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Resident's Satisfaction with Neighborhood Infrastructural Provision in Public Residential Estate Kano, Nigeria.

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Abstract:

The study assessed the resident's satisfaction with neighborhood infrastructure on public estate Kano. Field survey was conducted at the Kabuga medium density unit housing estate and 74 questionnaires were purposively administered to respondents. 63 (85.13%) responses were retrieved and descriptive and inferential statistical techniques were used to analyze the neighborhood satisfaction index (NSI), mean satisfaction score (MSS) and Standard Deviation (std. dev.). The result of the analyses revealed that the residents were satisfied with "proximity to religious facilities" M 2.419, "beauty of the houses M 2.333, proximity to school's M 2.301 and proximity of shop/ market M 2.258, level of privacy M 2.241, integration of houses M 2.161, and quality of layout M 2.147. However, respondents were dissatisfied with the poor power supply M 1.983, health facility M 1.983, security and vigilante M 1.968, refused / sewage disposal M 1.893, portable water M 1.737, drainage system M 1.737, open space buildings M 1.629, recreational facilities M 1.564, landscape M 1.516 and quality of open space for play and socialization M 1.387, ranked the lowest. The study recommends management intervention in upgrade of facilities, rehabilitation, and maintenance should be encouraged.

Keywords: Residents' satisfaction, neighborhood infrastructure, Kabuga-Kano, public housing.

1.0 Introduction

Neighborhood infrastructure plays significant satisfactory role in the cultural, socioeconomic, environmental and political roles in the lives of individuals, households and nations and hence the need for its regular assessment cannot be overemphasized. (Unah, 2019a, 2021b, Unah and Muktar, 2020, Magari, 2018, Ibrahim and Gyoh (2018) observed that housing demand in Kano is higher than the supply, thereby forcing the low-income earners to improvise informal developments for housing accommodation. The quality of housing attributes and basic infrastructural facilities in such settlements varies from lack of access to water, electricity, sanitation, usual marked by overcrowding of a densely populated, dirty surface runoff waste, human living conditions, and social disorganization". Jiboye (2011) posit the deplorable and inhabitable environment is as result of overcrowding and poor living condition, and inadequate state of

infrastructures. Opoko, Ibem and Adeyemi (2015) observed the aspiration of residents searching for a better living condition and upgrading of basic neighborhood infrastructural in the built environment to commiserate with the urge urban infrastructural development ongoing in the city metropolis, which such as road, fly-over and under-pass. The search for standard of living and provision of basic infrastructure, in the urban environment has led to measure of neighborhood satisfaction (Unah, 2021b). Wokekoro (2015) opined the living environment which involved advantages and disadvantages should be accessible with amenities, services, as well as economic vitality and social equity. As urban area is being transformed, it has become necessary to evaluate the fast growing human population that keep pace with neighborhood infrastructures (Wokekoro and Owei, 2006). Factors that influence neighborhood satisfaction assessment Ukoha, and Beamish (1997) include socio-economic and

participatory variables (Maina 2021, Unah, 2021b) (Amole, 2009; Ibem and Amole, 2013) increasing in quantity of homeowner modification (Unah, 2021b) and redevelopment (Unah, 2019a) uncontrolled residential transformations (Adegbehingbe, 2011; Fakere, Arayela and Folorunso, 2017). One of the most intriguing facts is that Janbulo –red bricks Kabuga is one of the high brown residential housing settlement in the metropolitan Kano that provides accommodation to the timid population of lectures of Bayero university and largely civil and public servants of the state.

This study contributes to fill the gap in infrastructural provision as a dearth to resident satisfaction emancipating from Kabuga neighborhood facilities and attributes of its peripheral built environments of Kano. The objective of the study is to examine neighborhood infrastructures and respondent's perception of factors influencing neighborhood facilities in the settlement. Also contribute to the growing literature on the determinants of housing satisfaction. The choice of Kabuga among other housing estate in Kano is an outcome of its long existence in provision of infrastructural development and the occupant's perception of their environment. This suggests a need for more research on neighborhood infrastructure in states and the country at large, and part of government efforts in addressing formal urban settlement challenge and revitalizing mass housing development across the nation.

2.0 Literature Review

In recent times, the study of neighborhood infrastructures and residential assessment the quality of housing satisfaction has emerged as a key area of research in built environment of most Nigerian cities. Salisu et al., (2019) asserted public housing is now a larger part of researcher discourse since its development has standards to be fulfilled. Unah(2021c) under study the developmental changes that characterized the transformation of five districts of a cosmopolitan Abuja to be; building development skyline. Redeveloping of residential building to commercials. Social-economic demolition and non-implementation of regulatory enforcement to be unsatisfactory. Ukoha and Beamish (1997) specify building features and functional spaces such as: living room, bedrooms, satisfaction towards housing conditions include: quality of walls, quality of construction of neighborhood facilities such as: schools, hospitals, worship places while garbage collection and enforcement of building regulation are contribution towards management of public housing, giving overall housing satisfaction. Topçu and Dökmeçi (undated)

relate the significance of public housing infrastructures on the quality of the built environment and residential satisfaction of a neighborhood to be precise on the place, time and the purpose of the assessment and on the value system of assessor. Several studies (Unah, 2019a, 2019b, 2020a, Maina et al., 2021, Maina et al., 2018; Fakere, et al., 2018; Daramola, 2006; Jiboye, 2004; Ibem, 2010) opined infrastructural provision in the country public housing as dissatisfactory and many researchers have put forward the neighborhood satisfaction and characteristics affect the quality of the built environment.

The concept of residential satisfaction is often adopted to evaluate resident's perceptions of their residential environment for improvement housing satisfaction (Dimuna and Olotuah, 2019 and Ogu, 2002). Wokekoro (2015) and Senecal, (2002) argued that this concept attribute to the built environment in two ways, advantage and disadvantage of the living environment, through accessibility to services facilities and amenities, (b) satisfaction with one's home, and the sensory quality of their surroundings. This specifically examine relationships between Socio-economic status / characteristics (Ibem 2011 and Amole 2009), demographic data: personal characteristics (Boschman, 2018), age, income, Gender education and occupation and the duration of residence social features that are influential on the built environment (Maina, 2021 and Baesung 2013, Jiboye 2014, Waziri et al. 2014, Adewale 2015, Okpoechi, 2018) education (Martens et al. 2014) health issues (Bowen and Quintilian, 2019) wellbeing of elderly citizen (Flang et al. 2019) status (Ibem et al. , 2015b and (Muoghalu, 1984), ethnic groups (Boschman & Van Ham, (2015) Length of stay (Makinde, 2015) tenure status (Zumbro ,2014), and (Mohit and Azim, 2012) determining self-actualization and fulfillment and Class/Level (Amole, 2009). Maina, 2021, Elsinga and Hoeksstra, 2005, Greenberg and Crossney, 2007) agreed that older and long-time resident, higher-income (Lu 1999, Gunseuk, 2016 and Amole, 2009), educational qualifications (Ibem and Amole 2012, Nguyen et al. 2017, Hassan et al. 2019), employment and occupation (Okpoechi, 2018; Ibem et al. 2015). Increases outdoor green spaces of the built environment (Kearney, 2006, Unah and Abubakar-Karmar, 2020, Unah, 2020b) streets and parking areas (Kaplan, 1985) success and status, Diaz-Serrano (2006). (Maina et al., 2021) revealed that support services and infrastructure were inadequate as electricity, abandoned and dilapidated drainage system (Unah, 2021b, 2021c. Unah and Ibrahim 2021; Unah and

Mukhtar 2020, Ochepea, 2018, Abdulrahman 2018, Ilesanmi, 2010, Jiboye, 2011). The study of neighborhood and its environment has characteristics that are relating to housing and a sense of protection (Herting and Guest, 1985), while the presence of abandoning of buildings has negative effects on neighborhood satisfaction (Jagun et al., 1990, Basolo and Strong, 2002). This agrees with the study of Ozdemir, (2002) that housing policies should not only focus on building new houses, but also improving housing standards with the existing housing infrastructures as to meet with the present challenges. Adequate provision of neighborhood infrastructures as posited by (Unah and Murhtar, 2021, Unah, 2021b, 2020, 2019, Ebehikhalu et al. 2016, Ogunbajo et al., 2016, Anofojie et al., 2014) includes the services and facilities necessary for its economy to function effectively are portable water supply, electricity, access road, drainages, telecommunication, sewage and drainage, health care facilities and education. Other are quality of land vehicular/pedestrian circulation, provision of greenery / landscape and quality of open spaces (Unah 2020a, Abubakar-Karmal, 2020), Maiwada 1994, 2014). Jiboye and Makinde (2015) study of residents' perception of neighborhood safety in gated communities observed that availability of neighborhood amenities and institutions such as churches, community organizations, hospitals and schools and colleges, play several roles with respect to neighborhood safety. The study of Ilesanmi, (2012) Ibem, et al. (2013); Wokekoro (2015), Boschman, (2018), Fakere et al., (2018), Salisu et al., (2019) posit neighborhood characteristics as having important impact on resident's quality of life. Topcu and

Dokmeci (undated) opt neighborhood satisfaction as being second to overall life satisfaction. This was further profound with the study of Maina (2021) and Anofojie et al. (2014) that provision of these infrastructures are basic requirements that determine the socio-economic wellbeing of an area. It is in this sense that residential satisfaction of neighborhood infrastructure can enhance our understanding and is fundamental on how the built environments influence their inhabitants and well-being as well as in the successful monitoring of public housing delivery in Nigeria.

3.0 Methodology:

The neighborhood of Kabuga (first gate, Janbulo) core residential housing density was assessed and structured questionnaires were analyzed on twenty-one (21) subjective attributes on neighborhood facilities (table 3) administered to 74 respondents who have redeveloped their houses out of 221 units representing 33.5% and a total of 63 (85.13%) responses were retrieved and utilized in uni-variate analysis. Using Likert scale respondents were rated on perception of points: not provided=1, fairly provided=2 and provided=3 and coded very bad, fair and very good respectively, were scale used to determine Neighborhood Satisfaction Index (NSI). Weighted mean was used to rank mean satisfaction score (MSS) on standard Deviation. Data were presented using the relevant descriptive and inferential statistics techniques expressed thus:

$$\text{Relative importance index} = \frac{\sum W}{AN} \quad (i)$$

Table 1 Neighborhood Satisfaction Index Guide

Rating Weighted Value	Degree of Impact	quartile
2.20 - 2.50	High satisfactory Impact	First
2.00 - 2.10	significant Impact	Second
1.00 - 1.99	Less satisfactory Impact	Third

Factors with NSI of MWV (2.20 - 2.50) were considered high positive Impact in this study. These correspond to ratings in the first quartile ranked between 1st -7th, MWV values between (2.00 - 2.10) corresponding to the second quartile ranked between 8th -10th are considered Significant Impact, MWV values between (1.00 - 1.99) corresponding to the third quartile ranked 11th -18th are considered Less Significant Impact respectively. The attributes identified and rate the Standard deviation as a degree of consistent in progression of the variables.

The following socio- demographic characteristics are deduced from table 2 thus: 92.06% of respondents were

male while 7.94% were female. Tenure Status has over 73.02% of the respondents were Owner Occupied, 14.29% were inherited while 3.17% free/ sponsored. Respondents status shows that 85.72% of the respondents were parent, while 11.11% were adult children and 3.17% grandparent. Occupational status has 41.27% civil Public Servant, with (47.62%) as business owners with 4.76% artisans while 6.35% others not specified. Monthly income has 3.17% earn below N100,000, another 63.50% earn N151,000 - N250 while 23.81% earn above N251,000 and above. Length of Stay has majority (53.97%) of the sampled homeowner representative were between 6-15 years, followed by 16

and above years(41.27%), while 1-5 years recorded the least (4.76%).Also, 11.11% were without formal education, while 88.89% has. Income Classification has 38.10% as high, 58.73% middle class and 3.17% low.

Socio-Demographic Characteristic of Respondents

The following are discussed under socio- demographic characteristic of the respondents:

Table 2 Characteristic of Respondents

Variables	Key performance indicators (KPI)	Freq.	Per. (%)
Level of Education	No formal Education	7	11.11
	Formal Education	56	88.89
	Total	63	100
Length of Stay	1-5	3	4.76
	6-15	34	53.97
	16 and above	26	41.27
	Total	63	100
Status/ Occupation of Respondents	Others ⁴ 6.35		
	Business	30	47.62
	Artisan	3	4.76
	Civil\ Public Servant	26	41.27
	Total	63	100
Respondents Status	Parent	54	85.72
	Adult Children	7	11.11
	Grand Parent	2	3.17
	Total	63	100
Tenure Status	Private rented	6	9.52
	Owner Occupied	46	73.02
	Inherited	9	14.29
	Free/ Sponsored	2	3.17
	Total	63	100
Average Monthly Income (Naira)	Less than N100,000	2	3.17
	N101,000 - 150,000	6	9.52
	N151,000 - 250,000	40	63.50
	N250,000 and Above	15	23.81
	Total	63	100
Income Classification	Low	2	3.17
	Middle	37	58.73
	High	24	38.10
	Total	63	100
Gender of Respondents	Female	5	7.94
	Male	58	92.06
	Total	63	100

Table 3 Resident Response to Neighborhood Infrastructure

Attributes	N	Sum	Mean	Std. Dev.	N.S. I	Rank
1. Proximity to Religious facilities	62	150	2.419	0.039	.806	1 st
2. Beauty of the houses (Aesthetics)	63	147	2.333	0.037	.777	2 nd
3. Proximity & availability of Schools	63	145	2.301	0.036	.767	3 rd
4. Proximity & availability of Shop/ Market	62	140	2.258	0.036	.752	4 th
5. Level of Privacy	62	139	2.241	0.036	.747	5 th
6. Location / integration of houses in the Estate	62	134	2.161	0.034	.720	6 th
7. Quality of layout efficiency/pedestrian/circulation.	61	131	2.147	0.035	.715	7 th
8. Accessibility of Road	62	130	2.096	0.033	.698	8 th
9. Waste management	63	132	2.095	0.033	.698	8 th
10. Community Service available	63	132	2.095	0.033	.698	8 th
11. Accessibility of Street light	62	127	2.048	0.033	.682	9 th
12. Public transportation available	63	128	2.031	0.032	.677	10 th
11. Power supply	61	121	1.983	0.032	.661	11 th
12. Health facility	61	121	1.983	0.032	.661	11 th
14. Provision of Security & Vigilante	63	124	1.968	0.031	.656	12 th
15. Quality of service Refused / Sewage disposal	61	110	1.893	0.029	.601	13 th
16. Accessibility of Portable water	61	106	1.737	0.028	.579	14 th
17. Accessibility of Drainage system.	61	106	1.737	0.028	.579	14 th

18. Open Space within buildings.	62	101	1.629	0.026	.543	15 th
19. Availability of Recreational facilities	62	97	1.564	0.025	.521	16 th
20. Provision of Landscape (Trees/Shrubs/Greeneries)	62	94	1.516	0.024	.505	17 th
21. Quality of Open Space for play and Socialization	62	86	1.387	0.022	.462	18 th

4.0 Results and Discussion

Table 3 shows resident responses to twenty one (21) neighborhood infrastructure (variables) using relative important indexes as present shows: proximity to religious with MSS 2.419, houses beauty (aesthetics) 2.333, proximity and availability of schools 2.301 and proximity & availability of shop/ market 2.258, level of privacy 2.241, mean of Location / integration of houses in the estate 2.161, quality of layout efficiency/pedestrian/circulation 2.147 were rank 1st, 2nd, 3rd, 4th, 5th, 6th, and 7th in the first quartile (table 1 and 3) respectively. The study of Maina et al. (2021), Maina et al., (2018) and (Boschman and Van Ham (2015) found that residents are more satisfied in neighborhoods with high safety scores, high dwelling values and good accessibility of facilities as well as planning that influences functional spaces satisfaction. Other neighborhood attributes include Accessibility of Road 2.096, waste management 2.095, community service available 2.095, accessibility of street light 2.048 and public transportation available has 2.031 were rank 8th, 9th and 10th in the second quartile (table 1 and 3) respectively. This buttresses the finding that infrastructures and basic amenities in urban center has failed (Wokekoro and Owei, 2006, Unah, 2021c, 2019, 2020, 202) with the fast growing population.

However, respondents were dissatisfied with the following neighborhood infrastructures: power supply 1.983, health facility 1.983, provision of security & vigilante 1.968, quality of service refused / sewage disposal 1.893, accessibility of portable water 1.737, accessibility of drainage system 1.737, open space within buildings 1.629, availability of recreational facilities 1.564, provision of landscape (trees/shrubs/greeneries) 1.516 and quality of open space for play and socialization 1.387 rank 11th, 12th, 13th, 14th, 15th, 16th, 17th and 18th and these were in the third quartile respectively. Supporting the findings in literature where satisfaction was generally at its lowest (Maina et al. 2021, Unah and Muktar, 2020, Enoguanbhor and Gollnowet al., 2019, Ochepea, 2018, Abdulrahman 2018, Ilesanmi, 2010, Jiboye, 2011, and Gbakeji et al., 2007) particularly ranked for services infrastructure.

5.0 Conclusion and Recommendations

The study identify from relevant literature the respondents satisfaction as supporting the research finding on the neighborhood infrastructure attributes of public housing. The result posit that the residents were

quite dissatisfied with inadequacies and unsatisfactorily notable basic neighborhood attributes such as Power supply, Health facility, Provision of Security and Vigilante, Quality of service Refused / Sewage disposal, Accessibility of Portable water, Accessibility of Drainage system, Open Space within buildings., Availability of Recreational facilities, Provision of Landscape (Trees/Shrubs/Greeneries) for Open Space relaxation and Socialization were ranked lowest of the variables and are basics that necessitate the quality of built environment.

It is recommended that the estate management upgrade these basic amenities to enhance for good habitat able built-up developments through reconstruction and rehabilitation. The study therefore concludes that residential neighborhood satisfaction depends on the choice of hierarchy infrastructures as preference by the residents in the settlement as it impact on the needs. This is recommended that they should be upgraded, rehabilitated and constant maintenances should be encouraged and carried out timely to ensured better living environment. The studies on the subject are crucial since neighborhood satisfaction is very important in informing urban planning and designs in the built environment. Therefore, it is evident that neighborhood satisfaction assessment is the desires of individual perception on the state of infrastructure beard on their immediate environment.

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