types. The sample size for this study consisted of 887 respondents obtained through random sampling and it is made up of 842 housewives, one from each household, professionals made up of 15 staff of ASHDC/AHOCOL and 15 PEDs and non- professionals represented by 15 NEOs. The sample (887) represented 30% of the total population (2,955) which was composed by proportionate sampling of all the subgroups of housing units in the population.

Table 4.4 Distribution of Public Housing Population and Sample Size in Awka

Name of Estate	Iyiagu	Real	Udoka	Ngozika	Ahocol (GRA)	Ahocol (1)	Ahocol (2)	Ahocol(3) Oganiru	Obinwanne	Total
Population	94	90	500	25	8	27	34	174	80	1032
Sample size	28	27	150	8	2	8	10	52	24	310

Researcher's Field work

Table 4.5 Distribution of Public Housing Population and Sample Size in Onitsha

Name of Estate	Fed. Trans Nkissi	Niger Bridge	Fed. Low Cost	Akpaka	Ahocol(GRA)	Total
Population	1177	554	15	17	10	1773
Sample size	353	166	5	5	3	532

Researcher's Field work

A simple random sampling was then drawn from elementary units in each stratum. A distribution of the sample from each cluster of the population is shown on Tables 4.4 and 4.5. Women were used as primary respondents in each household because according to Muoghalu (1984) women are much more critical of housing than their husbands. This view is supported by other researchers. Doxiadis (1973) argued that 80% of housing decisions taken by his clients were made by housewives, while Rapoport (1980) contended that women were more affected by inappropriate environments and were much more identified with the home. Onibokun (1974) has argued that women, as homemakers stay at home and interact with the housing environment more than men.

Part of the population is the staff of Housing Corporations and Private Estate Developers in the state. Information obtained from Head of Service, Ministry of Housing and Urban Development, Anambra Home Ownership Company Ltd (AHOCOL), Anambra State Housing Development Corporation (ASHDC) at Awka gave the population distribution of the occupants and 30% sample distribution for housing by house types of each estate and at Awka and Onitsha as shown on Tables 4.6 and 4.7

A distribution of the sample from each cluster of the population is shown on Tables 4.6 and 4.7.

House types	Iyiagu	Real Estate	Udoka	Ngozika	Ahocol GRA	Ahocol 1	Ahocol 2	Ahocol 3	Oganiru 1&2	Total population	Sample (30% of pop.)
4-bedroom bungalow	Nil	15	Nil	20	4	7	7	Nil	18	71	21
3-bedroom bungalow	20	26	Nil	5	4	7	6	Nil	17	85	26
2-bedroom bungalow	50	12	Nil	Nil	Nil	7	4	Nil	Nil	73	22
1-bedroom bungalow	24	10	Nil	Nil	Nil	Nil	Nil	Nil	Nil	34	10
3-bedroom Exec. Bung.	Nil	11	Nil	Nil	Nil	Nil	Nil	15	Nil	26	8
2-B/R semi-detached	Nil	16	Nil	Nil	Nil	Nil	Nil	Nil	Nil	16	5
Duplexes	Nil	Nil	182	Nil	Nil	6	Nil	10	10	208	62
Flats	Nil	Nil	278	Nil	Nil	Nil	Nil	15	Nil	293	88
Boys quarters	Nil	Nil	40	Nil	Nil	Nil	17	87	20	164	49
Mansions	Nil	Nil	Nil	Nil	Nil	Nil	Nil	47	15	62	19
Total housing Units	94	90	500	25	8	27	34	174	80	1032	
Sample	28	27	150	8	2	8	10	52	24		310

TABLE 4.6: Sample Distribution for Housing Estates in Awka.
Sources: Researcher's Fieldwork, (2010-2011) and ASHDC, (2010).

Table: 4.7: Sample Distribution for Housing Estates in Onitsha/ Staff of ASHDC/AHOCOL, NEOs and Private Estate Developers.

House Types	Fed & services (sites) (33)	Niger bridgehead	Fed. Low Cost housing	Akpaka housing(33)	Ahocol GRA	Total population	Sample 30% of pop.
4-bedroom bungalow	110	Nil	Nil	Nil	10	120	36
3-bedroom bungalow	Nil	20	Nil	Nil	Nil	20	6
2-bedroom bungalow	Nil	Nil	10	Nil	Nil	10	3
1-bedroom bungalow	Nil	Nil	5	Nil	Nil	5	2
3-bedroom Executive Bungalow	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2-B/R semi-detached	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Duplexes	344	514	Nil	17	Nil	875	263
Flats	552	20	Nil	Nil	Nil	572	172
Boys Quarters	171	Nil	Nil	Nil	Nil	171	51
Total housing units	1177	554	15	17	10	1773	
Sample	353	116	5	5	3		532
C: Staff of ASHDC/AHOCOL						50	15
C D: Private estate Developers(PEDs)						50	15
E E :Non-Estate Occupants(NEOs)						50	15
Total						2955	887

Sources: Researcher's fieldwork, (2010-2011) and ASHDC, (2010).

Instrument for Data Collection

Questionnaire was the major instrument used for the study. An instrument titled Questionnaire on Affordable and Habitable Public Housing (QAHPH) developed by the researcher was used for data collection. Questionnaire was administered to the study population- the occupants of public housing estates in Awka and Onitsha, the PEDs, the NEOs and the staff of ASHDC/AHOCOL. The questionnaire (Appendix C) was administered to occupants of public housing. It was a 59-item questionnaire consisting of seven (7) sections. The questions can be classified into the following groups;

(a) Multiple-choice structured 5-point Likert Scale questions of possible responses from which respondents chose as appropriate. The items represented a 5-point Likert rating scale in which respondents indicated the extent to which they considered the listed variables in the

buildings affordable and habitable for occupants. (Kearney, 2006; Potter and Cantarero, 2006; and Hur and Morrow-Jones, 2008). The significant agreement being tested was determined by adopting the mid-point value, which is 3.00 (that is, average or fairly affordable/habitable) as the acceptable mean (Coakes and Steed (2001), and Oladapo, (2006). This implies that any result significantly different from this mean value was assumed to be either positive or negative (Pulling and Haidar, also cited in Oladapo, 2006). The data is obtained by pulling all positive responses (SA and AG or VLH and LH) for each category of occupants (Awka or Onitsha) as positive response and (DI and SD or BH and NH) as negative response and their proportions obtained and filled below pooled observations (counts). Undecided responses are left as neutral. (See page79 1st Para.)

The scaling is as follows; For affordability; SA = Strongly Agree =5 points, AG = Agree =4 points, UN = Undecided =3 points, ID = Disagree =2 points, SD= Strongly Disagree = 1 point and

For habitability; VLH = Very largely habitable =5 points, LH =largely habitable =4 points, MH = moderately habitable =3 points, BH = Barely habitable =2 points, NH=Not habitable =1 point

(b) Open-ended questions or unstructured responses were also used to elicit from respondents why they choose a particular scale.

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% were 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% (3 48).
- 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.

While answering the research questions in Section B produced the following findings;

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 in1990 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 3: 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

ii. What were the strategies for achieving production of improved habitable and affordable public housing in Awka Urban Area?

The data required to answer the research question were presented in Table 5.19

Mean rating of the respondents on perception strategies for achieving production of improved habitable and affordable public housing in Awka Urban Area
N=313

Expected (321): Estate occupants (305)	Staff of
ASHDC/AHOCOL (15)	PEDs (15)
Obtained (313): “ (299) “	(15-5=8)
8 “ (12-6=6) 6	

Table 4: Strategies for Achieving Improved Habitable and Affordable Public Housing

S/No	Strategies Items	Respondents	ACCEPT		REJECT	
			Number	Percentage	Number	Percentage
13	Direct construction by the homeowner with loan from the Government.	Occupants	680	81.05	159	18.95
		The Staff of ASHDC/AHOCOL	–	0	15	100.00
		PEDs	–	0	12	100.00
		NEOs	15	100.00	–	0.00
14.	Mortgage institutions should charge minimal Interest on loans	Occupants	760	90.58	79	9.42
		The Staff of ASHDC/AHOCOL	13	86.67	2	13.33
		PEDs	10	83.33	2	16.67
		NEOs	15	100.00	–	0.00
15.	Authenticated academic/professional Certificates should be accepted as collaterals	Occupants	800	95.35	39	4.65
		The Staff of ASHDC/AHOCOL	7	46.67	8	53.33
		PEDs	4	33.33	8	66.67
		NEOs	15	100.00	–	0.00
16.	Nigerian workers are underpaid, their salaries should be increased for them to build their own houses	Occupants	826	98.45	13	1.55
		The Staff of ASHDC/AHOCOL	4	26.67	11	73.33
		PEDs	2	16.67	10	83.33
		NEOs	15	100.00	–	00.00

However, a good percentage of them (staff of ASHDC/AHOCOL and PEDs) accepted that mortgage institutions should charge minimal interests on housing loans. Interestingly, the staff of ASHDC/AHOCOL (public parastatals) and PEDs (private organisations/ individuals) object to the option of increasing the salary of workers to enable them build their own houses, whereas the occupants and NEOs being mainly Civil Servants opted maximally in support of this item. It is little wonder that strike by workers has remained a frequent tool for pressing home such demand.

Discussion of Strategies for Improvement of Habitability and Affordability of Public Housing

The findings on research question seven is in line with the recommendation of Turner (1976) who strongly promoted the idea of urban residents being given more room by government to organize housing provision for themselves. In order to amplify the perceived strategies for sustained affordable and habitable public housing in their ranked order of preference, it implies that:

i. Mortgage institutions Primary Mortgage Institutions (PMIs) and Secondary Mortgage Institutions (SMIs) should charge minimal interests on loans. The federal government should pursue a dynamic mortgage finance/credit facilities policy so that such finances would be within reach of the low-income people, at very moderate lending terms including below market interest rates as they obtain their funds from FMBN at ridiculously low rate from NHTF.

ii. Authenticated academic and professional certificates should be accepted as collaterals. Most people cannot afford down payment and /or landed assets to securitize loans for homeownership and must resort to finance institutions for building fund. These peoples' original or authenticated academic certificates such as HND, B.Sc, M.Sc, and Ph.D or professional registration licences issued by regulatory bodies such as Architects' Registration Council of Nigeria (ARCON), Council of Registered Engineers of Nigeria (COREN), to mention but two, can be used in lieu of landed property as collaterals for housing loans.

iii. Since Nigerian workers are poorly paid, it follows that their salaries should be increased for them to build their own houses. The Federal Government should as a matter of policy set aside a reasonable percentage of the country's gross national product or gross domestic product or its annual budget for housing, say 30%. This will ensure a steady supply of funds and will boost the housing sector.

iv. For further improvement of public housing consumption, direct construction of homes with loans from the Federal and State Governments is recommended.

Therefore, government should move away from direct provision of services, and limit itself to setting the regulatory framework for private sector companies. A World Bank evaluation survey estimated that people building on their own in this manner could do so at costs of 30% lower than the conventional construction sector does (Murtala, 2002). Therefore government should also pursue an aggressive home ownership policy. Such projects should also be given adequate attention by the various governments of the federation. This is with a view to eliminating the problem of poor environmental sanitation, urban blight and squalor and unsanitary conditions. According to Bala and Bustani(undated) the World Bank argues for a new approach to urban development which incorporates various forms of aided self-help (World Bank, 1972) the two 'packages' which received the most support were sites and

services scheme, and upgrading schemes. Essentially, the first provided low-income beneficiaries with serviced plots including tenure security and help to build their own houses; the second approach helps house-owners in existing squatter areas obtain tenure to their land, and to incrementally improve their dwellings. Many of these sites exist all over the country essentially provided by the government. Aluko (2002) opined that the cost attached to each plot is usually beyond the reach of the urban poor. Ademiluyi (2010) suggested that urgent steps need to be taken to bring about the much needed improvement and transformation in the Nigerian housing sector. He also advised the government to back up its many lofty initiatives and efforts with necessary political will and commitment, using cooperatives, development agencies, and partnerships through Public Private Sector Participation.

Strategies for Achieving Production of Improved Affordable and Habitable Public Housing in Awka and Onitsha Towns.

To answer this research question; what are the strategies for achieving production of improved affordable and habitable public housing in Awka and Onitsha towns, percentages as statistical technique were used. Percentages were obtained by simply dividing the frequencies of each category on the table by the total number of frequencies and then multiplying the quotient by 100. Percentages were preferred to frequency counts because they allow the comparing of subgroups of unequal size meaningfully. The provision of common base (100) makes the comparison clearer. Free comments of respondents could suffice in answering question 7. However the responses had been scaled in percentage in order to rank their preferences.

Table 5.27 shows the views of the respondents on the strategies for achieving sustainable affordable and habitable public housing. A greater percentage of the occupants and all NEOs accept such strategies as facilitating direct construction of public housing by homeowners, by providing housing loans by government, charging minimal interests on loans, accepting academic/professional certificates as adequate collaterals and enhanced pay-package for Nigerian workers. The NEOs appear to be eager to enjoy public housing and facilities but PEDs reject entirely the idea of using direct construction of public housing by homeowners, perhaps as this option is capable of relieving them or some of them their means of livelihood.

Table 5: Strategies for Achieving Improved Habitable and Affordable Public Housing

S/No	Strategies Items	Respondents	ACCEPT		REJECT	
			Number	Percentage	Number	Percentage
13.	Direct construction by the homeowner with loan from the Government.	Occupants	680	81.05	159	18.95
		The Staff of ASHDC/AHOCOL	–	0	15	100.00
		PEDs	–	0	12	100.00
		NEOs	15	100.00	–	0.00
14.	Mortgage institutions should charge minimal Interest on loans	Occupants	760	90.58	79	9.42
		The Staff of ASHDC/AHOCOL	13	86.67	2	13.33
		PEDs	10	83.33	2	16.67
		NEOs	15	100.00	–	0.00
15.	Authenticated academic/professional Certificates should be accepted as collaterals	Occupants	800	95.35	39	4.65
		The Staff of ASHDC/AHOCOL	7	46.67	8	53.33
		PEDs	4	33.33	8	66.67
		NEOs	15	100.00	–	0.00
16.	Nigerian workers are underpaid, their salaries should be increased for them to build their own houses	Occupants	826	98.45	13	1.55
		The Staff of ASHDC/AHOCOL	4	26.67	11	73.33
		PEDs	2	16.67	10	83.33
		NEOs	15	100.00	–	00.00

However, a good percentage of them (staff of ASHDC/AHOCOL and PEDs) accepted that mortgage institutions should charge minimal interests on housing loans. Interestingly, the staff of ASHDC/AHOCOL (public parastatals) and PEDs (private organisations/ individuals) object to the option of increasing the salary of workers to enable them build their own houses, whereas the occupants and NEOs being mainly Civil Servants opted maximally in support of this item. It is little wonder that strike by workers has remained a frequent tool for pressing home such demand.

Perception on Strategies for Improvement of Habitability and Affordability of Public Housing

The findings on research question seven is in line with the recommendation of Turner (1976) who strongly promoted the idea of urban residents being given more room by government to organize housing provision for themselves. In order to amplify the perceived strategies for sustained affordable and habitable public housing in their ranked order of preference, it implies that:

- i. Mortgage institutions Primary Mortgage Institutions (PMIs) and Secondary Mortgage Institutions (SMIs) should charge minimal interests on loans. The federal government should pursue a dynamic mortgage finance/credit facilities policy so that such finances would be within reach of the low-income people, at very moderate lending terms including below market interest rates as they obtain their funds from FMBN at ridiculously low rate from NHTF.
- ii. Authenticated academic and professional certificates should be accepted as collaterals. Most people cannot afford down payment and /or landed assets to securitize loans for homeownership and must resort to finance institutions for building fund. These peoples' original or authenticated academic certificates such as HND, B.Sc, M.Sc, and Ph.D or professional registration licences issued by regulatory bodies such as Architects' Registration Council of Nigeria (ARCON), Council of Registered Engineers of Nigeria (COREN), to mention but two, can be used in lieu of landed property as collaterals for housing loans.
- iii. Since Nigerian workers are poorly paid, it follows that their salaries should be increased for them to build their own houses. The Federal Government should as a matter of policy set aside a reasonable percentage of the country's gross national product or gross domestic product or its annual budget for housing, say 30%. This will ensure a steady supply of funds and will boost the housing sector.
- iv. For further improvement of public housing consumption, direct construction of homes with loans from the Federal and State Governments is recommended.

Therefore, government should move away from direct provision of services, and limit itself to setting the regulatory framework for private sector companies. A World Bank evaluation survey estimated that people building on their own in this manner could do so at costs of 30% lower than the conventional construction sector does (Murtala, 2002). Therefore government should also pursue an aggressive home ownership policy. Such projects should also be given adequate attention by the various governments of the federation. This is with a view to eliminating the problem of poor environmental sanitation, urban blight and squalor and unsanitary conditions. According to Bala and Bustani(undated) the World Bank argues for a new approach to urban development which incorporates various forms of aided self-help

(World Bank, 1972) the two ‘packages’ which received the most support were sites and services scheme, and upgrading schemes. Essentially, the first provided low-income beneficiaries with serviced plots including tenure security and help to build their own houses; the second approach helps house-owners in existing squatter areas obtain tenure to their land, and to incrementally improve their dwellings. Many of these sites exist all over the country essentially provided by the government. Aluko (2002) opined that the cost attached to each plot is usually beyond the reach of the urban poor. Ademiluyi (2010) suggested that urgent steps need to be taken to bring about the much needed improvement and transformation in the Nigerian housing sector. He also advised the government to back up its many lofty initiatives and efforts with necessary political will and commitment, using cooperatives, development agencies, and partnerships through Public Private Sector Participation.

The perceived strategies for achievement of sustainable, affordable and habitable public housing in their ranked order of preference include:

- i. Mortgage institutions should charge minimal interests on loans.
- ii. Authenticated academic and professional certificates should be accepted as collaterals.
- iii. From respondents free comments Nigerian workers are underpaid, it follows that their salaries should be increased for them to build their own houses.
- iv. Direct construction of homes with loans from the Federal and State Governments was recommended.

The research findings expose the value of the study in relation to practical situation as they affect the occupants, the staff of ASHDC/ AHOCOL, PEDs and NEOs in public housing provision. They point out indicators of housing satisfaction in design and construction, affordability, habitability, social considerations and strategies of choice as perceived by the residents themselves and other actors in housing 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 both occupants and providers of housing.

CONCLUSIONS

This study addressed the output of housing delivery strategies in public housing programmes. The characteristics of housing units; housing services and infrastructure, neighbourhood facilities and socio-economic environment were the key components of housing considered. Basically, the assessment of residents’ perception on the adequacy level of housing provided was important. This is important in examining the extent to which housing programmes can provide access to adequate housing in terms of both affordable and habitably public housing. Particularly, emphasis was on the extent to which housing provided have met the needs of the residents in terms of the adequacy of spaces, comfort, security, hygiene, and aesthetics, and provided opportunities for social and economic benefits, access to basic amenities and proximity to public services and infrastructure. It had also determined that the distribution of housing resources is not fair to both relational partners. It is not surprising that Awka seem to have fared better than Onitsha by the reason of being the Capital city of Anambra State. Concern has been expressed over the affordability and habitability of public housing estates. This is further attested to, by the many seminars, conferences and workshops organized on the subject matter. The cost of housing and the liveability imperatives of public housing were required to match the high expectations of occupants and would-be occupants, the staff of ASHDC/AHOCOL, PEDs and NEOs. It was against these backgrounds that the purpose of this

study examined and determined the perception of various actors in housing and formulated strategies for improvement in the affordability and habitability of public housing.

However, this involved the provision of infrastructural services which could bring about sustainable growth and development through improved environmental conditions and improved livelihood. Previous studies have indicated that a more appropriate method of evaluating the quality of the built environment was through the affective responses based on the user's assessment as this study has also done.

This study on affordability and habitability of public housing estates in Awka and Onitsha has a lot of lessons for the authorities of ASHDC/AHOCOL and PEDs (both public and private housing provisions). Results of this research also have implications for the re-planning and reorganizing the agencies. The students and researchers also will benefit from the outcome of these findings, as it will enable them to take literature review seriously, having realized that public housing estate studies have academic inputs. The National Housing Policy also stands to benefit from the study as they will find fresh ideas and input in the reformulation of the policy.

RECOMMENDATIONS

Based on the findings of this study and the conclusions drawn from it, the following recommendations are made:

That based on the proposal of Herzberg's theory to discover factors in the public housing which make occupants satisfied and / or dissatisfied. The result of a two factor hypothesis in public housing assessment has confirmed that, men have two different categories of need which are independent of each other. The public housing occupants in Onitsha are not as satisfied with the design and construction, affordability, environmental amenities and social considerations of public housing, therefore steps should taken to ameliorate this shortcoming. Anambra state government in her effort to solve the acute problem of residential accommodation occasioned by the creation of state embarked upon construction of housing estates particularly for civil servants and state legislators in Awka as a result, Awka has been favoured in the location of public housing in recent times because of its administrative eminence. It has Nine(9) public housing estates while Onitsha, a city founded in 1550 and became part of a British protectorate in 1884 has only five (5) public housing estates. Therefore, modern public housing estates should be built in Onitsha with a teeming population that far exceeds that of Awka and rehabilitation of the existing ones should be regarded as a priority. Also,

- i. Mortgage institutions should charge minimal interests on loans.
- ii. Authenticated academic and professional certificates should be accepted as collaterals.
- iii. Nigerian workers are underpaid; their salaries should be increased for them to build their own houses.
- iv. Direct construction by prospective homeowners with loans from the Federal and State Governments is recommended.

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