

ASSESSMENT OF OCCUPANTS' LEVEL OF FACILITIES AND SERVICES SATISFACTION IN THE RESIDENTIAL HOUSING ESTATES BUILT ENVIRONMENT IN LOKOJA, KOGI STATE

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Abstract

The study assessed residents' satisfaction with facilities and services in public housing estates in Lokoja, Kogi State. Guided by two research questions and two null hypotheses, a descriptive survey design was employed. The target population comprised 2,820 residents from fifteen public housing estates. Due to the large sample size, a multistage sampling method was employed. Initially, the estates were stratified by factors such as location and population density. From these strata, eight estates were randomly selected to ensure diversity. Within these estates, 453 residents were chosen through simple random sampling. Data were gathered using a structured questionnaire, validated by experts from the Federal University of Technology, Minna, and pilot-tested in Talba, Niger State. The questionnaire's reliability was confirmed with a Cronbach's Alpha of 0.80. Data analysis, performed using SPSS version 26, involved calculating means and standard deviations for the research questions and z-tests for hypotheses at a 0.05 significance level. Results showed moderate satisfaction with both facilities (mean = 3.12) and services (mean = 2.86). The study recommended that estate management in Lokoja implement regular maintenance and upgrades to improve resident satisfaction. Additionally, it recommended establishing an active service response team with accessible contact information to facilitate effective communication and timely maintenance responses.

Keywords: Occupants, Facilities and Services, Satisfaction, Residential Housing Estates, Built Environment

Introduction

The built environment and the quality of residential facilities and services have a profound impact on occupants' satisfaction and overall quality of life. As such, they are crucial considerations in urban planning, architecture, and real estate development. According to the United States Environmental Protection Agency (USEPA, 2022), the built environment encompasses all aspects of human life, including residential buildings, infrastructure for water and electricity, transportation systems, waste management, security measures, and recreational facilities. These elements significantly influence the comfort and satisfaction of residents. The built environment consists of man-made or modified spaces for living, working, and recreation, requiring substantial material resources to create. The impact of the built environment can be both positive, such as increased safety and productivity, and negative, like air pollution and reduced health quality.

Housing is a basic human need, on par with food and clothing, and serves as a key indicator of an individual's standard of living and societal status. Ensuring the provision of satisfactory housing that meets government standards and aligns with user needs and expectations has

always been a priority for both public and private housing sectors in Nigeria (National Housing Policy, 2022). In building projects, various services are interdependent and essential, emphasizing the importance of architectural, engineering, and construction expertise, particularly in urban areas. Lokoja, a rapidly growing urban center, is experiencing increased demand for housing due to population growth. Consequently, housing estates have been developed to meet this demand, but concerns remain about the quality of these estates and resident satisfaction with the provided facilities and services (Hassan et al., 2023). As Okafor (2016) notes, housing is a fundamental human need that significantly impacts health, welfare, and productivity across all socioeconomic groups.

Occupants' satisfaction in residential housing estates refers to the contentment residents feel regarding the quality and effectiveness of the facilities and services provided in their living environment (Simeon et al., 2022). This satisfaction encompasses various aspects, including the physical structure (space, noise control, lighting, ventilation), the availability and reliability of utilities (electricity, water, internet connectivity), and communal facilities and services (parking, security, green spaces, waste management, and recreational amenities). Resident satisfaction or dissatisfaction profoundly affects their comfort, well-being, and overall quality of life. Satisfaction is highly subjective, shaped by individual expectations and experiences, and is influenced by multiple factors such as cultural expectations, personal preferences, and social dynamics.

Understanding occupants' satisfaction levels is essential for urban planners, developers, and policymakers. It provides valuable insights for improving residential design, facility management, and housing policies, thereby enhancing residents' living conditions. Feedback on occupant satisfaction can inform better housing design practices, estate management strategies, and policy formulation aimed at improving urban living conditions. Resident satisfaction is an important area of study for professionals seeking to enhance the quality of life in residential areas (Parkes et al., 2022).

Wang and Wang (2020) highlight the importance of infrastructural facilities and services in ensuring the proper functioning and utilization of residential properties. The demand for these facilities extends beyond the physical structure to include additional installations and fittings that enhance their utility. In residential properties, satisfaction includes shelter, protection, comfort, convenience, health, privacy, and dignity. A decent housing unit must meet the economic, physical, and environmental needs of its occupants. Economic satisfaction, or getting value for rent paid, may be unrealistic if physical satisfaction, which includes uninterrupted power supply, water supply, and waste disposal, is not adequately addressed. Environmental satisfaction, encompassing social status and neighborhood security, also contributes to the perceived utility of residential properties.

Statement of the Research Problem

Residential housing estates in Lokoja are designed to provide a satisfactory living environment, offering essential facilities and services such as water supply, electricity, waste management, and recreational spaces.

However, inadequate planning and maintenance have resulted in issues like structural deterioration, plumbing problems, electrical faults, and overall degradation of the living environment. According to David *et al.* (2023), residents have expressed concerns over unreliable water and electricity supply, poor waste management, inadequate security, and the lack of recreational facilities. Furthermore, aspects related to the built environment, including

housing design, construction quality, integration with the natural environment, and neighborhood layout, are often neglected in planning, construction, and maintenance, despite their significant impact on residential satisfaction. Without a comprehensive understanding of the factors influencing satisfaction with facilities and services, it is difficult for architects, urban planners, and policymakers to develop effective solutions to improve living conditions. This study aims to assess residents' satisfaction with the facilities and services provided in the residential housing estates in Lokoja, Kogi State, to better inform future planning and policy decisions. Understanding these key issues is crucial for enhancing the quality of life in these estates and ensuring that housing developments meet the needs and expectations of their occupants.

Purpose of the Study

The following are the purpose of the study:

1. Identify the level of occupant's satisfaction with the facilities provided in the residential housing estates in Lokoja, Kogi State.
2. Determine the level of occupants' satisfaction with the services provided in residential housing estates in Lokoja, Kogi State.

Research Questions

The following research questions guided the study:

1. What is the level of occupants' satisfaction with the facilities provided in the housing estates in Lokoja, Kogi State?
2. What is the level of occupants' satisfaction with the services provided in housing estates in Lokoja, Kogi State?

Research Hypotheses

The following null hypotheses were formulated and guided the study and was tested at 0.05 level of significance.

1. **H₀₁**: There is no significant difference in the mean responses of new and old occupants of residential housing estates as regards the level of occupants' satisfaction with facilities provided in the residential housing estates in Lokoja, Kogi State.
2. **H₀₂**: There is no significant difference in the mean responses of new and old occupants of residential housing estates as regards the level of occupants' satisfaction with the services provided in the residential housing estates in Lokoja, Kogi State.

Research Methodology

This study adopted descriptive survey research design. The study was conducted in Kogi State. Kogi State is located in the central region of Nigeria (North-Central). The target population of the study was 2820 old and new housing residents living in the fifteen (15) public housing estates in Lokoja, Kogi State. A multistage sampling technique was used for the study to select 8 public housing estate in Lokoja. A 30-items structured questionnaire was used as the instrument for data collection. The questionnaire was designed in line with the research questions, and structured on a five-point rating scale. The structured questionnaire was validated by three (3) experts from the Department of Industrial and Technology Education, Federal University of Technology Minna. The experts were asked to go through the instrument and make suggestions where necessary. In order to determine the reliability coefficient of the instrument, a pilot study was conducted in Talba housing estate in Minna Niger State using 20 residents from the housing estate. The total of 453 structured questionnaires was administered to the respondents in the eight sampled housing estates with the help of four (4) research assistants. Mean and standard deviation were used to answer the research questions while z-test was used to test the null

hypotheses at 0.05 level of significance. Real upper and lower limit of numbers was used in order to determine the level of agreement or disagreement of the respondents to the items. Statistical Package for the Social Sciences (SPSS version 26) was used for data analysis. The decision on each item of the research questions was based on the resulting mean scores interpreted relatively to the concept of real lower and limits of numbers as shown in Table 3.4. Furthermore, the decision to reject or retain the null hypothesis was based on the obtained p-value. If the p-value was less than or equal to 0.05 ($p \leq 0.05$), there was statistically significant evidence to reject the null hypothesis. If the p-value was greater than 0.05 ($p > 0.05$), the null hypothesis was retained.

Results

Research Question 1

What is the level of occupants satisfaction with the facilities provided in the housing estates in Lokoja, Kogi State?

The data for answering research question one is presented in Table 1.

Table 1: Mean and Standard Deviation of Respondents on the Level of Occupants' Satisfaction with the Facilities Provided in the Housing Estates in Lokoja, Kogi State.
N = 362

S/N	Items	Mean (\bar{x})	SD	Remark
1	Backup generators for constant supply of electricity	3.48	0.70	ML
2	Boreholes for constant water supply	3.20	0.45	ML
3	CCTV surveillance systems	2.48	0.59	LL
4	ATM facilities	3.42	0.69	ML
5	Paved roads	3.43	0.91	ML
6	Recreational centres	3.35	0.70	ML
7	Internet and cable TV infrastructure	3.19	0.81	ML
8	Shopping complex	3.39	0.70	ML
9	Car parking space	3.30	0.55	ML
10	Waste management systems	3.29	0.64	ML
11	Landscaped gardens	3.18	0.78	ML
12	Healthcare centre	2.48	0.68	LL
13	Street lighting	2.40	0.78	LL
14	Fitness centre	3.35	0.68	ML
15	Firefighting equipment	2.88	0.75	LL
Grand Mean/SD		3.12	0.68	Moderate

Key: N = Number of respondents; SD = Standard Deviation; ML = Moderate Level; LL = Low Level

Table 1 shows the mean responses of the respondents on 15 items posed to determine the levels of occupants satisfaction with the facilities provided in the housing estates in Lokoja, Kogi State with a grand mean of 3.12. This implies that the level of occupants' satisfaction with the facilities provided in the housing estates is moderate. The standard deviation of the items ranged from 0.45 to 0.81 which implies that the 15 items had their standard deviation less than 1.96. This indicates that the respondents were not too far from the mean and were close to one other in their responses. This closeness of the responses adds value to the reliability of the mean. Hence, the occupants have moderate level of satisfaction with facilities provided in the housing estates.

Research Question 2

What is the level of occupants satisfaction with the services provided in housing estates in Lokoja, Kogi State?

The data for answering research question two is presented in Table 2.

Table 2: Mean and Standard Deviation of Respondents on the Level of Occupants' Satisfaction with the Services Provided in the Housing Estates in Lokoja, Kogi State
N = 362

S/N	Items	Mean (\bar{x})	SD	Remark
1	Security	3.35	0.52	ML
2	Electricity supply	2.48	0.48	LL
3	Water supply	2.40	0.50	LL
4	Waste disposal services	3.34	0.70	ML
5	Landscaping and gardening maintenance	3.35	0.44	ML
6	Road maintenance	3.40	0.60	ML
7	Internet and Wi Fi	2.49	0.54	LL
8	Health clinics	3.01	0.80	ML
9	Car wash services	2.44	0.55	LL
10	Laundry services	3.40	0.64	ML
11	Restaurant or cafes	3.20	0.66	ML
12	ATM facilities	2.28	0.68	LL
13	Schools or educational facilities	3.21	0.80	ML
14	Shuttle services	2.26	0.60	LL
15	Fitness centres or gyms	2.35	0.79	LL
Grand Mean/SD		2.86	0.62	Moderate

Key: N = Number of respondents; SD = Standard Deviation; ML = Moderate Level; LL = Low Level

Table 2 shows the mean responses of the respondents on 15 items posed to determine the level of occupants satisfaction with the services provided in the housing estates in Lokoja, Kogi State with a grand mean of 2.86. This implies that the level of occupants' satisfaction with the services provided in the housing estates is moderate. The standard deviation of the items ranged from 0.44 to 0.80 which further implies that the 15 items had their standard deviation less than 1.96 indicating that the respondents were not too far from the mean and were close to one other in their responses. This closeness of the responses adds value to the reliability of the mean. Hence, the occupants have moderate level of satisfaction with the services provided in the housing estates.

Hypothesis 1

There is no significant difference in the mean responses of new and old housing occupants as regards the level of occupants' satisfaction with facilities provided in the residential housing estates in Lokoja, Kogi State ($P < 0.05$). Null hypothesis one was tested and the result is presented in Table 3.

Table 3: Z-test Analysis Showing the Significant Difference between the Mean Responses of New and Old Housing Occupants' As Regards the Level of Occupants' Satisfaction with Facilities provided in the Residential Housing Estates in Lokoja, Kogi State

		Levene's Test for Equality of Variances		Z-test for Equality of Means					
		F	Sig.	Z	Df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Difference Lower Upper
Facilities Provided	Equal variances assumed	11.240	.520	3.845	360	.034	.64740	.06842	.09128 .40820
	Equal variances not assumed	-	-	2.726	24.020	.152	.64740	.08502	.07580 .38082

($p > 0.05$) SD = Significant Difference

Table 3 shows the z-test analysis for the test of significant difference between the mean responses of new and old housing occupants as regards the level of occupants' satisfaction with facilities provided in the residential housing estates in Lokoja, Kogi State. The Levene's test was carried out to determine equality of variance. The test showed an F value of 11.24 with a p-value of 0.52 which shows that equal variances was assumed. Also, the z-test analysis showed a z-value of 3.85 and a p-value of 0.03 which is less than the bench mark of 0.05. This implied that there was significant difference between the mean responses of new and old housing occupants as regards the level of occupants' satisfaction with facilities provided in the residential housing estates in Lokoja, Kogi State. Hence null hypothesis one was rejected.

Hypothesis 2

There is no significant difference in the mean responses of new and old housing occupants as regards the level of occupants' satisfaction with the services provided in the residential housing estates in Lokoja, Kogi State ($P < 0.05$). Null hypothesis two was tested and the result is presented in Table 4.

Table 4: Z-test Analysis Showing the Significant Difference between the Mean Responses of New and Old Housing Occupants As Regards the Level of Occupants' Satisfaction with the Services provided in the Residential Housing Estates in Lokoja, Kogi State

		Levene's Test for Equality of Variances		Z-test for Equality of Means					
		F	Sig.	Z	Df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Difference Lower Upper
		-	-	-	-	-	-	-	-

Equal variances assumed	9.248	-.075	3.890	360	.024	.52044	.05408	.08408	.35404
Equal variances not assumed			2.735	24.100	.098	.52044	.08740	.04822	.39805
Services Provided									

(p>0.05) SD = Significant Difference

Table 4 shows the z-test analysis for the test of significant difference between the mean responses of new and old housing occupants as regards the level of occupants' satisfaction with the services provided in the residential housing estates in Lokoja, Kogi State. The Levene's test was carried out to determine equality of variance. The test showed an F value of 9.25 with a p-value of 0.75 which means that equal variances was assumed. Furthermore, the z-test analysis showed a z-value of 3.89 and a p-value of 0.02 which is less than the bench mark of 0.05. Hence, null hypothesis two was rejected. This implied that there is significant difference between the mean responses of new and old housing occupants as regards the level of occupants' satisfaction with the services provided in the residential housing estates in Lokoja, Kogi State.

Findings of the Study

The following findings emerged from the study based on the research questions answered and the hypotheses tested.

1. The level of occupants' satisfaction with the facilities provided in the housing estates in Lokoja, Kogi State was moderate.
2. The level of occupants' satisfaction with the services provided in the housing estates in Lokoja, Kogi State was moderate.
3. There is significant difference between the mean responses of new and old housing occupants as regards the level of occupants' satisfaction with facilities provided in the residential housing estates in Lokoja, Kogi State.
4. There is significant difference between the mean responses of new and old housing occupants as regards the level of occupants' satisfaction with services provided in the residential housing estates in Lokoja, Kogi State.

Discussion of Findings

The findings of research question one revealed that occupants' satisfaction with facilities in Lokoja's housing estates was moderate. Facilities assessed included backup generators, boreholes, CCTV systems, recreational centers, parking spaces, paved roads, street lighting, and firefighting equipment. A significant difference in satisfaction levels was observed between new and old housing occupants. This difference likely result from the degradation of facilities in older residences compared to the generally better condition of facilities in newer properties.

The findings align with previous research indicating moderate satisfaction levels among residents in various locations: Abiodun and Kingsley (2020) in Benin City, Faisal (2023) in Hamad City, and Elahi (2024) in Mashhad. However, they differ from Ogbuefi and Okoro

(2019), which reported high satisfaction in private housing estates in Port Harcourt, potentially due to the superior management by private developers in those estates.

The findings on research two revealed that the level of occupants' satisfaction with the services provided in the housing estates in Lokoja, Kogi State was moderate. The services include: security, electricity supply, water supply, waste disposal services, landscaping and gardening maintenance, road maintenance, internet service and wifi, health clinics and car wash services among others. Also, the findings on hypothesis two revealed that there was significant difference between the mean responses of new and old housing occupants as regards the level of occupants' satisfaction with services provided in the housing estates in Lokoja, Kogi State. This implied that the respondents had different opinions regarding the level of their satisfaction with the services provided in the housing estates. This could be as

The findings align with several studies indicating moderate satisfaction levels with housing services: Azian et al. (2023) in Kenya, Abiodun and Kingsley (2020) in Benin City, and Faisal (2023) in Gaza Strip. They also confirm Ogbuefi and Okoro's (2019) finding of significant differences in satisfaction between private and public housing estate occupants. However, they contrast with Ogbuefi and Okoro's (2019) observation that private estate occupants in Port Harcourt reported high satisfaction, likely due to the superior facilities and services provided by private developers.

Conclusion

The study concluded that while essential facilities like backup generators, boreholes, CCTV systems, and street lighting are present, overall occupant satisfaction is only moderate. This suggests that the infrastructure, though in place, does not fully meet occupants' needs, with notable differences in satisfaction between new and old housing occupants. The moderate satisfaction with services such as security, electricity, water supply, and waste disposal indicates that these services also fall short of fully meeting occupants' needs. The disparities in satisfaction levels emphasize the need for targeted improvements, especially in older estates where facilities may be outdated or inadequate.

Recommendations

The following recommendations were made based on the findings of this study;

1. The management of housing estates in Lokoja, Kogi State should periodically carry out routine maintenance and general upgrade of existing facilities to improve the level of occupants' satisfaction with their facilities.
2. The management of the housing estates in Lokoja, Kogi State should establish an active service response team and their contact should be distributed to all occupants in the estate to enable effective communication and prompt response for cases of emergency.
3. The management of housing estates in Lokoja, Kogi State should create avenues such as suggestion boxes, social media platforms (Whatsapp group) and help lines where occupants will have the opportunity to share the challenges they face and necessary arrangement be made to address such challenges.

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