International Journal of Sustainable Development and Planning
Vol. 19, No. 11, November, 2024, pp. 4441-4452
Journal homepage: http://iieta.org/journals/ijsdp

Satisfaction with Neighbourhood Physical Environment of the Government Staff Housing Schemes in Lagos State, Nigeria

Adedotun O. Akinola[1*], Eziyi O. Ibem[2], Akunnaya P. Opoko[3], Esther O. Adekunle[4], Vincent O. Ene[1]

[1] Department of Architecture, Covenant University, Ota 112233, Nigeria
[2] Department of Architecture, University of Nigeria, Enugu Campus, Enugu 400241, Nigeria
[3] Department of Architecture, Bells University of Technology, Ota 112104, Nigeria
[4] Department of Political Science and International Relations, Covenant University, Ota 112233, Nigeria

Corresponding Author Email: adedotun.akinola@covenantuniversity.edu.ng

https://doi.org/10.18280/ijsdp.191131

Received: 11 July 2024
Revised: 25 August 2024
Accepted: 14 September 2024
Available online: 28 November 2024

Keywords:
satisfaction, neighbourhood physical environment, government staff housing schemes, survey, Lagos State

ABSTRACT

A neighbourhood's physical environment is crucial to residents' quality of life. However, not much is known about residents' satisfaction with the neighbourhood physical environment of government staff housing schemes in Nigeria. This research sought to examine the satisfaction with the neighbourhood physical environment of the nine government Staff housing estates in Lagos State, Nigeria. The data were sourced through a questionnaire survey involving 500 household heads in the study area. The data were analysed using descriptive and principal component analyses. The results revealed that about 44.6% indicated contentment with the physical environment of the estates and were most pleased with the closeness of their housing units to their places of worship but least satisfied with the closeness of their housing units to the nearest fire service station. The top three out of six main dimensions of neighbourhood physical environment satisfaction were the closeness of housing units to neighbourhood facilities and access to parking spaces and public transport services; the number of entrances, the number of green areas and open spaces, and drainage facilities and external lighting and access to children's play area. These findings imply that to enhance residents' satisfaction with the physical neighbourhood environment in government-provided staff housing estates, architects, estate managers, town planners and other professionals involved in the design, construction and management of housing estates should consider the provision of vital neighbourhood facilities such as worship places, fire stations, parking spaces, good quality green areas and open spaces, drainage facilities and external lighting and others as identified in this research.

1. INTRODUCTION

The "government staff housing" provision is based on the government as an employer and provider of housing for its employees in Nigeria. It falls under the public housing provision, which caters to the housing needs of a segment of the citizens. As is true for other forms of housing provision, public housing comprises housing units, housing unit services, neighbourhood facilities and management practices [1-3]. Among these, the neighbourhood environment of housing influences how people live, network, work as well as play. Even though the term community is often used in place of neighbourhood, Cater and Jones [4] pointed out that the two terms vary in description as well as contents. These authors defined "community" as social dynamics and connection within a geographic area, and "neighbourhood" as a physical place. The planning approach and ecological approaches are the two key approaches to understanding the concept of the neighbourhood as explained by Higgitt and Memken [5]. On the one hand, the planning approach defines neighbourhood as how the physical environment supports its residents in their everyday lives. The ecological approach on the other hand describes the neighbourhood as a functional unit that is related to both the physical characteristics of a community and how social clusters are distributed in different neighbourhood settings. Berk [6] also defined the neighbourhood as the immediate physical and social surroundings of the residence. Given these definitions, the neighbourhood environment as used in this study refers to the immediate social, physical, and economic surroundings of the residential units. However, the scope of the current research is limited to the physical neighbourhood environments of government staff housing estates.

The physical environment of a residential neighbourhood plays a crucial role in promoting social cohesiveness, community building, and social interactions among residents. This comprises public spaces, such as parks, plazas, community centers and others which serve as hubs for community activities. Mouratidis and Poortinga [7] asserted that a neighbourhood's physical environment has a complex

influence on people's experiences, perceptions, and general levels of pleasure. Beyond just providing a place to live, a neighbourhood's physical environment has a significant influence on social interactions, safety and well-being, day-to-day activities, and accessibility to basic services and facilities. According to Lee et al. [8], these can foster a feeling of trust, shared identity, and belonging within the community, which can improve social cohesiveness and inhabitants' contentment with their living conditions. The physical neighbourhood environment has a substantial influence on people's sense of safety, security, and general well-being, according to Basu et al. [9]; leading to improvement in the general well-being and contentment with their community [10].

Further, Mouratidis and Yiannakou [11] noted that peoples' daily activities, mobility, and access to necessary services and facilities are usually shaped by the physical characteristics of their neighbourhood environment. For instance, the availability and accessibility to pedestrian-friendly infrastructure, such as bike lanes, sidewalks, and public transit systems can affect how people choose to get to their places of work, schools, markets, healthcare facilities, and other vital urban services. Research has also shown that a well-planned neighbourhood environment with a high premium on accessibility and walkability may encourage active lives, lessen dependency on personal automobiles, and help create a more ecologically conscious and sustainable society [12]. Notably, the studies by Tcymbal et al. [13] and Grum and Grum [14] identified the key design and planning features of residential neighbourhood environments to include open spaces, lighting, walkability, and aesthetics, and concluded that these aspects have a profound influence on residents' level of satisfaction with their neighbourhood physical environment. It was on this premise that other authors noted that neighbourhood environments with well-kept green areas, eye-catching landscaping, and visually appealing architectural features can increase inhabitants' sense of pride and ownership and improve their general contentment with their surroundings [15]. In addition, it has also been reported that well-designed parks and green areas can provide opportunities for leisure and exercise, improving the physical and emotional well-being of the community, and leading to general satisfaction with the residential environment [16].

Parkes et al. [17] noted that in a bid to ensure that most residents are satisfied with their residential environments in the urbanizing world, neighbourhood (dis)-satisfaction has become a significant aspect of the neighbourhood that has received significant research attention. According to Permentier et al. [18], the degree to which locals are happy or unhappy with the social, physical, and economic surroundings of their dwellings is the definition of neighbourhood satisfaction. Given this, research on residential neighbourhoods has been based on diverse perspectives and different theories. This is because housing satisfaction consists of the satisfaction housing unit and the neighbourhood environment. The current study is based on the housing deficit, housing need and psychological construct theories.

In an attempt to assess residential satisfaction, some previous studies have explored satisfaction with housing units and neighbourhood environments in one research [2, 19, 20]. Research has also explored residents' satisfaction with the neighbourhood physical environments of public housing estates. For example, Ibem et al. [21] examined neighbourhood settings and residents' satisfaction with public housing in Ogun State, southwest Nigeria, Okopi [22] investigated residents' contentment with the provision of local infrastructure in Kano, northern, Nigeria, while Mouratidis [23] investigated the travel distance satisfaction, neighbourhood satisfaction, and housing satisfaction as predictors of subjective quality of life in Oslo, Norway. Despite the insight gained from these studies, there is limited research on residents' satisfaction with neighbourhood physical environment of government staff housing estates in Nigeria. Specifically, no study known to us has explored the extent to which residents are satisfied with the physical neighbourhood environment of government staff housing schemes in Nigeria. As a result, not much is known about the performance of the physical environment of housing estates provided in this scheme in meeting the occupants' needs, expectations and aspirations.

It is against this background that this research sought to assess the residents' satisfaction with the neighbourhood physical environments of the government Staff housing schemes in Lagos State, Nigeria, to make suggestions on how to enhance residents' satisfaction with government Staff housing schemes in the study area and beyond. The study was guided by two key research questions served. They are as (i) What are the residents' levels of satisfaction with the physical neighbourhood environments of government staff housing estates provided in Lagos State, Nigeria? (ii) How do the residents understand satisfaction with the physical neighbourhood environments of the housing estates in the study area?

The focus on government staff housing schemes was informed by the increasing number of housing estates provided by both public and private sector employers in Nigeria with little or no attempt to evaluate the performances of these housing estates in meeting the occupants' needs. This study contributes to scientific knowledge by identifying the aspects of the physical neighbourhoods of the housing estates that influenced the residents' levels of satisfaction. It also identified aspects that need to be strengthened in enhancing the levels of residents' satisfaction and by extension their quality of life in government staff housing estates provided in Lagos State, Nigeria. The knowledge of these is vital in informing mass housing design, planning and management practices as well as policy-making in Nigeria.

2. LITERATURE REVIEW

2.1 History of employee housing schemes

The housing problem is enormous and complex. The problem has also manifested in qualitative and quantitative forms. To address this problem, successive governments have engaged in several initiatives and policies. In Nigeria, one of such policies is the employee housing scheme, through a special provision in Decree Number 54, 1979. This decree made it compulsory for all employers with up to 500 employees to provide and maintain for their employees in a housing scheme. In addition, the decree provides for the provision of houses on a rental basis by the employer and that the designated employer may provide furniture for the employees [3]. To buttress the importance of this decree in housing provision in Nigeria, the employee housing scheme was recognized in both the 1991 and 2012 national housing policy documents.

Under the provisions of the Employee Housing (special

provision) Decree 1979, many public and private sector employers of labour in Nigeria have set up several mass housing schemes by developing mass housing estates for their employees. This type of housing scheme involves the government as employers, providing housing to its employees on a rental basis in the course of their employment in government agencies. Hence, it has been described as a sub-set of public housing, especially for those who cannot afford decent housing on their own.

The Government Staff Housing Schemes in Lagos State, Nigeria is a typical example of an employee housing scheme in Nigeria. Given the submission by Ibem et al. [21] that for the housing sector to improve the quality of housing it produces, it must explore and understand users' needs and expectations and the extent to which such needs and expectations are met through regular performance evaluation, the current study is focused on evaluating an aspect of the housing estates provided under this scheme in Lagos which is Nigeria's largest metropolitan area

2.2 Neighbourhood physical environment satisfaction: theoretical clarification

Neighbourhood satisfaction is commonly regarded as the degree to which the needs of residents are met within their neighbourhood environments [18]. The neighbourhood environment can also be further broken into the physical neighbourhood, social and economic neighbourhood environment. The neighbourhood's physical environment is the focus of the current research. Thus, satisfaction with the neighbourhood's physical environment is defined as an evaluation of how well people's local physical environments meet their needs, expectations and aspirations. Several theories, including the housing needs, the housing deficit theory, and the psychological construct theory. This is because housing satisfaction consists of the satisfaction housing unit and the neighbourhood environment. Housing need theories were originally presented by Rossi [24], who pointed out that there are diverse life phase stages which lead to varying housing needs and that the difference between current and anticipated housing needs generates housing strain or dissatisfaction. Related to this is the housing deficit theory, which contends that residents evaluate their housing situation, which includes the neighbourhood's physical environment based on some social, economic and psychological family and cultural norms. This evaluation is determined by several factors, including physical, social, and economic characteristics of the housing environment. In the evaluation process, if there is an incongruity between the existing housing situation and the established family and societal norms can lead to a housing deficit, leading to residential dissatisfaction [25]. In line with this, if the residents of the neighbourhood physical environments of the housing estates align with the family and societal norms, there is a high tendency for the residents to feel satisfied with these, and vice versa. The psychological construct theory contends that individuals usually have a mental picture of what their housing situation should be, and thus evaluate their housing environment using that as the reference standard. They tend to express satisfaction if their housing situation reasonably aligns with the reference situation, and vice versa [26]. In applying this theoretical framework, it is also important to reckon that housing schemes are social programmes designed to meet the needs of target beneficiaries. Hence, the evaluator must first identify those intending to use the housing products and services before the evaluation study is designed [27]. This suggests that even before the evaluation's design and data collection, the perspectives of the target beneficiaries must be known and considered in the design of the housing projects. This informs the adoption of a utilization-focused evaluation approach in a majority of the research on satisfaction with public housing.

2.3 Review of empirical studies on neighbourhood physical environment satisfaction

Several reasons abound on why neighbourhood satisfaction studies should be conducted. Chief among these is that residents' satisfaction studies help us to know the housing conditions of the residents, their expectations and aspirations [21], and quality of life [28, 29] and to determine the achievements or failures of housing programmes, projects, strategies and or policies [30]. In addition, studies on neighbourhood satisfaction also provide insight into residents' housing modification and mobility behaviours [28].

Even though the neighbourhood environment comprises physical, social and economic aspects, the current study is focused on the neighbourhood's physical environment. The physical environment of a neighbourhood comprises mostly public and neighbourhood facilities. The quality, and proximity of these facilities to residents have an influence on residents' satisfaction or dissatisfaction with their residential neighbourhood. Particularly in the context of public housing, the neighbourhood environment is very key to determining residents' experiences and general levels of satisfaction. A key factor in deciding neighbourhood satisfaction and quality of life is having easy access to basic services and amenities [31]. According to Du et al. [32], neighbourhood facilities such as schools, places of worship, markets, healthcare facilities, public transportation, workplaces, fire services, and recreational spaces are key to meeting residents' daily needs and enhancing their overall health and well-being. In the work by Mayne et al. [33], it was reported that the proximity to educational facilities, such as schools and daycare centers, is especially important for families with children. Not only does having these amenities close make life more convenient, but it also makes commuting easier and reduces travel time for the kids, leading to their general safety and well-being.

Similarly, having access to places of worship can help neighbours feel more connected to one another and more fulfilled spiritually, leading to a higher level of happiness in the neighbourhood as a whole. It is equally important to have markets and food shops within residential neighbourhoods to ensure that residents have easy access to necessities at convenient locations without having to travel long hours to get them [34]. Furthermore, Peters et al. [35] highlighted that the availability of healthcare facilities, such as clinics and hospitals, within the neighbourhood can be life-saving in emergencies and can provide peace of mind for residents, particularly the elderly and those with chronic health conditions. Similarly, Mouratidis [36] and Van Soest et al. [37], noted that access to reliable public transportation is another critical factor that contributes to neighborhood satisfaction. Efficient public transportation systems, such as buses, trains, or subways, enable residents to commute to work, run errands, or access services and amenities outside their immediate neighbourhood with ease. This encourages a more ecologically conscious and sustainable way of living in addition to lowering dependency on personal automobiles [38].

Furthermore, residential neighbourhoods with sources of employment, fire protection, and entertainment may greatly improve the quality of life for the locals [39]. While having access to fire services assures inhabitants of a sense of security and safety, living close to places of employment can shorten commuting time and the stress associated with this [40]. Parks, playgrounds, and sports facilities are examples of recreational facilities that offer opportunities for physical activities, social interactions, and mental health in general [41, 42]. In addition to making residential areas more convenient for inhabitants daily, the presence and accessibility to these amenities influence residents' perception of their neighbourhood as a desirable and livable place [40]. When essential services and amenities are within reach, residents tend to experience a greater sense of satisfaction, comfort, and overall well-being, ultimately enhancing their quality of life within the neighbourhood [43]. Succinctly put, the closeness of housing units to the places of worship, the nearest market, gas/petrol station, banking facilities /services, and parking spaces have been identified as aspects of the neighbourhood's physical environment that affect residents' satisfaction [21, 22, 44-46]. Research has also shown that access to public transport services, and proximity homes to the nearest police post, hair barbing/ dressing saloons, auto-mechanic workshops, health care facilities, drinking joints/eateries, friends and loved ones, shopping facilities, work /business, and children's play areas also influence residents' satisfaction with neighbourhood physical environments [18, 21, 22, 47-49]. The proximity of dwelling units to open spaces to dry washed clothes, connectivity between different parts of the estate, closeness of housing units to business centres/cyber cafes, quality of telecommunication services within neighbourhoods, external lighting, closeness to the public library, signage and street furniture, and good stormwater drainage facilities are factors that influence neighbourhood physical environment satisfaction [21, 46-48].

Other studies have examined neighbourhood physical environment within the context of residential satisfaction research [1, 3, 50-56], while neighbourhood physical environment satisfaction has been part of general research on neighbourhood satisfaction [18, 21, 44, 46-48]. For example, Jaramillo et al. [49] used neighbourhood satisfaction in Charlotte, North Carolina, to investigate the relationship between the subjective well-being of housing Choice Ticket beneficiaries and other community opportunity aspects. According to that study, moving to an area with better prospects may not immediately result in increases in neighbourhood satisfaction and, consequently, subjective well-being. Mantey [57] considered the essential elements for sub-urban neighbourhood satisfaction with emphasis on walkability, ease of access, and mental and social views about the neighbourhood. The study reported that ease of access was the most important predictor of satisfaction with the sub-urban neighbourhood environment. Another study by Kwon et al. [58] examined the relationship between quality of life (QoL) and neighbourhood and physical environment satisfaction in Gyeonggi, Korea. The authors found that improved neighbourhood and physical elements satisfaction had a significant effect on quality of life, with the most discernible effect coming from satisfaction with access to basic amenities. Using survey and geospatial information gathering methods, Mouratidis [59] investigated the association between neighbourhood deficit and neighbourhood features, satisfaction with neighbourhood, and well-being in Oslo. The results indicated that destitute neighbourhoods had greater perceived uproar and lower perceived safety, sanitation, status, and place affection. Neighbourhood satisfaction and emotional reaction to the neighbourhood were found to be lesser in underprivileged neighbourhoods. The author also reported that residents of underprivileged neighbourhoods experienced lower levels of satisfaction with the neighbourhood and lesser emotional reaction to the neighbourhood even when social infrastructure like open green spaces, public transport services, and local facilities were uniformly distributed. Aksel and İmamoğlu [60] also examined how neighbourhood location affected place attachment and residential satisfaction. In contrast to prior studies, the findings demonstrated a positive correlation between place connection and residential satisfaction albeit neighborhood location appears to be only associated with residential satisfaction.

In Nigeria, Okopi [22] assessed resident's satisfaction with neighbourhood facilities in a public residential estate in Kano, Nigeria. The findings showed that the residents valued the proximity of their houses to places of worship, aesthetic appeal, proximity to schools and shops/markets, level of seclusion, integration of the residences, and superior layout. However, some residents were dissatisfied with the power supply, health, surveillance, safety, and vigilante, refuse/ sewage disposal facilities, potable water supply, drainage and leisure facilities, open spaces, the landscape and public spaces for social interactions. Ibem et al. [21] investigated neighbourhood satisfaction in public housing estates in Ogun State, Nigeria. The results revealed that most of the residents sampled in that study were dissatisfied with the neighbourhood physical environments of public housing estates, with poor access to utilities and services being the main source of dissatisfaction.

From the literature reviewed here, it is clear that studies in their climes have divergent findings on satisfaction with the neighbourhood's physical environment. Whereas some studies found that explicit characteristics had a significant influence on satisfaction with the neighbourhood environments, others found no substantial impact at all. This suggests the existing studies are inconclusive. This might be due to some factors. First, it might be due to the various variables investigated and the diversity of contexts involved in these studies. Second, it can also be because some of these studies assessed the neighbourhood environment as a whole comprising physical and social aspects. Some authors examined the housing unit and neighbourhood environment together in the context of overall residential satisfaction [2, 19, 20]. It is also evident from the review that even though satisfaction with the physical settings of neighbourhoods in public housing estates has been assessed by some authors, satisfaction with the neighbourhood physical environment of government Staff housing estates has received very little research attention, especially in Nigeria. Moreover, how residents understand satisfaction with the neighbourhood's physical environment has not been adequately explored in the housing literature. These constitute the research gap the current study attempts to fill.

3. STUDY AREA

Lagos, one of the main commercial and economic centers in sub-Saharan Africa, is located between longitude 3°21'24'E and latitude 6°35'8'N. With a population density of 4713 people per square kilometre, Lagos has an area of 3577.8

square kilometres. However, within the metropolis, which houses most of the informal settlements, the density soars to 12000 persons per square kilometre. The Lagos metropolis comprises 16 out of the 20 local government areas of Lagos State. Despite being Nigeria's smallest state in terms of land area, it is the most populous. Lagos' environment is characterized as coastal, featuring wetlands, sandy barrier islands, and beaches. Water is the most significant topographical feature in Lagos State. The Lagos State government have several ministries, departments and agencies under the control of the Governor of the State. One such is the Staff Housing Board under the supervision of the Lagos State Head of Service Office.

The Staff Housing Board was established in 1976 primarily to cater for the ever-increasing demand for government Staff quarters by providing decent and affordable housing units to Public Servants. It also provides soft loans to enable members of staff to buy land towards building their houses and /or refurbish their existing houses. The Board monitors, maintains, updates record and enforces rules and regulations guiding the occupation and vacation of government staff quarters.

4. METHODS

The data used in this manuscript study are part of a larger research work on the outcomes of a public sector employee housing scheme in Lagos State, Nigeria. The research design used was a cross-sectional survey. They are 48 Lagos State Staff Housing Board-managed estates/locations in Agge, Ifako-Ijaiye, Oshodi–Isolo, Amowo-Odofin, Ikeja, Ikorodu, Mainland, Island, Surulere, Kosofe and Badagry Local Government Areas. A total of 1148 dwelling units were identified in these housing estates/locations. Six of the 11 local governments area identified were selected using a cluster sampling technique. The housing estates of the following local government districts- Agege, Ifako-Ijaiye, Oshodi-Isolo, Amowo-Odofin, Ikeja, and Ikorodu were selected for investigation because they have a large number of residents and a high concentration of governmental workers. The housing estates in these locations have 688 housing units representing about 60% of the housing units provided in the 48 Lagos State Staff Housing Board-managed housing estates/locations. Given this number of housing units, a census sampling technique was used in selecting all the dwelling units to constitute the sample size for this research.

The research population consists of household heads in the 688 housing units of the 9 housing estates selected for investigation. The principal data collection instrument used was a structured questionnaire designed by the researchers based on the findings from the literature review. Although the questionnaire used in the bigger research project had questions structured into five parts, the data presented in this manuscript were derived from Parts A and D of the instrument. Part D of the questionnaire was used to elicit from the residents their satisfaction with the neighbourhood physical environments of the eleven housing estates sampled. Based on the literature review, questions were framed around the residents' satisfaction with 31 neighbourhood physical environment attributes. The research participants were asked to rate their level of satisfaction with each attribute using a 5-point Likert scale, ranging from '1' for Very Dissatisfied, to '5' for Very Satisfied. The questionnaire instrument was pre-tested in a non-selected staff housing estate and the reliability of the scale of measurement was investigated using the Cronbach alpha reliability test, which returned 0. 927 for the 31 items investigated.

The main survey was conducted between September 2020 and March 2021in the study area. This involved giving each household head or their adult representatives in the housing units a copy of the questionnaire to fill out by hand during work days and at weekends. As noted earlier all the housing units in the 9 housing estates were given a copy of the questionnaire. A total of 688 copies of the questionnaire were administered out of which 500 copies were retrieved (see Table 1) This represents a response rate of about 73%.

The data was subjected to descriptive analysis using frequencies, percentages mean satisfaction scores and mean score ranking. These were used to answer the research question 1. To answer research question 2, factor analysis (i.e., Principal Component Analysis, PCA) was used to analyze the data. The choice of PCA was informed by the large number of interconnected variables and the need to uncover the underlying dimensions of the residents' understanding of satisfaction with the neighbourhood physical environments of their housing estates. Before executing the PCA, there was a need to determine whether the dataset was appropriate for this type of analysis. This was done using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy. The KMO test produced a score of 0.93 (more than the recommended 0.6), and Bartlett's Test of Sphericity of 0.000. These results confirmed the dataset can be subjected to factor analysis. In the PCA, the Varimax Rotation technique with Kaiser Normalization was utilized in the extraction factors. Previous studies of this nature had adopted this approach [61-64].

Table 1. Estates investigated

	Local Government	Housing Estates /Location	Total Number of Units	Retrieved
1	Ifako-Ijaiye	Ogba Phase 2	280	258
2	Ikeja	Hos Staff Quarters	94	32
3	Ifako-Ijaiye	Ijaiye Medium Housing	26	23
4	Ifako-Ijaiye	Lsdpc Estate Ojokoro	18	16
5	Oshodi – Isolo	General Hospital, Isolo quarters	14	5
6	Amuwo Odofin	Amuwo Odofin Low Cost	94	68
7	Ikorodu	Tos Benson Estate, Owutu, Ikorodu	98	59
8	Ifako-Ijaiye	Millenium Estate	40	20
9	Agege	Ijaiye Low-Cost Pen Cinema	24	19
		Total	688	500

5. RESULTS

5.1 Residents' satisfaction with neighbourhood physical environments of the housing estates

The research used thirty-one questions to examine the neighbourhood physical environments of the housing estates

sampled. The mean satisfaction scores (MSS) for these items varied between 3.12 and 3.96. (Table 2). Based on these, it can be deduced that the residents were generally satisfied with all 31 attributes of the neighbourhood physical environments of the housing estates. Furthermore, the results in Table 2 indicate that the proximity of the housing units to the place of worship (MSS=3.96), the housing estate's location within the city (MSS=3.89), and the proximity of the housing unit to the closest market (MSS=3.85) were the top three attributes of the neighbourhood physical environment of the estates the residents were most satisfied with. However, they were least satisfied with, the quality of stormwater drainage facilities in the estates, the proximity of their dwelling units to the closest fire station, and the signage and street furniture in the estates. As shown in Table 2, each of these attributes had a mean satisfaction score of 3.12. A summary of the residents' general satisfaction with each of the 31 attributes of the neighbourhood's physical environment (Figure 1) shows that while the highest proportion (44.6%) of those sampled expressed satisfaction with the neighbourhood's physical environment, around 25.4% of them did not respond to the question on this, about 27.6% were not sure of this, while around 2.4% were dissatisfied with this. The results suggest that the number of residents who are satisfied with the neighbourhood physical environments of the housing estates is more than those who are dissatisfied with this.

Table 2. Descriptive statistics of residents' satisfaction with the neighbour physical environment

NPE	1	2	3	4	5	NR	N	MSS	MSR
The closeness of your housing unit to your place of worship	9(1.8)	25(5.0)	63(12.6)	261(52.2)	121(24.2)	21(4.2)	479	3.96	1st
Location of housing estate in the city	9(1.8)	38(7.6)	87(17.4)	210(42.0)	136(27.2)	20(4.0)	480	3.89	2nd
The closeness of your housing unit to the nearest market	10(2.0)	35(7.0)	75(15.0)	258(51.6)	104(20.8)	18(3.6)	482	3.85	3rd
The closeness of your housing unit to your gas/petrol station	7(1.4)	36(7.2)	77(15.4)	278(55.6)	82(16.4)	20(4.0)	480	3.82	4th
The closeness of your housing unit to your banking facilities /services	15(3.0)	52(10.4)	60(12.0)	238(47.6)	114(22.8)	21(4.2)	479	3.80	5th
Location of parking spaces in the estate	22(4.4)	39(7.8)	66(13.2)	242(48.4)	103(20.6)	28(5.6)	472	3.77	6th
Access to public transport services from the estate	15(3.0)	38(7.6)	104(20.8)	218(43.6)	103(20.6)	22(4.4)	478	3.74	7th
Closeness of your housing unit to the nearest Police post	20(4.0)	49(9.8)	80(16.0)	229(45.8)	99(19.8)	23(4.6)	477	3.71	8th
The closeness of your housing unit to hair barbing/ dressing saloons	12(2.4)	44(8.8)	89(17.8)	263(52.6)	70(14.0)	22(4.4)	478	3.70	9th
Number of buildings in the estate	17(3.4)	31(6.2)	98(19.6)	267(53.4)	64(12.8)	23(4.6)	477	3.69	10th
The closeness of your housing unit to auto-mechanic workshops	13(2.6)	42(8.4)	119(23.8)	216(43.2)	91(18.2)	19(3.8)	481	3.69	10th
Closeness of your housing unit to the nearest healthcare facilities	14(2.8)	63(12.6)	81(16.2)	226(45.2)	96(19.2)	20(4.2)	480	3.68	11th
The closeness of your housing unit to drinking joints/eateries	18(3.6)	57(11.4)	105(21.0)	212(42.4)	79(15.8)	29(5.8)	471	3.59	12th
The closeness of your housing unit to your friends and loved ones	14(2.8)	62(12.4)	98(19.6)	243(48.6)	61(12.2)	22(4.4)	478	3.58	13th
The closeness of your housing unit to Children's school	17(3.4)	71(14.2)	92(18.4)	218(43.6)	79(15.8)	23(4.6)	477	3.57	14th
The closeness of your housing unit to shopping facilities	9(1.8)	91(18.2)	72)14.4)	247(49.4)	63(12.6)	18(3.6)	482	3.55	15th
The closeness of your housing unit to your place of work /business	20(4.0)	76(15.2)	79(15.8)	231(46.2)	73(14.6)	21(4.2)	479	3.54	16th
Access to Children's play area within the estate	19(3.8)	62(12.4)	108(21.6)	224(44.8)	67(13.4)	20(4.0)	480	3.54	16th
Open space to dry washed clothes	21(4.2)	78(15.6)	87(17.4)	234(46.8)	57(11.4)	23(4.6)	477	3.48	17th
Connectivity between different parts of the estate	16(3.2)	56(11.2)	148(29.6)	196(39.2)	59(11.8)	25(5.0)	475	3.48	17th

NPE	1	2	3	4	5	NR	N	MSS	MSR
The closeness of your housing unit to business centres / cyber cafes	18(3.6)	91(18.2)	73(14.6)	235(47.0)	58(11.6)	25(5.0)	475	3.47	18th
Quality of telecommunication services within the estate	26(5.2)	61(12.2)	164(32.8)	162(32.4)	60(12.0)	23(4.6)	477	3.43	19th
Number of entrances/ exit gates in the estate	37(7.4)	82(16.4)	90(18.0)	196(39.2)	72(!4.4)	23(4.6)	477	3.39	20th
The closeness of your housing unit to recreational /sport facilities	33(6.6)	91(18.2)	107(21.4)	181(36.2)	66(13.2)	22(4.4)	478	3.33	21st
Pedestrian walkways in the estate	44(8.8)	71(14.2)	112(22.4)	179(35.8)	64(12.8)	30(6.0)	470	3.31	22nd
Quantity of green areas and open spaces in the estate	35(7.0)	87(17.4)	117(23.4)	173(34.6)	60(12.0)	28(5.6)	472	3.29	23rd
External lighting in the estate	46(9.2)	92(18.4)	88(17.6)	181(36.2)	65(13.0)	28(5.6)	472	3.27	24th
The closeness of your housing unit to your public library	37(7.4)	85(17.0)	159(31.8)	142(28.4)	53(10.6)	24(4.8)	476	3.19	25th
Signage and street furniture in the estate	22(4.4)	101(20.2)	169(33.8)	137(27.4)	32(6.4)	39(7.8)	461	3.12	26th
Quality of stormwater drainage services in the estate	68(13.6)	55(11.0)	148(29.6)	154(30.8)	47(9.4)	28(5.6)	472	3.12	26th
The closeness of your housing unit to the nearest fire service station	48(9.6)	118(23.6)	103(20.6)	139(27.8)	66(13.2)	26(5.2)	474	3.12	26th

1= Very dissatisfied 2= Dissatisfied, 3= Not Sure, 4=satisfied, 5= Very satisfied, NR = No Response; N (%), NPE= Neighbourhood Physical Environment; MSS=Mean Satisfaction Score; MSR= Mean Score Ranking

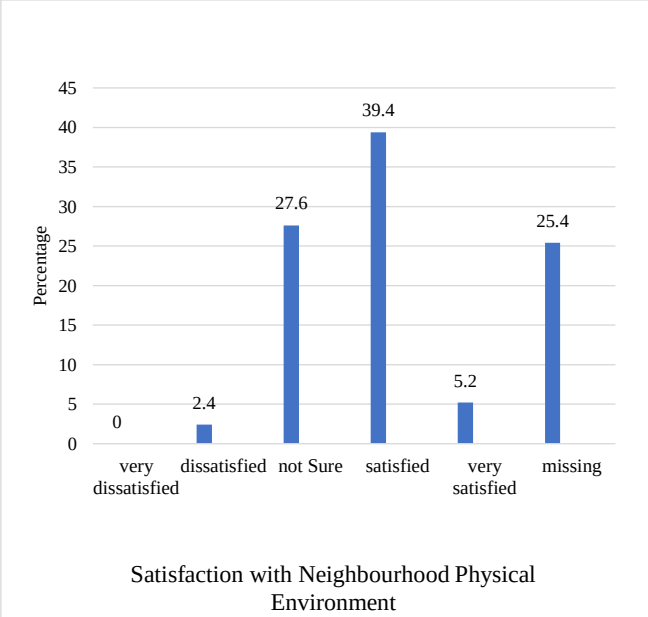

Figure 1. Residents' overall satisfaction with neighbourhood physical environment

5.2 Dimensions of residents satisfaction with neighbourhood physical environments of the housing estates

Table 3 displays the six factors, the cumulative percentage accounted for and the proportion of variance each factor contributed as extracted from the PCA. The results show that the six components (dimensions) accounted for about 58.68% of the variation in the 31 variables investigated. According to Table 3 the extracted components had an Eigenvalue of over one (e>1) and were significantly correlated. The six components extracted present the dimensions the residents of the housing estates understood, assessed and interpreted their satisfaction level with the neighbourhood physical environments of the housing estates sampled.

Furthermore, Table 3 shows the suggested names and factor loadings for each of the six components extracted from the PCA. The first component /dimension which is the *closeness of housing units to neighbourhood facilities and access to parking spaces and public transport services*, accounted for around 14.61% of the variance in all the 31 attributes investigated and has 8 factors loaded on it. The second dimension is the *number of entrances, the number of green areas and open spaces, drainage facilities, external lighting and access to the Children's play area.* This dimension which accounted for around 11.84% of the variance in all the variables investigated has six factors loaded on it. The third dimension is the *closeness of housing units to businesses and Children's schools,* which accounted for around 11.81% of the variance in the variables and had five factors loaded on it. The fourth dimension is the *Closeness of housing units to public libraries, fire stations and recreational/sports facilities***,** which accounted for around 7.90% of the variance in the variables and has three factors loaded on it. The fifth dimension is the *open spaces for dry-washed clothes,* which accounted for around 6.96% of the variance in the variables and had one item loaded on it. The sixth dimension is the *location of a housing estate in the city and the number of buildings in the estate***,** which accounted for around 5.55% of the variance in the variables and had two items loaded on it. However, the six dimensions or components that were found are thought to be the most significant ways that the residents assessed how satisfied they were with the actual neighbourhood setting of their apartments in the estates.

Table 3. Suggested names and factor loadings for six dimensions residents' satisfaction with neighbourhood physical environment

	Factor Loading	Eigenvalue	% of Variance	Cum %
Dimension 1: Closeness of housing units to neighbourhood facilities and access to parking spaces and public transport services		10.622	14.612	14.612
Closeness of your housing unit to your banking facilities /services	**.723**			
Closeness of your housing unit to your place of worship	**.722**			
The closeness of your housing unit to the nearest market	**.698**			
Closeness of your housing unit to your gas/petrol station	**.655**			
Closeness of your housing unit to auto-mechanic workshops	**.601**			
Closeness of your housing unit to the nearest Police post	**.533**			
Location of parking spaces in the estate	**.521**			
Access to public transport services from the estate	**.508**			
Dimension 2: Number of entrances, quantity of green areas and open spaces, drainage facilities, external lighting and access to Children's play area		2.295	11.843	26.456
External lighting in the estate	**.757**			
Number of entrances/ exit gates in the estate	**.700**			
Quantity of green areas and open spaces in the estate	**.603**			
Access to Children's play area within the estate	**.567**			
Connectivity between different parts of the estate	**.541**			
Quality of stormwater drainage facilities in the estate	**.538**			
Dimension 3: Closeness of housing units to businesses and Children's school		1.709	11.808	38.264
Closeness of your housing unit to hair barbing/ dressing saloons	**.755**			
Closeness of your housing unit to shopping facilities	**.749**			
Closeness of your housing unit to drinking joints/eateries	**.701**			
Closeness of your housing unit to business centres/cyber cafes	**.642**			
Closeness of your housing unit to Children's school	**.518**			
Dimension 4: Closeness of housing units to public library, fire service station and recreational/sports facilities		1.339	7.904	46.168
Closeness of your housing unit to your public library	**.699**			
Closeness of your housing unit to the nearest fire service station	**.646**			
Closeness of your housing unit to recreational /sports facilities	**.543**			
Dimension 5: Open spaces to dry washed clothes		1.204	6.960	53.129
Open space to dry washed clothes	**.673**			
Dimension 6: Location of a housing estate in the city and number of buildings in the estate		1.021	5.548	58.677
Location of housing estate in the city	**.708**			
Number of buildings in the estates	**.694**			

Variance accounted for 58.68%

6. DISCUSSION

This study aimed to examine residents' satisfaction with the neighbourhood physical environments of government Staff housing estates in Lagos State, Nigeria. The findings of this research have brought to bear two key issues for further discussion. The first finding revealed that the residents were most satisfied with the closeness of their housing unit to their place of worship; the location of housing estate in the city and the closeness of their housing unit to the nearest market and least satisfied with, the quality of stormwater drainage facilities in the estates, the proximity of their dwelling units to the closest fire station, and signage and street furniture in the estates. These findings are consistent with that of Du et al. [32] indicating that these features influence satisfaction with residential neighbourhood environments. Given the disparity in the levels of satisfaction with these features, it can be deduced that adequate consideration was given to the first three aspects, while little or no consideration was given to the last three features in the design, planning and management of these estates.

Further, it was also found that many of the residents sampled expressed satisfaction with neighbourhood physical environment of the estates. Notably, this supports earlier studies by Ukoha and Beamish [50], which showed that residents of housing estates built by the government for their workers in the Federal Capital Territory (FCT) of Abuja, Nigeria, were satisfied with the neighbourhood infrastructures, and by Ibem and Aduwo [54], who reported that the majority of residents of government housing constructed in Ogun State, Nigeria, between 2003 and 2009 were also happy with the neighbourhood's amenities and services in those housing estates. The findings also align with research by Mohit and Azim [53], which reported that residents of government housing in Hulhumale, Maldives, expressed high levels of satisfaction with public facilities, and by Clement and Kayode [52], who found that residents of public housing in Ondo State, southwest Nigeria, were also satisfied with the proximity of their units to places of worship and other neighbourhood facilities. However, the findings contract evidence in Lagos State, Nigeria, where it was reported that residents in low-cost public housing estates were least satisfied with the availability of pedestrian walkways, the number of green spaces and open areas, external lighting, the estates' proximity to the public library and fire station, the availability of signage and street furniture, and the standard of stormwater drainage facilities in

the housing estates [51]. This means that when it came to the location and planning of the housing estates/locations considered, factors like the number of green spaces and open areas within the estate, external lighting within the estate, the proximity of your housing unit to the public library, signage and street furniture within the estate, the quality of stormwater drainage services within the estates, and the proximity of housing units to the closest fire service station were not given priority attention in the design, planning and construction of the low-cost public housing estates in Lagos State, Nigeria.

The second is on the dimensions of residents' satisfaction with neighbourhood physical environments in the government staff housing estates. The results of the PCA revealed that the residents understood satisfaction with the neighbourhood physical environments of the housing estates in six main dimensions. These are 1) the closeness of their housing units to neighbourhood facilities and access to parking spaces and public transport services 2) the number of entrances, quantity of green areas and open spaces, drainage facilities, external lighting and access to children's play area 3) closeness of their housing units to businesses and Children's schools 4) closeness of their housing units to public library, fire station and recreational/sport facilities 5) open spaces to dry washed clothes, and 6) the location of housing estates in the city and number of buildings in the estates.

Notably, these six dimensions represent the most significant attributes of the neighbourhood physical environments of the housing estates that affect their satisfaction with the neighbourhood physical environments in the government Staff housing scheme. This implies that the occupants of these housing estates sampled viewed the closeness of their dwelling units to neighbourhood facilities, parking spaces and public transport services as the physical attribute of the neighbourhood environment with the most significant influence on their satisfaction with this particular component of their housing situation in those estates. Therefore, residents of such schemes are more likely to be satisfied with neighbourhood physical environments if their housing units are close to neighbourhood facilities, parking spaces and public transport services. This result is understandable because the appropriate location of housing estates close to neighbourhood facilities and access to public transport services is a prerequisite for gaining access to key urban infrastructure and other social amenities required for a decent living environment.

7. CONCLUSIONS AND RECOMMENDATIONS

This study investigated residents' satisfaction with the neighbourhood physical environment of government staff housing estates in Lagos State, Nigeria. Based on the findings, two key conclusions have been put forward. The first conclusion is that the highest proportion of the residents sampled were satisfied with the neighbourhood physical environment of government staff housing estates in Lagos State, Nigeria. The second conclusion is that residents of government staff housing estates in Lagos State, Nigeria, understood satisfaction with the neighbourhood physical environment of housing estates in six main dimensions: 1) closeness of their housing units to neighbourhood facilities and access to parking spaces and public transport services 2) the number of entrances, the number of green areas and open spaces, and drainage facilities, external lighting and access to children's play area 3) closeness of their housing units to businesses and Children's schools 4) closeness of their housing units to the public library, fire station and recreational/sport facilities 5) open spaces to dry washed clothes, and 6) the location of housing estates in the city and number of buildings in the estates.

The findings of this study have some noteworthy implications. First is that the study implies the neighbourhood physical environments of the estates meet the needs, expectations and aspirations of around 45% of the 500 residents who took part in the survey. This means that about 55% per cent were not satisfied with this component of the housing environment in the estates. Therefore, architects, planners, builders, engineers and government officials involved in government staff housing estates design, planning and management need to pay more attention to aspects of neighbourhood physical environments of the estates with relatively low mean satisfaction scores as found in this research (see Table 2).

Second, the study implies that the six main dimensions of the residents' understanding of satisfaction with the neighbourhood physical environment of government staff housing estates are the aspects with the most significant influence on their satisfaction neighbourhood physical environment. This also implies that research involved in exploring residents' satisfaction with the physical environment of public housing estates should focus on these dimensions for valid and reliable results. In addition, public mass housing developers should pay specific attention to these dimensions in enhancing residents' satisfaction with neighbourhood physical environments of such housing schemes in Nigeria

Finally, the current research is focused on 9 of the 48 government staff housing estates in Lagos State, Nigeria, leaving out other estates within and outside Lagos State. This implies that the findings cannot be generalized for all the government staff housing estates in Lagos State and other parts of Nigeria. Given this, it is recommended that future research should be carried out in other government staff housing estates in Lagos State and other parts of Nigeria for comprehensive results on this subject.

ACKNOWLEDGMENT

This work was supported by the Covenant University Center for Research and Innovation and Discovery (CUCRID).

REFERENCES

[1] Ibem, E.O., Ayo-Vaughan, E.A., Oluwunmi, A.O., Alagbe, O.A. (2019). Residential satisfaction among low-income earners in government-subsidized housing estates in Ogun State, Nigeria. Urban Forum, 30(1): 75-96. https://doi.org/10.1007/s12132-018-9337-4

[2] Jegede, F.O., Ibem, E.O., Oluwatayo, A.A. (2019). Residents' satisfaction with security in public housing in Lagos, Nigeria: The gender perspective. International Journal of Innovative Technology and Exploring Engineering, 8(6): 375-382.

[3] FRN. (2012). National housing policy. Federal Ministry of Land, Housing and Urban development, Mabuishi, Abuja.

https://fmhud.gov.ng/themes/front_end_themes_01/images/uploads_images/1598990131.pdf.
[4] Cater, J., Jones, T. (1989). Social geography: An introduction to contemporary issues. Edward Arnold.
[5] Higgitt, N.C., Memken, J.A. (2001). Understanding neighborhoods. Housing and Society, 28(1-2): 29-46. https://doi.org/10.1080/08882746.2001.11430460
[6] Berk, M.G. (2005). The concept of neighbourhood in contemporary residential environments: An investigation of occupants' perception. Doing, Thinking, Feeling Home- 14/15 October - Delft, The Netherlands.
[7] Mouratidis, K., Poortinga, W. (2020). The built environment, urban vitality and social cohesion: Do vibrant neighbourhoods foster strong communities? Landscape and Urban Planning, 204: 103951. https://doi.org/10.1016/j.landurbplan.2020.103951
[8] Lee, C., Choi, S., Yoon, J. (2023). The influence of access to urban amenities on urban environment satisfaction: A case study of four new towns in the vicinity of Seoul, South Korea. Applied Research in Quality of Life, 18(6): 3111-3139. https://doi.org/10.1007/s11482-023-10223-7
[9] Basu, N., Oviedo-Trespalacios, O., King, M., Kamruzzaman, M., Haque, M.M. (2022). The influence of the built environment on pedestrians' perceptions of attractiveness, safety and security. Transportation Research. Part F, Traffic Psychology and Behaviour, 87: 203-218. https://doi.org/10.1016/j.trf.2022.03.006
[10] Altomonte, S., Allen, J., Bluyssen, P. M., Brager, G., Heschong, L., Loder, A., Schiavon, S., Veitch, J.A., Wang, L., Wargocki, P. (2020). Ten questions concerning well-being in the built environment. Building and Environment, 180: 106949. https://doi.org/10.1016/j.buildenv.2020.106949
[11] Mouratidis, K., Yiannakou, A. (2022). What makes cities livable? Determinants of neighbourhood satisfaction and neighbourhood happiness in different contexts. Land Use Policy, 112: 105855. https://doi.org/10.1016/j.landusepol.2021.105855
[12] Baobeid, A., Koç, M., Al-Ghamdi, S.G. (2021). Walkability and its relationships with health, sustainability, and livability: elements of the physical environment and evaluation frameworks. Frontiers in Built Environment, 7: 721218. https://doi.org/10.3389/fbuil.2021.721218
[13] Tcymbal, A., Demetriou, Y., Kelso, A., Wolbring, L., Wunsch, K., Wäsche, H., Woll, A., Reimers, A.K. (2020). Effects of the built environment on physical activity: A systematic review of longitudinal studies taking sex/gender into account. Environmental Health and Preventive Medicine, 25(1): 1-25. https://doi.org/10.1186/s12199-020-00915-z
[14] Grum, B., Grum, D.K. (2020). Concepts of social sustainability based on social infrastructure and quality of life. Facilities, 38(11/12): 783-800. https://doi.org/10.1108/f-04-2020-0042
[15] Omole, F.O., Olajiga, O.K., Olatunde, T.M. (2024). Sustainable urban design: A review of eco-friendly building practices and community impact. Engineering Science & Technology Journal, 5(3): 1020-1030. https://doi.org/10.51594/estj.v5i3.955
[16] Song, S., Yap, W., Hou, Y., Yuen, B. (2020). Neighbourhood built Environment, physical activity, and physical health among older adults in Singapore: A simultaneous equations approach. Journal of Transport & Health, 18: 100881. https://doi.org/10.1016/j.jth.2020.100881
[17] Parkes, A., Kearns, A., Atkinson, R. (2002). What makes people dissatisfied with their neighbourhoods? Urban Studies, 39(13): 2413-2438. https://doi.org/10.1080/0042098022000027031
[18] Permentier, M., Bolt, G., van Ham, M. (2011). Determinants of neighbourhood satisfaction and perception of neighbourhood reputation. Urban Studies, 48(5): 977-996. https://doi.org/10.1177/0042098010367860
[19] Ibem, E.O., Aduwo, E.B., Daniel, B.O., Ayo-Vaughan, E.A., Odoanyanwu, M.N. (2018). Survey dataset on occupants′ satisfaction with housing and life in public residential estates in Ogun State, Nigeria. Data in Brief, 20: 1745-1748. https://doi.org/10.1016/j.dib.2018.09.036
[20] Equere, E.B., Ibem, E.O., Alagbe, O.A. (2020). Assessment of factors considered in the development of housing for resilient city: A study of Abuja, Nigeria. International Journal of Scientific and Technology Research, 9(3): 4747-4753.
[21] Ibem, E.O., Opoko, P.A., Aduwo, E.B. (2017). Satisfaction with neighbourhood environments in public housing: Evidence from Ogun State, Nigeria. Social Indicators Research, 130(2): 733-757. https://doi.org/10.1007/s11205-015-1188-y
[22] Okopi, U.M. (2022). Resident's satisfaction with neighborhood infrastructural provision in public Residential Estate Kano, Nigeria. Covenant Journal of Research in the Built Environment, 10(2): 49-57.
[23] Mouratidis, K. (2020). Commute satisfaction, neighbourhood satisfaction, and housing satisfaction as predictors of subjective well-being and indicators of urban livability. Travel Behaviour and Society, 21: 265-278. https://doi.org/10.1016/j.tbs.2020.07.006
[24] Rossi, P.H. (1955). Why Families Move: A Study in the Social Psychology of Urban Residential Mobility. Free Press.
[25] Morris, E.W., Winter, M. (1975). A theory of family housing adjustment. Journal of Marriage and the Family, 37(1): 79. https://doi.org/10.2307/351032
[26] Galster, G.C., Hesser, G.W. (1981). Residential satisfaction: Compositional and contextual correlates. Environment and Behavior, 13(6): 735-758. https://doi.org/10.1177/0013916581136006
[27] Patton, M.Q. (2002). A vision of evaluation that strengthens democracy. Evaluation, 8(1): 125-139. https://doi.org/10.1177/1358902002008001740
[28] Hur, M., Morrow-Jones, H. (2008). Factors that influence residents' satisfaction with neighborhoods. Environment and Behavior, 40(5): 619-635. https://doi.org/10.1177/0013916507307483
[29] Leby, J.L., Hashim, A.H. (2010). Liveability dimensions and attributes: Their relative importance in the eyes of neighbourhood residents. Journal of Construction in Developing Countries, 15(1): 67-91.
[30] Basolo, V., Strong, D. (2002). Understanding the Neighborhood: From residents' perceptions and needs to action. Housing Policy Debate, 13(1): 83-105. https://doi.org/10.1080/10511482.2002.9521436
[31] Chang, S.H., Rutherford, R., Hsueh, M.C., Yu, Y.C., Park, J.H., Wang, S., Liao, Y. (2021). Neighbourhood

environment and objectively measured sedentary behavior among older adults: A cross-sectional study. Frontiers in Public Health, 8: 552198. https://doi.org/10.3389/fpubh.2020.552198
[32] Du, Y., Jiang, H., Huang, Z., Yang, H. (2023). Associations between neighbourhood environment and sense of community belonging in urban China: Examining mediation effects of neighbourly interactions and community satisfaction. Frontiers in Public Health, 10: 1105473. https://doi.org/10.3389/fpubh.2022.1105473
[33] Mayne, S.L., Mitchell, J.A., Virudachalam, S., Fiks, A. G., Williamson, A.A. (2021). Neighbourhood environments and sleep among children and adolescents: A systematic review. Sleep Medicine Reviews, 57: 101465. https://doi.org/10.1016/j.smrv.2021.101465
[34] Lee, K. (2021). Relationship between physical environment satisfaction, neighborhood satisfaction, and quality of life in Gyeonggi, Korea. Land, 10(7): 663. https://doi.org/10.3390/land10070663
[35] Peters, M., Muellmann, S., Christianson, L., Stalling, I., Bammann, K., Drell, C., Forberger, S. (2020). Measuring the association of objective and perceived neighbourhood environment with physical activity in older adults: Challenges and implications from a systematic review. International Journal of Health Geographics, 19(1): 1-20. https://doi.org/10.1186/s12942-020-00243-z
[36] Mouratidis, K. (2020). Neighbourhood characteristics, neighbourhood satisfaction, and well-being: The links with neighbourhood deprivation. Land Use Policy, 99: 104886. https://doi.org/10.1016/j.landusepol.2020.104886
[37] Van Soest, D., Tight, M.R., Rogers, C.D.F. (2019). Exploring the distances people walk to access public transport. Transport Reviews, 40(2): 160-182. https://doi.org/10.1080/01441647.2019.1575491
[38] Allen, J., Farber, S. (2020). Planning transport for social inclusion: An accessibility-activity participation approach. Transportation Research. Part D, Transport and Environment, 78: 102212. https://doi.org/10.1016/j.trd.2019.102212
[39] Al-Ali, A., Maghelal, P.K., Alawadi, K. (2020). Assessing neighbourhood satisfaction and social capital in a Multi-Cultural setting of an Abu Dhabi neighbourhood. Sustainability, 12(8): 3200. https://doi.org/10.3390/su12083200
[40] Sánchez-Moral, S., Arellano, A., Díez-Pisonero, R. (2022). Understanding the role of neighbourhood characteristics and distance to the workplace in the residential location patterns of knowledge workers in large cities. Cities, 127: 103764. https://doi.org/10.1016/j.cities.2022.103764
[41] Zhu, X., Yoshikawa, A., Qiu, L., Lu, Z., Lee, C., Ory, M. (2020). Healthy workplaces, active employees: A systematic literature review on impacts of workplace environments on employees' physical activity and sedentary behaviour. Building and Environment, 168: 106455. https://doi.org/10.1016/j.buildenv.2019.10645
[42] Sarkar, C., Lai, K. Y., Zhang, R., Ni, M.Y., Webster, C. (2022). The association between workplace built environment and metabolic health: A systematic review and meta-analysis. Health and Place/Health & Place (Online), 76: 102829. https://doi.org/10.1016/j.healthplace.2022.102829
[43] Liu, Y., Wang, X., Zhou, S., Wu, W. (2020). The association between spatial access to physical activity facilities within the home and workplace neighbourhoods and time spent on physical activities: evidence from Guangzhou, China. International Journal of Health Geographics, 19(1): 1-15. https://doi.org/10.1186/s12942-020-00216-2
[44] Lee, B.A., Guest, A.M. (1983). Determinants of neighborhood satisfaction: A metropolitan-level analysis Sociological Quarterly, 24(2): 287-303. https://doi.org/10.1111/j.1533-8525.1983.tb00703.x
[45] Leslie, E., Cerin, E. (2008). Are perceptions of the local environment related to neighbourhood satisfaction and mental health in adults? Preventive Medicine, 47(3): 273-278. https://doi.org/10.1016/j.ypmed.2008.01.014
[46] Lovejoy, K., Handy, S., Mokhtarian, P. (2010). Neighbourhood satisfaction in suburban versus traditional environments: An evaluation of contributing characteristics in eight California neighbourhoods. Landscape and Urban Planning, 97(1): 37-48. https://doi.org/10.1016/j.landurbplan.2010.04.010
[47] Howley, P., Scott, M., Redmond, D. (2009). Sustainability versus liveability: An investigation of neighbourhood satisfaction. Journal of Environmental Planning and Management, 52(6): 847-864. https://doi.org/10.1080/09640560903083798
[48] Baum, S., Arthurson, K., Rickson, K. (2010). Happy people in mixed-up places: The association between the degree and type of local socioeconomic mix and expressions of neighbourhood satisfaction. Urban Studies, 47(3): 467-485. https://doi.org/10.1177/0042098009351941
[49] Jaramillo, A., Rohe, W.M., Webb, M.D. (2020). Neighborhood opportunity and satisfaction among housing choice voucher recipients: A subjective well-being perspective. Housing Policy Debate, 30(5): 703-717. https://doi.org/10.1080/10511482.2020.1737830
[50] Ukoha, O.M., Beamish, J.O. (1997). Assessment of residents' satisfaction with public housing in Abuja, Nigeria. Habitat International, 21(4): 445-460. https://doi.org/10.1016/S0197-3975(97)00017-9
[51] Olatubara, C.O., Fatoye, E.O. (2007). Evaluation of the satisfaction of occupants of the Abesan public low-cost housing estate in Lagos State, Nigeria. The Nigerian Journal of Economic and Social Studies, 49(1): 5-9. https://scholar.google.com/citations?view_op=view_citation&hl=en&user=cBpf66sAAAAJ&citation_for_view=cBpf66sAAAAJ:d1gkVwhDpl0C.
[52] Clement, O.I., Kayode, O. (2012). Public housing provision and user satisfaction in Ondo State Nigeria. British Journal of Art and Social Sciences, 8: 103-111.
[53] Mohit, M.A., Azim, M. (2012). Assessment of residential satisfaction with public housing in Hulhumale', Maldives. Procedia - Social and Behavioral Sciences, 50: 756-770. https://doi.org/10.1016/j.sbspro.2012.08.078
[54] Ibem, E.O., Aduwo, E.B. (2013). Assessment of residential satisfaction in public housing in Ogun State, Nigeria. Habitat International, 40: 163-175. https://doi.org/10.1016/j.habitatint.2013.04.001
[55] Jegede, F.O., Ibem, E.O., Oluwatayo, A.A. (2018). Manifestation of defensible space in Lagos state development and property cooperation housing estates,

Lagos, Nigeria. International Journal of Civil Engineering and Technology, 9(491-505): 491-505.
[56] Adewale, B.A., Ibem, E.O., Amole, B., Adeboye, A.B. (2019). Assessment of residential satisfaction in the core area of Ibadan Metropolis, Nigeria. Journal of Human Behavior in the Social Environment, 29(2): 206-233. https://doi.org/10.1080/10911359.2018.1502116
[57] Mantey, D. (2021). Objective and subjective determinants of neighbourhood satisfaction in the context of retrofitting suburbs. Sustainability, 13(21): 11954. https://doi.org/10.3390/su132111954
[58] Kwon, M., Pickett, A.C., Lee, Y., Lee, S. (2019). Neighborhood physical environments, recreational wellbeing, and psychological health. Applied Research in Quality of Life, 14: 253-271. https://doi.org/10.1007/s11482-018-9591-6
[59] Mouratidis, K. (2021). Urban planning and quality of life: A review of pathways linking the built environment to subjective well-being. Cities, 115: 103229. https://doi.org/10.1016/j.cities.2021.103229
[60] Aksel, E., İmamoğlu, Ç. (2020). Neighbourhood location and its association with place attachment and residential satisfaction. Open House International, 45(3): 327-340. https://doi.org/10.1108/OHI-05-2020-0035
[61] Ajakaiye, O.O., Afolabi, H.A., Akinola, A.O., Okagbue, H.I., Olagunju, O.O., Adetoro, O.O. (2018). Datasets on factors influencing trading on pedestrian bridges along Ikorodu road, Lagos, Nigeria. Data in Brief, 19: 1584-1593. https://doi.org/10.1016/j.dib.2018.06.055
[62] Akinola, A.O., Adeboye, A.B., Oluwatayo, A., Alagbe, O., Babalola, O., Afolabi, A.O. (2018). Survey dataset on architectʺs awareness and adoption of building envelope technologies for energy-efficient housing in Lagos State. Data in Brief, 19: 1894-1901. https://doi.org/10.1016/j.dib.2018.06.093
[63] Afolabi, A.O., Ojelabi, R.A., Bukola, A., Akinola, A., Afolabi, A. (2018). Statistical exploration of dataset examining key indicators influencing housing and urban infrastructure investments in megacities. Data in Brief, 18: 1725-1733. https://doi.org/10.1016/j.dib.2018.04.089
[64] Oluwatayo, A., Akinola, A.O., Agomuo, I.U., Mozimo, S.O., Onwuka, C.C., Okagbue, H.I. (2018). Survey dataset on factors that influence the satisfaction of clients with architectural services in Lagos State, Nigeria. Data in Brief, 20: 118-125. https://doi.org/10.1016/j.dib.2018.07.055