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A Comparative Analysis of the Socio-Physical Characteristics of Selected Inner-City Residential Neighbourhoods in Ondo State, Nigeria

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Abstract

Inner-city residential neighbourhoods are important components of the urban system that define the city's social and spatial dynamics. The historical evolution and socio-physical characteristics of the neighbourhoods influence exposure to and responses to challenges and emergencies. This study, through a mixed-methods approach, compares the socio-physical neighbourhood characteristics of the selected inner-city residential neighbourhoods in Ondo State, Nigeria. Quantitative data were gathered through the administration of 440 structured questionnaires to household heads and adults across the selected neighbourhoods. Furthermore, the qualitative approach involved semi-structured interviews to elicit information from Landlord Associations across the randomly selected inner-city residential neighbourhoods in Akure, Owo, and Okitipupa, respectively. The study unpacks the fairly poor physical and housing conditions in the selected neighbourhoods. However, the social conditions investigated reveal improved social systems. Spearman's rho correlation analysis reveals significant associations ($p < 0.05$) between physical and social characteristics across the study areas. This indicates a socio-physical paradox that suggests the persistence of performance of the social systems despite deteriorating physical environments. Findings underscore the heterogeneity of secondary cities in Nigeria and highlight the critical role of socio-physical neighbourhoods' characteristics in achieving and sustaining resilience. The study advocates for integrated urban design and policy interventions that concurrently improve social cohesiveness and address deficiencies in physical infrastructure in the rapidly urbanizing cities in Nigeria.

Keywords: Housing Conditions, Inner-City Neighbourhoods, Neighbourhood Revitalization, Social Capital, Socio-Physical Characteristics, Urban Decay, Vulnerabilities.

Introduction

Inner-city neighbourhoods form the essential mechanisms of urban systems that impact diverse changes. The neighbourhoods serve as the core of communal life, activities, and connections (Frank, 2018; Lynge, Visagie, Scheba, Turok, Everatt, & Abrahams, 2022). Inner-city residential neighbourhoods possess social and physical characteristics with varying impacts on well-being, social cohesion, and environmental health (Olaniran & Aule, 2025). The interaction between these phenomena presents the neighbourhoods as a social space that simultaneously connects residents both in the private and public realms (Häussermann, De Witte, Schepers, Gryp, Heylen, & Van Regenmortel, 2025).

Ayoola, Fakere & Olusoga, (2019) argue that despite the historical and functional importance of inner-city residential neighbourhoods in Nigeria, they are increasingly marked by declining housing conditions, inadequate infrastructure, and collapsed social institutions. The neighbourhoods continually experience challenges and emergencies ranging from a decline in the physical, social, and cognitive functions (Qin, Choi, Dou, & Hao, 2024; Kuzuoglu, Glover, Moyer, & Todd, 2024). These challenges restrict access to opportunities and also limit activities in the neighbourhoods (Cohen, Mason, Bedimo, Scribner, Basolo, & Farley, 2003; Cacciatore, Mao, Nuñez, Massaro, Spadafora, Bernardi, ... & Landi, 2025; WHO, 2025). Consequently, the interplay between deteriorating physical surroundings and brittle social systems of the inner-city residential neighbourhoods produces compounded vulnerabilities that jeopardize the sustainability and resilience of the cities (Cohen et al., 2003; Grazuleviciene, Andrusaityte, Gražulevičius, & Dėdelė, 2020; Taylor & Howden-Chapman, 2021; WHO 2025).

Furthermore, Aliyu and Amadu (2017) argue that several inner-city residential neighbourhoods in the cities are exposed to diverse challenges that alter the developmental processes and necessitate socioeconomic changes. Other studies also note that, unlike the traditional approaches to inner-city revitalisation, which focus more on socio-economic and political aspects of the neighbourhoods, successful neighbourhood revitalisation takes cognizance of the relationships between the social fabric and the physical environment (Sepe, 2014; Horbliuk & Dehtiarova, 2021; Lin & van Ameijde, 2026). Further studies reinforce inner-city residential neighbourhoods as an important component of urban systems in the developing countries in the global south (Razak & Galadima, 2014; Mouratidis & Yiannakou, 2022; Baffoe & Kintrea, 2023). They constitute important influences on the environmental quality, urban sustainability, and well-being (Li, Song, Cao, Mo, Du & He,

2024; Avtar, Ahmad, Rahman, Alsulamy, Meraj, Sethi, ... & Kharrazi, 2025).
However, empirical studies that contrast the socio-physical features of rapidly urbanising inner-city residential neighbourhoods are scarce in the literature. This gap restricts the development of evidence-based urban policies capable of addressing the multidimensional challenges facing the neighbourhoods. This study is therefore put forward to comparatively analyze socio-physical characteristics of selected inner-city residential neighbourhoods in Ondo State, Nigeria. It provides insights into existing spatial disparities in the neighbourhoods, and also aims to find parallels and variances in the neighbourhoods' housing, physical, environmental, infrastructural, and social conditions. In addition to offering evidence-based insights to promote sustainable urban and neighbourhood revitalization projects in Ondo State, the findings are anticipated to deepen understanding of neighbourhood-level urban dynamics.

Literature Review

Residential neighbourhoods are a discrete part of every urban city that reflects unique physical, social, and historical characteristics (Merlin & Choay, 2010; Serre, Barroca, Balsells, & Becue, 2016). They are frequently influenced and shaped by identity, demographic compositions, and historical events (UN-Habitat, 2023; SCF, 2023). Neighbourhoods serve as social and spatial systems with frameworks that play crucial roles in fostering resilience, inclusivity, and prosperity (UN-Habitat, 2023; Stark Community Foundation, SCF, 2023).
Adger, Adams, Evans, O'Neill, and Quinn (2013) describe neighbourhoods as entities made up of two overlapping dimensions. The first is the quantifiable physical and social characteristics. Qin et al. (2024) identify land-use patterns, street connectivity, infrastructure quality, service accessibility, housing conditions, social capital, social structures, social networks, accessibility, urban design, and architecture as the objective neighbourhood features. Gocer et al. (2023) further reinforce that physical and social characteristic of residential neighbourhoods offer dynamics for change, control, and resilience. Furthermore, the quality of urban neighbourhoods attributed to the physical environment shapes neighbourhood surroundings (Makinde, 2020). Conversely, the perceived neighbourhood features inform the residents' behaviour, well-being, experiences, and perceptions (Swope & Hernández, 2019; Ogbonna, Ochie, & Aniwada, 2024; Qin et al., 2024). This, in turn, dictates the quality, usefulness, and liveability of neighbourhoods (Rachele et al., 2019; Gocer et al., 2023). It also plays a critical role in shaping and directing coping capacity, survival, and sustainability within the urban environment (Johnson, 2025; Hannon, Sawyer, & Allman, 2012; Morenikeji et al., 2017; Olubi & Ayoola, 2021; Olubi, 2023).
The neighbourhood's physical environment is a quantifiable physical environment crucial for determining the quality of life. It affects socioeconomic outcomes, health, and general well-being (Van Cauwenberg, Mertens, Petrovic, Van Dyck, & Deforche, 2022; Gocer et al., 2023). Mbazor (2018) argues that the quality of housing, the accessibility of services, the availability of infrastructure, and the beauty of the surrounding area are important physical neighbourhood features that constitute a reasonable impact on daily experiences.

However, despite the significance of the neighbourhoods' physical characteristics, empirical studies reveal the noticeable challenges facing inner-city residential neighbourhoods in the rapidly urbanizing developing countries (Mouratidis, 2020; Virk, Nelson, & Dele-Adedeji, 2023; Dagunduro & Jiboku, 2025). The neighbourhoods are dominated by deteriorating housing stock, poor infrastructure, overpopulation, and restricted access to vital urban services. These circumstances lower the quality of life and increase the hazards to urban health challenges (Ayoola, 2018; Ahmed et al., 2023; Coenen, Huysmans, Holtermann, Krause, Van Mechelen, Straker & Van Der Beek, 2020; Olubi & Aseyan, 2023).

Nesbitt et al. (2019) linked the deprivations in the physical characteristics of inner-city residential neighbourhoods to the persistent challenges in safety, cleanliness, aesthetic quality, and reputation, among others. These deficiencies frequently cause negative emotional reactions among residents (Mohit & Iyanda, 2016; Farinmade et al., 2021; Olubi, 2023). They also reinforce spatial inequalities and contribute to long-term urban instabilities (Zhang, Li, Caneparo, Meng, Guo, & Liu, 2023).

On the other hand, social environments are the structural and cognitive characteristics of residential neighbourhoods (Rashidfarokhi, Pelsmakers, Maununaho, de la Rosa, Järventausta, Toivonen, et al., 2026). According to Poortinga (2012), social capital fosters bonding, bridging, and linking among residents. At the geographical level, social capital is spatially organised and exhibits diverse cultural variations (Agampodi, Agampodi, Glozier, & Siribaddana, 2015). It is crucial for identifying and addressing disruptions, disasters, and vulnerabilities (Okyere, Frimpong, Abunyewah, Diko, Fatemi, Mensah, & Kita, 2023). It provides the tools and knowledge required to anticipate, respond to, and recover from shocks, hazards, or disasters (Jamshed, Birkmann, Rana, & Feldmeyer, 2020; Shahihagh, Gharehbaglou, & Beyti, 2024).

Social capital exerts cumulative effects on risk coping and preparedness (Ngema, Bokhari, & Mbanga, 2025; Sakketa, 2025). More importantly, it provides residents and entire inner-city residential neighbourhoods with strong networks and linkages that facilitate the sharing of resources and information during disturbances (Gepty, Lambert, Milam, & Ialongo, 2022). Furthermore, social capital supports disaster management and mediates the consequences of hazardous events (Behera, 2023). It serves as a mechanism for preparedness in the event of shocks or disruptions. Stronger social relationships, therefore, enable neighbourhoods to recover more swiftly and effectively from disasters (Iwasaki, Sawada & Aldrich, 2017).

McCann, Fünfgeld, Brown, and Wylie (2016) demonstrate social networks as tools within the social environment for exploring relationships between social systems in terms of strength, duration, regularity, and diversity. Carpenter (2013); Saja, Teo, Goonetilleke, and Ziyath (2018); Okedare and Fawole (2024); Qi, Mazumdar, & Vasconcelos (2024) affirm that social networks such as volunteerism, diverse civic engagement, and civic organisations offer advantages for neighbourhoods during challenges. In essence, social networks highlight the interaction between individuals and groups towards building stable and functioning neighbourhoods (Borgatti, Mehra, Brass, & Labianca, 2009; Canton, 2021).

Furthermore, the collective capacity of residential neighbourhoods provides the ability to effectively address social issues during shocks or disasters (Mohit & Iyanda, 2016). It offers residents the awareness, adaptability, and responses to disruptions, particularly health shocks, through self-reported measures (Cohen, Mason, Bedimo, Scribner, Basolo, & Farley, 2003; Taylor & Howden-Chapman, 2021; O'Neill, Cole, García-Lamarca, Anguelovski, Gullón, & Triguero-Mas, 2023). Gülsoy, Uyan, Özcan, & Durmuş, 2025). Research suggests that both social exchange and collective efficacy are vital to a wide range of individual and neighbourhood outcomes (Vassilev, Band, Kennedy, James, & Rogers, 2019; Grazuleviciene, Andrusaityte, Gražulevičius, & Dėdelė, 2020).

Empirical studies reveal that social and physical environmental features of residential neighbourhoods provide essential responses to disasters, reduce inequality, and promote social justice (Meerow, Pajouhesh, & Miller, 2019; Rezvani, Silva, & de Almeida, 2023; Cacciatore, Mao, Nuñez, Massaro, Spadafora, Bernardi, ... & Landi, 2025; WHO, 2025). This emphasises the connection between the socio-physical characteristics of a neighbourhood and its susceptibility to crises and deterioration. Hasan et al. (2024) argue that neighborhoods with poor infrastructure, low educational attainment, and erratic household incomes are generally more susceptible to environmental challenges. This standpoint aligns with Canton (2021), who contends that socioeconomic hardship and deteriorating physical environments lower the potential of urban neighbourhoods. As a result, improving the physical features of inner-city residential neighbourhoods is increasingly recognized as a critical strategy for promoting urban sustainability, resilience, and equitable well-being.

Methodology

A mixed-methods approach through quantitative and qualitative means was adopted for this study. This method is capable of providing a complete and better understanding of the research problems. It makes bare the necessary variables and data needed, and provides less biased but more precise conclusions. Ondo State has a projected population of 5,499,334 inhabitants distributed across 18 Local Government Areas and three senatorial districts. Three (3) cities, namely: Akure, Owo, and Okitipupa, each from the senatorial districts of the State, were selected for the study. The selected cities significantly contribute to the overall population and growth dynamics of the State.

A total of twenty-seven (27) inner-city residential neighbourhoods were randomly selected for the study. These include six (6) in Okitipupa ward II, nine (9) in Iloro political wards in Owo, and twelve (12) in Ijomu/Obanla political ward in Akure. The selected neighbourhoods are the pre-colonial settlements that are located in the centre of the cities. They exhibit historical layouts and land-use patterns that display active demographic traits and typical Yoruba traditional city developmental patterns (Oriye & Fakere, 2015). Closed-ended questionnaires were used to gather quantitative data from 440 adult or household head respondents selected through simple random sampling. A total of 420 questionnaires representing 95.5% were retrieved and analysed. The questionnaire was structured, standardised for consistency, and sequentially arranged. Additionally, 20 semi-structured interviews comprising 12 important

sub-theme variables were conducted to gather qualitative data. Statistical Package for Social Sciences (SPSS) was used to evaluate quantitative data, while thematic content analyses were conducted to analyse qualitative data.

Study Areas

According to Olajuyigbe, Olamiju, and Ola-Omole (2016), Ayoola, Fakere, & Olusog (2023), inner-city residential neighbourhoods in Akure are located within the Ijomu/Obanla political wards of the city, as shown in Figure 1. In Owo, the Iloro political ward comprises the most culturally significant inner-city neighbourhoods shown in Figure 2. Similarly, in Okitipupa, the inner-city residential neighbourhoods located within Okitipupa Ward II represent the historical origin of the city and hold other cultural significances (Figure 3).



Figure 1: Map showing Ijomu/ Obanla in Akure
Source: Google Earth Map 2026



Figure 2: Map showing Iloro in Owo
Source: Google Earth Map 2026



Figure 3: Map showing Iloro in Owo
Source: Google Earth Map 2026

Results and Discussions

Socio-Demographic Characteristics of Respondents

The socio-demographic characteristics of respondents across the selected inner-city residential neighbourhoods in the study areas provide insights into the population composition and socioeconomic profiles of residents, as presented in Table 1. The table reveals that a higher proportion of male respondents, 231 (55.0%), participated in the study compared to females, 189 (45.0%). This finding corroborates previous studies that greater male involvement in neighbourhood decision-making in Nigeria (Olubi & Ayoola, 2021; Olubi, 2023). Although both genders appear to have relatively similar exposure to neighbourhood conditions and disruptions, housing remains a predominantly male-dominated sector.

Age distribution of respondents indicates that the majority, 146 (34.8%), were between 18 and 30 years, followed by 86 (20.5%) of the respondents with ages ranging between 31 and 40 years. 78 (18.6%) of the respondents were aged between 41–50 years, 71 (16.9%) were aged between 51–60 years, and 39 (9.3%) were above 60 years. These results suggest that the respondents largely comprise a working-age and economically active population. This supports Virk et al. (2023), who describe Nigeria's demographic structure as predominantly youthful and potentially productive, capable of engaging in resilient and adaptive behaviours.

Educational attainment across the selected neighborhoods indicates that 32 (7.6%) of the respondents had no formal education, 27 (6.4%) completed primary education, 221 (52.6%) attained secondary education, and 138 (32.9%) achieved tertiary education. This distribution suggests a relatively high level of literacy and awareness among respondents. This also indicates a solid understanding of neighbourhood conditions and resilience-related issues. In agreement with Gülsoy et al. (2025), these findings highlight the positive influence of education on awareness, preparedness, and adaptability to disasters within neighbourhood environments.

Employment status of respondents reveals that 86 (20.5%) were unemployed, 142 (33.8%) were employed in the public or private sectors, 170 (40.5%) were self-employed, and 22 (5.2%) were retired. Correspondingly, the average monthly income of respondents shows that 171 (40.7%) earned below the ₦70,000 minimum wage, 98 (23.3%) earned between ₦71,000 and ₦100,000, another 98 (23.3%) earned between ₦101,000 and ₦200,000, 39 (9.3%) earned between ₦200,000 and ₦500,000, and 14 (3.3%) earned above ₦500,000. These results underscore the prevalence of informal economic activities and reliance on non-formal sources of livelihood within inner-city residential neighbourhoods of Ondo State. Such conditions form the basis for vulnerability, economic fragility, and socioeconomic inequality that affect neighbourhood resilience. This finding aligns with Dagunduro and Jiboku's (2025) study, which states that despite the informal sector providing employment opportunities and income for the urban poor, persistent economic fragility and inequality deepen neighbourhood vulnerability.

Marital status of the respondents reveals that the majority, 238 (56.7%) of respondents were married, 78 (18.6%) were single, 27 (6.4%) were divorced, and 49 (11.7%) were widows/widowers. These results suggest that strong household and family structures may

support social cohesion and influence social vulnerability within neighbourhoods. In line with Okedare and Fawole (2024), the findings imply the presence of relatively robust family and household systems that sustain social support networks. However, diverse household compositions may also shape vulnerability patterns, particularly among female-headed households.

Housing tenure across the study areas indicates that 133 (31.7%) of respondents reside in self-owned houses, 169 (40.2%) live in rented apartments, 84 (20.0%) occupy family-owned houses, and 34 (8.1%) reside in inherited homes. This distribution suggests that inner-city residential neighbourhoods largely comprise semi-permanent populations. Results show that home ownership is an important determinant of residential stability, social cohesion, participation, and investment. According to Qi et al. (2024), home ownership fosters stable and cohesive communities that are better positioned to invest in their environments and recover from shocks.

Household size varies across the study areas, with 134 (31.9%) of households comprising 1–3 members, 178 (42.4%) comprising 4–6 members, 78 (18.6%) comprising 7–10 members, and 30 (7.1%) comprising more than 10 members. This indicates the dominance of medium-sized households within the study area. Analysis of length of residence shows that 168 (40.0%) of respondents had lived in their neighbourhoods for less than five years, 135 (32.1%) for 5–10 years, 56 (13.3%) for 11–20 years, and 61 (14.5%) for more than 20 years. This pattern reflects a considerable level of residential mobility and relatively low long-term settlement stability. These adversely affect neighbourhood responses to health-related shocks. The findings align with Gepty et al. (2022) that high rates of residential turnover weaken social cohesion, neighbourhood ties, and collective efficacy.

Table 1: The Socio-Demographic Characteristics of Respondents

Variables	Selected Neighbourhoods in Akure (n = 158) Freq. (%)	Selected Neighbourhoods in Owo (n =127) Freq. (%)	Selected Neighbourhoods in Okitipupa (n = 135) Freq. (%)	Total Freq. (%)
Gender				
Male	107(67.7)	48(37.8)	76(56.3)	231(55.0)
Female	51(32.3)	79(62.2)	59(43.7)	189(45.0)
Age Range				
18yrs -30yrs	46(29.1)	73(57.5)	27(20.0)	146(34.8)
31yrs-40yrs	32(20.3)	22(17.3)	32(23.7)	86(20.5)
41yrs – 50yrs	32(20.3)	15(11.8)	31(23.0)	78(18.6)
51- 60yrs	31(19.6)	7(5.5)	33(24.4)	71(16.9)
Above 60yrs	17(10.8)	10(7.9)	12(8.9)	39(27.0)
Level of Education				
No formal education	24(15.2)	4(3.1)	6(4.4)	32(7.6)
Primary	16(10.1)	2(1.6)	9(6.7)	27(6.4)
Secondary	84(53.2)	56(44.1)	81(60.0)	221(52.6)
Tertiary	34(21.5)	65(51.2)	39(28.9)	138(32.9)
Employment Status				
Unemployed	37(23.4)	24(18.9)	25(18.5)	86(20.5)

Variables	Selected Neighbourhoods in Akure (n = 158) Freq. (%)	Selected Neighbourhoods in Owo (n =127) Freq. (%)	Selected Neighbourhoods in Okitipupa (n = 135) Freq. (%)	Total Freq. (%)
Employed	55(34.8)	28(22.0)	59(43.7)	142(33.8)
Self-Employed	58(36.7)	72(56.7)	40(29.6)	170(40.5)
Retired	8(5.1)	3(2.4)	11(8.1)	22(5.2)
Average Monthly Income				
Below N70,000	50(31.6)	82(64.6)	39(28.9)	171(40.7)
N71,000 - N 100,000	46(29.1)	22(17.3)	30(22.2)	98(23.3)
N101,000 - N 200,000	35(22.2)	16(12.6)	47(34.8)	98(23.3)
N200,000 – N 500,000	17(10.8)	5(3.9)	17(12.6)	39(9.3)
Above N 500,000	10(6.3)	2(1.6)	2(1.5)	14(3.3)
Marital Status				
Single	41(24.0)	34(26.8)	31(23.0)	78(18.6)
Married	92(58.2)	67(52.8)	79(58.5)	238(56.7)
Divorced	12(7.6)	4(3.1)	11(8.1)	27(6.4)
Widow/Widower	13(8.2)	22(17.4)	14(10.4)	49(11.7)
Housing Tenure Status				
Self-owned	47 (29.7)	44 (34.6)	42 (31.1)	133 (31.7)
Rented	77 (48.7)	37 (29.1)	55 (40.7)	169 (40.2)
Family House	23 (14.6)	26 (20.5)	35 (25.9)	84 (20.0)
Inherited House	11 (7.0)	20 (15.8)	3 (2.2)	34 (8.1)
Household Size				
1-3	52 (32.9)	35 (27.6)	47 (34.8)	134 (31.9)
4-6	62 (39.2)	52 (40.9)	64 (47.4)	178 (42.4)
7-10	31 (19.6)	34 (26.8)	13 (9.6)	78 (18.6)
Above 10	13 (8.3)	6 (4.7)	11 (8.1)	30 (7.1)
Length of Stay in the Neighbourhoods	67 (42.4)	50 (39.4)	51 (37.8)	168 (40.0)
Below 5yrs	47 (29.7)	45 (35.4)	43 (31.9)	135 (32.1)
5 – 10yrs	26 (16.5)	15 (11.8)	15 (11.1)	56 (13.3)
11-20yrs	18 (11.4)	17 (13.4)	26 (19.3)	61 (14.5)
Above 20yrs				

Housing and Neighbourhoods Physical Characteristics

Housing Characteristics

The study evaluates housing, neighbourhoods, and social conditions across the selected inner-city residential neighbourhoods. Important housing components considered are ceiling, doors, floors, roof, walls, and windows. A 5-point Likert scale measure where 5 represents excellent condition with no significant defects; 4 represents good, functional, and adequate condition with minor defects; 3 represents average, moderate, functional but with noticeable deteriorated condition; 2 represents poor, visible defects requiring major repairs; and 1 represents very poor, severely deteriorated, unsafe, or non-functional condition was deployed for this study.

In the selected inner-city areas in Akure, floor conditions rank highest by mean (3.0823), and roof conditions rank lowest (mean = 2.8481). As shown in Table 2, other elements ranked by mean are doors (2.9937), windows (2.9873), walls (2.9051), and ceilings (2.8734). In Owo, the selected inner-city residential neighbourhoods exhibit the highest rank in the window

conditions (mean = 2.5827), while door conditions rank the least (mean = 2.4724). Other features ranked by mean are ceilings (2.5512), roofs (2.5512), floors (2.4803), and walls (2.4724). Additionally, in the selected neighbourhoods in Okitipupa, door conditions rank highest by mean (3.2889), while roof conditions record the lowest mean score (2.4593). Other features ranked are windows (2.7704), floors (2.6815), walls (2.6296), and ceilings (2.5333).

Comparatively, the selected neighbourhoods in Akure record the highest overall mean for housing conditions (2.9502). This suggests fair and average housing conditions of the selected inner-city residential neighbourhoods in Akure. The housing is functional but exhibits noticeable signs of deterioration. This also indicates comparatively higher levels of housing investment and maintenance, which could enhance household resilience and stability. Similarly, housing conditions in the selected inner-city residential neighbourhoods in Okitipupa (mean = 2.7312) reflect moderate conditions. Houses in the neighbourhoods display quality in structure; however, structural weaknesses coexist within the neighbourhoods, which require specific improvements. However, housing conditions of the selected inner-city residential neighbourhoods in Owo (mean = 2.5200) reflect poor conditions that suggest pronounced structural deficiencies, which could reduce household resilience and increase exposure to environmental hazards.

Additionally, the Housing Conditions Index (HCI) was conducted to ascertain the physical state of dwellings in the selected inner-city residential neighbourhoods, suggesting that the neighbourhoods demonstrate heterogeneous housing conditions. As shown in Table 3, the results reveal HCI mean values of 58.97%, 50.37%, and 52.32% across the selected neighbourhoods in Akure, Owo, and Okitipupa, respectively. This indicates that overall housing conditions are highest in the inner-city residential neighbourhoods of Akure, followed by those in Okitipupa. In contrast, the selected inner-city residential neighbourhoods in Owo exhibit the poorest housing conditions.

The findings show that inner-city residential neighbourhoods in Ondo State exhibit intermediate housing conditions. The housing displays simple structural elements, but they are not well-maintained or environmentally friendly. Significantly degraded buildings that could endanger occupants' health, safety, and general well-being are highlighted by the comparatively low minimum score of 20%. Furthermore, the high standard deviation (15.25), which reflects underlying socioeconomic, spatial, and physical disparities and inequalities, shows significant diversity in housing circumstances.

Findings align with previous studies that identify several housing and environmental infrastructural inadequacies and precarious and unsafe living conditions within the core residential neighbourhoods. In line with the studies of Mohit and Iyanda (2016), Ayoola (2018), and Farinmade et al. (2021), this study identifies significant variation in physical housing conditions as the common challenges bedeviling inner-city neighbourhoods in Ondo state, thus the need for inclusive and transformative urban core developments.

Table 2: Housing Conditions across the Study Areas

	Selected Neighbourhoods in Akure (n=158)		Selected Neighbourhoods in Owo (n=127)		Selected Neighbourhoods in Okitipupa (n=135)			
Housing Conditions	**Mean**	**Rank**	**Mean**	**Rank**	**Mean**	**Rank**	**Overall Mean**	**Overall Rank** 5
Ceiling Conditions	2.8734	5	2.5512	2	2.5333	5	2.653	1
Doors Condition	2.9937	2	2.4724	5	3.2889	1	2.918	3
Floors Condition	3.0823	1	2.4803	4	2.6815	3	2.748	6
Roof Conditions	2.8481	6	2.5512	2	2.4593	6	2.620	4
Wall Conditions	2.9051	4	2.4724	5	2.6296	4	2.669	2
Windows Condition	2.9873	3	2.5827	1	2.7704	2	2.780	
Overall mean	**2.9502**	**1**	**2.5200**	**3**	**2.7312**	**2**		

Table 3: Housing Condition Index across the study areas

Houses Physical Conditions Index	Selected Neighbourhoods in Akure (n=158)	Selected Neighbourhoods in Owo (n=127)	Selected Neighbourhoods in Okitipupa (n=135)
Minimum (%)	20.00	20.00	20.00
Maximum (%)	96.67	80.00	83.33
Mean (%)	58.97	**50.37**	**52.32**
Std. Deviation	15.25	17.07	10.39

Neighbourhoods' Physical Characteristics

A 5-point Likert scale was deployed to evaluate the neighbourhoods' physical conditions in the selected inner-city residential neighbourhoods. The scale represents observable environmental and infrastructure quality, such as water supply, drainage, road condition, waste management, electricity, outdoor areas, and safety. Excellent, well-functioning, dependable, and sustainable physical conditions with few or no defects are represented by a score of 5; good, dependable, adequate infrastructure with minor deficiencies is represented by a score of 4; fair or moderate conditions are represented by a score of 3; significant deficiencies, unreliable or inadequate services requiring major improvement are represented by a score of 2; and a very poor, severely deficient, non-functional environments are represented by a score of 1.

Analysis of the neighbourhoods' physical conditions, as shown in Table 4, reveals that physical safety ranks highest (mean = 3.0443) in the selected inner-city residential neighbourhoods in Akure, while dependability and condition of water supply rank lowest (mean = 2.3418). The table ranks other neighbourhoods' physical conditions as outdoor (2.8924), roads (2.7089), cleanliness and waste management (2.6709), and drainage (2.4557). In Owo, cleanliness and waste management rank highest (mean = 2.4961), while drainage conditions rank lowest (mean = 2.1496). Roads (2.3858), outdoor areas (2.3228), physical safety (2.3150), and water supply dependability (2.3071) are other neighbourhood features ranked. Additionally, the selected inner-city residential neighbourhoods in Okitipupa

demonstrate the highest mean (3.4570) for physical safety, while drainage conditions rank lowest (mean = 1.8370). Other neighbourhood features ranked are cleanliness and waste management (3.4370), water supply reliability (2.1333), outdoor spaces (2.0741), and roads (1.8889).

Across the three studied cities, inner-city residential neighbourhoods in Akure exhibit the most favourable physical conditions across all metrics, with the highest overall mean (2.686) compared to other study areas. The selected inner-city residential neighbourhoods in Okitipupa display an intermediate overall mean (2.468), with high ratings for waste management and physical safety but extremely poor road and drainage conditions, indicating unequal infrastructure quality. Conversely, the selected inner-city residential neighbourhoods in Owo exhibit the lowest overall mean (2.329), reflecting generally poorer neighbourhood conditions.

Corroboratively, the Neighbourhood Conditions Index (NCI) identifies geographical variations in the physical qualities across the selected inner-city residential neighbourhoods in the study areas. As shown in Table 5, the selected inner-city residential neighbourhoods in Akure possess the highest NCI mean (53.71%), indicating moderate neighbourhood physical conditions. In contrast, the selected inner-city residential neighbourhoods in Owo and Okitipupa record NCI means of 46.59% and 47.56%, respectively. Additionally, the table reveals minimum values of 26.67% and 30.00%, indicating that a significant proportion of residents in these neighbourhoods live in extremely poor conditions, with deteriorated and inadequate infrastructure. Comparatively, the study reveals greater heterogeneity and better inner-city residential neighbourhood conditions in Akure, possibly due to larger urban development. However, the inner-city residential neighbourhoods in Owo and Okitipupa exhibit poorer conditions, highlighting potential vulnerabilities.

Findings align with previous studies by Mohit and Iyanda (2016) and Farinmade et al. (2021) on the poor and unsatisfactory housing and neighbourhood physical conditions of inner-city residential neighbourhoods. Several parts of the houses and neighbourhoods are considered extremely poor and appalling. For instance, open dumping and burning of waste continue to occur in these neighbourhoods. Additionally, unsafe water consumption and insecurity persist in the neighbourhoods. These findings align with Olubi and Aseyan (2023) and Ogbonna et al. (2024) on the hazardous conditions, inadequate amenities, and substandard housing in the urban poor areas in Nigeria.

Table 4: Neighbourhoods' Physical Characteristics across the Study Area

	Selected Neighbourhoods in Akure		Selected Neighbourhoods in Owo		Selected Neighbourhoods in Okitipupa			
Neighbourhood Physical Conditions	**Mean (N=158)**	**Rank**	**Mean (N=127)**	**Rank**	**Mean (N=135)**	**Rank**	**Overall Mean**	**Rank**
Outdoor spaces	2.8924	2	2.3228	3	2.0741	4	2.4298	3
Water supply	2.3418	6	2.3071	5	2.1333	3	2.2607	5
Drainage conditions	2.4557	5	2.1496	6	1.8370	6	2.1474	6

	Selected Neighbourhoods in Akure		Selected Neighbourhoods in Owo		Selected Neighbourhoods in Okitipupa			
Physical safety	3.0443	1	2.3150	4	3.4370	1	2.9321	1
Road conditions	2.7089	3	2.3858	2	1.8889	5	2.3279	4
Waste management	2.6709	4	2.4961	1	3.4370	1	2.8680	2
Overall	**2.6861**	1	**2.3290**	3	**2.4680**	**2**		

Table 5: Neighbourhoods Physical Condition Index across the Study Areas

Neighbourhood Physical Conditions Index	Selected Neighbourhoods in Akure (n=158)	Selected Neighbourhoods in Owo (n=127)	Selected Neighbourhoods in Okitipupa (n=135)
Minimum (%)	30.00	26.67	26.67
Maximum (%)	80.00	73.33	66.67
Mean (%)	53.71	46.59	47.56
Std. Deviation	10.90	10.92	8.34

Social Characteristics

The study depends on a 5-point Likert scale to measure social characteristics, with 5 denoting very strong, active, and well-established social indicators, 4 denoting strong and consistent social characteristics, 3 denoting average social characteristics, 2 denoting low or limited social characteristics, and 1 denoting very weak social characteristics. Results show that in the selected inner-city residential areas in Akure, residents' participation in neighbourhood decision-making ranks lowest (3.5316) and freedom of association ranks highest (4.1392) as shown in Table 6. The table further reveals the ranking of other neighbourhoods' social characteristics, such as leadership (3.5316), equality (3.5253), volunteering to assist during emergencies (3.5253), resident trust (3.4304), and engagement with other residents (3.4241). In the selected inner-city residential neighbourhoods in Owo, freedom ranks highest (mean = 4.7717), while resident trust ranks lowest (mean = 3.6220). Equality (3.9134), interaction (3.8268), volunteering to assist others during emergencies (3.8189), leadership (3.8031), and participation in decision-making (3.7165) are the other social characteristics ranked by mean. Similarly, among all social parameters investigated in the selected inner-city residential neighbourhoods in Okitipupa, freedom within the neighbourhoods ranks highest (mean = 4.5037), while equality ranks lowest (mean = 3.6444). Other variables, ranked by mean, include trust (3.9333), interaction (3.9185), volunteering to help during emergencies (3.9185), leadership (3.8000), and involvement in decision-making (3.7556).

Comparatively, the selected inner-city residential neighbourhoods in Owo and Okitipupa show identical overall means of 3.925, indicating excellent social cohesion, freedom, and interaction in the neighbourhoods. In contrast, the selected inner-city residential neighbourhoods in Akure exhibit a lower overall mean of 3.569, suggesting that local social features are generally weaker. The strength of social capital in the study areas was further assessed using the Social Condition Index (SCI), as shown in Table 7. The table indicates that the selected inner-city

residential neighbourhoods in Owo and Okitipupa display very strong and stable social capital as reflected by their SCI means of 78.49% and 78.50%, respectively. Conversely, the selected inner-city residential neighbourhoods in Akure, with an SCI of 71.37%, demonstrate greater heterogeneity, lower trust, weaker social ties, and reduced perceived freedom.

Findings support Shahihagh et al. (2024), that social aspects of inner-city residential neighbourhoods are crucial for enhancing livability, particularly through a sense of freedom and belonging. Overall, the social characteristics of inner-city residential neighbourhoods in Ondo State portray socially open and interactive spaces. However, this study reveals that social capital is lower in Akure compared to Owo and Okitipupa, likely due to heterogeneity and urbanization. Consistent with Sakketa (2025)'s study, findings emphasise that rapid urbanization reduces social capital, alters social fabrics, and reshapes social cohesion in the inner-city residential neighbourhoods.

Table 6: Neighbourhoods' Social Characteristics across the Study Areas

	Selected Neighbourhoods in Akure		**Selected Neighbourhoods in Owo**		**Selected Neighbourhoods in Okitipupa**			
Neighbourhoods' Social Characteristics	**Mean (N=158)**	**Rank**	**Mean (N=127)**	**Rank**	**Mean (N=135)**	**Rank**	**Overall Mean**	**Rank**
Freedom of Association	4.1392	1	4.7717	1	4.5037	1	4.4715	1
Leadership Equality	3.5316	2	3.8031	5	3.8000	5	3.7116	4
Volunteering to help during emergencies	3.5253	3	3.9134	2	3.6444	7	3.6944	5
Trust in one another	3.5253	4	3.8189	4	3.9185	3	3.7542	2
Interaction	3.4304	5	3.6220	7	3.9333	2	3.6619	6
Involvements in decision making	3.4241	6	3.8268	3	3.9185	3	3.7231	3
Overall	3.4051	7	3.7165	6	3.7556	6	3.6257	7
	3.5690	**3**	**3.9250**	**1**	**3.9250**	**1**		

Table 7: Neighbourhoods Social Condition Index across the Study Areas

Neighbourhood Social Conditions Index	**Selected Neighbourhoods in Akure (n=158)**	**Selected Neighbourhoods in Owo (n=127)**	**Selected Neighbourhoods in Okitipupa (n=135)**
Minimum (%)	31.43	45.71	48.57
Maximum (%)	100.00	97.14	100.00
Mean (%)	71.37	78.49	78.50
Std. Deviation	14.50	12.06	11.08

Spearman Rho Correlation Matrix of the Socio-Physical Neighbourhood Characteristics

In the inner-city residential neighbourhoods in Akure, Spearman's rho correlation between the neighbourhoods' social, housing, and physical characteristics reveals the highest correlation (0.790) between ceiling conditions and wall conditions in the neighbourhoods. All analyses show significant associations ($p<0.05$) as shown in Table 8. This result reveals that housing elements in the inner-city neighbourhoods either decline or improve concurrently. Furthermore, the regeneration hierarchy derived from Spearman's rho correlation analysis reveals that spatial variables of the neighbourhoods' physical characteristics exhibit the most consistent relationships with important social indicators. This demonstrates the influence of social interaction and neighbourhood engagement on conditions and quality of selected inner-city residential neighbourhoods. However, despite the significance of housing components, it exhibits comparative modest correlations with social factors. This aligns with the findings of O'Neill et al. (2023) and Ngema et al. (2025), which emphasise the possible effects of housing and physical neighbourhood improvements on social circumstances. It further corroborates Rashidfarokhi et al. (2026) on the necessity of comprehensive neighbourhood redevelopment strategies that incorporate social, infrastructure, and spatial initiatives.

Table 8: Spearman Rho Correlation Matrix of Socio-Physical Neighbourhood Characteristics in the selected Inner-City Residential Neighbourhoods in Akure

	WC	FC	WnC	DC	CC	RC	AO	PL	RoC	DrC	TN	IN	NL	VN	ID	EN	FN
WC	1																
FC	.754	1															
WNC	.695	.686	1														
DC	.683	.651	.648	1													
CC	.790	.597	.638	.655	1												
RC	.727	.548	.610	.621	.925	1											
AoB	.595	.624	.649	.405	.741	.755	1										
PL	.459	.432	.515	.262	.543	.560	.704	1									
RoC	.301	.322	.385	.012	.312	.307	.567	.677	1								
DrC	212	.248	.320	.040	.192	.187	.413	.671	.787	1							
TN	.121	.171	.109	.142	.107	.109	.121	.228	.146	.087	1						
IN	.247	.273	.166	.210	.160	.157	.140	.150	.166	.062	.718	1					
NL	.230	.317	.200	.195	.135	.147	.189	.260	.224	.151	.656	.719	1				
VN	.118	.202	.032	.071	.045	.038	.109	.219	.185	.115	.683	.653	.712	1			
ID	.116	.172	.091	.131	.119	.119	.152	.183	.154	.101	.573	.598	.584	.681	1		
EN	.110	.149	.104	.121	.077	.123	.126	.169	.045	.009	.396	.391	.425	.425	.512	1	
FN	.155	.279	.178	.147	.142	.167	.223	.102	.055	-.011	.302	.342	.279	.279	.317	.392	1

All variables are significant at 0.05

WC: Walls Condition, FC: Floors Conditions, WnC: Windows Condition, DC: Doors Conditions, CC: Ceiling Conditions, RC: Roofs Condition, AO: Available Outdoor Spaces, PL: Proper Landscaping, RoC: Road Conditions, DrC: Drainage Condition, TN: Trust in the Neighbourhood, IN: Interaction in the Neighbourhood, NL Neighbourhood Leadership, VN: Volunteering to help each other in the

Neighbourhood, ID: Involvement in the Decision making, EN: Equality in the Neighbourhood, FN: Freedom in the Neighbourhoods.

Table 9 reveals that the correlation coefficients between the physical and social neighbourhood parameters for the selected inner-city residential neighbourhoods in Owo range from -0.185 to 1.000. The analysis reveals a statistically significant correlation ($p<0.05$) between the neighbourhoods' physical and social features. The correlation matrix further shows that housing characteristics variables exhibit strong intercorrelations and considerable multicollinearity. This suggests that the variables collectively represent a single underlying dimension of housing quality. Additionally, the matrix shows a weak association between housing conditions and social characteristics, highlighting those variations in housing conditions do not strongly correspond to changes in social characteristics. Consistent with the socio-physical paradox (Coenen et al., 2020), robust social structures endure despite deteriorating physical conditions. Findings also align with previous studies by Makinde (2020) and Zhang et al. (2023) that improvements in physical housing and neighbourhood conditions do not translate into enhanced social outcomes. Rather, social and physical systems seem to function as complementary but somewhat autonomous aspects of neighbourhood resilience.

Table 9: Spearman Rho Correlation Matrix of Socio-Physical Neighbourhood Characteristics in the Selected Inner-City Residential Neighbourhoods in Owo

	WC	FC	WnC	DC	CC	RC	AO	PL	RoC	DrC	TN	IN	NL	VN	ID	EN	FN
WC	1																
FC	.940	1															
WnC	.975	.965	1														
DC	1.000	.940	.975	1													
CC	.580	.619	.585	.580	1												
RC	.569	.582	.560	.569	.919	1											
AoB	.485	.479	.426	.485	.820	.853	1										
PL	.273	.213	.141	.273	.315	.217	.423	1									
RoC	.340	.231	.205	.340	.334	.292	.320	.855	1								
DrC	.028	.020	-.066	.028	.124	.111	.437	.831	.660	1							
TN	-.155	-.185	-.172	-.155	-.046	-.036	-.046	-.065	-.010	-.059	1						
IN	.073	.018	.062	.073	-.041	-.033	-.085	-.041	.060	-.081	.335	1					
NL	.079	.030	.062	.079	.015	-.013	1.017	.015	.045	-.078	.400	.474	1				
VN	.164	.107	.131	.164	-.028	-.025	-.011	.092	.123	.019	.317	.340	.398	1			
ID	.128	.129	.118	.128	.079	.136	.054	.015	.087	-.004	.310	.387	.364	.313	1		
EN	.062	.000	.053	.062	-.017	.048	.032	-.020	-.086	-.115	.331	.407	.486	.326	.475	1	
FN	.011	-.007	.006	.011	.078	.038	.011	.056	.071	-.011	.272	.232	.302	.341	.285	.366	1

All variables are significant at 0.05

WC: Walls Condition, FC: Floors Conditions, WnC: Windows Condition, DC: Doors Conditions, CC: Ceiling Conditions, RC: Roofs Condition, AO: Available Outdoor Spaces, PL: Proper Landscaping, RoC: Road Conditions, DrC: Drainage Condition, TN: Trust in the Neighbourhood, IN: Interaction in the Neighbourhood, NL Neighbourhood Leadership, VN: Volunteering to help each other in the Neighbourhood, ID: Involvement in the Decision making, EN: Equality in the Neighbourhood, FN: Freedom in the Neighbourhoods.

In the selected inner-city residential neighbourhoods in Okitipupa, the socio-physical features are frequently reinforcing, internally coherent, and appropriate for composite assessment as indicated by Table 10. The lowest correlation value is -0.176, and the highest is 1.000, with the majority of the coefficients positive. This signifies that any improvement in one trait has an impact on the others. Spearman's rho correlation between the social and physical neighbourhood characteristics is statistically associated ($p<0.05$). The physical and social systems in the selected inner-city residential neighbourhoods show weak, frequently insignificant, and negatively correlated. This suggests that improvements in physical characteristics are not always associated with social traits. Social resilience appears to be sustained by contemporary social networks, interactions, and collective behaviours rather than directly depending on the quality of the physical environment. In order to maintain neighbourhood resilience, the results indicate that a combined strategy of bolstering social institutions and preserving physical housing and neighbourhood conditions is required.

Table 10: Spearman Rho Correlation Matrix of Socio-Physical Neighbourhood Characteristics in the Selected Inner-City Residential Neighbourhoods in Okitipupa

	WC	FC	WnC	DC	CC	RC	AO	PL	RoC	DrC	TN	IN	NL	VN	ID	EN	FN
WC	1																
FC	.866	1															
WnC	.728	.809	1														
DC	.761	.885	.772	1													
CC	.403	.505	.657	.570	1												
RC	.210	.342	.566	.360	.723	1											
AoB	.526	.320	.371	.311	.327	.480	1										
PL	.551	.379	.296.	.416	.222	.343	.882	1									
RoC	.484	.356	.187	.432	.179	.283	.811	.918	1								
DrC	.440	.313	.137	.441	.153	.192	.710	.825	.916	1							
TN	-.076	-.066	-.049	-.114	-.126	-.132	-.170	-.165	-.111	-.085	1						
IN	-.033	-.017	-.028	-.084	-.035	-.032	-.051	-.036	-.003	.017	.634	1					
NL	.006	.023	-.081	-.021	-.084	-.153	-.158	-.099	-.052	-.012	.648	.645	1				
VN	.061	.033	-.002	-.040	-.124	-.121	-.002	.034	.073	.100	.660	.823	.670	1			
ID	-.114	-.090	-.101	-.115	-.043	-.059	-.008	-.113	-.056	-.021	.538	.620	.526	.561	1		
EN	-.061	-.009	-.045	-.084	-.040	-.001	-.083	-.098	-.057	-.058	.316	.453	.372	.482	.268	1	
FN	.047	-.050	-.099	-.034	-.075	-.176	.009	.028	.028	-.005	.146	.174	.120	.134	.056	.162	1

Not all variables are significant at 0.05

WC: Walls Condition, FC: Floors Conditions, WnC: Windows Condition, DC: Doors Conditions, CC: Ceiling Conditions, RC: Roofs Condition, AO: Available Outdoor Spaces, PL: Proper Landscaping, RoC: Road Conditions, DrC: Drainage Condition, TN: Trust in the Neighbourhood, IN: Interaction in the Neighbourhood, NL Neighbourhood Leadership, VN: Volunteering to help each other in the Neighbourhood, ID: Involvement in the Decision making, EN: Equality in the Neighbourhood, FN: Freedom in the Neighbourhoods.

The strong correlations among housing variables underscore the systemic nature of housing quality across the study areas. Consistent with Morenikeji et al. (2017), findings suggest that housing conditions and neighbourhood quality in the inner-city residential neighbourhoods in

Nigeria are spatially interdependent. Furthermore, the statistically significant association between the social and physical characteristics of the neighbourhoods suggests interplay between the neighbourhood environments in shaping outcomes. Additionally, results reveal significantly high mean values of social characteristics (3.5690 and 3.925) compared to the lower mean values for neighbourhoods' physical conditions (2.3290, 2.4680, and 2.6861). This suggests a significant difference between social and physical conditions across the study areas. This paradox implies that inner-city residential neighbourhoods in Ondo State maintain robust social functioning and resilience in spite of inadequate infrastructure and declining housing conditions. The findings suggest that neighbourhoods' social networks meet residents' needs despite limited infrastructure and institutional support. In line with Cutter et al. (2008), Cutter et al. (2014), and UN-Habitat (2020)'s findings and reports, the quality of the built environment is an important determinant of social cohesion and neighbourhood resilience. Thus, there is a need for integrated housing and neighbourhood improvement strategies that simultaneously address physical infrastructure and social well-being challenges.

Contents Analysis of Residents' Opinions on Housing and Neighbourhoods Characteristics

Table 11 presents the thematic content analysis of interviews on the dominant physical characteristics of the selected neighbourhoods. The analysis suggests the presence of multi-dimensional structural vulnerability in the neighbourhoods. This is reflected in the age of the buildings (predominantly old), deterioration due to the lack of maintenance, and weak construction materials. The Table also highlights the weak infrastructure and basic amenities, and pinpoints the decrease in the adaptive capacity and service delivery in the neighbourhoods. These increase sanitation-related health challenges and negatively influence the overall health outcome in the neighbourhoods. Furthermore, results identify institutional and governmental neglect in the inner-city residential neighbourhoods as a challenge to environmental and public health. In support of Gocer et al. (2023), the neighbourhoods tend towards transformations, shrinkage, and decline arising from the dangerous and unsafe conditions.

The triangulation of results suggests a clear convergence of evidence about the declining conditions of inner-city residential neighbourhoods in Ondo State. The quantitative results show that housing and neighbourhood physical conditions are generally poor and unsatisfactory. Abnormalities such as improper water use, open waste disposal and burning, and ongoing insecurity were discovered across the study areas. In the same vein, qualitative analysis reinforces the persistent pattern of multi-dimensional structural vulnerability in the neighbourhoods. The convergence of these results implies that systemic infrastructural and socio-environmental issues are closely linked to the physical deterioration of housing and neighbourhood environments. Additionally, health risks associated with sanitation increase in the neighbourhoods. Furthermore, this congruence validates the findings and highlights the necessity of coordinated interventions that address the structural and physical aspects of vulnerability in the neighbourhoods.

Table 11: Contents Analysis of Housing and Neighbourhoods Characteristics across the Study Area

Theme	Sub-Theme	Description	Illustrative Quotes	Interpretation
Housing Quality and Conditions	Building Status	Old buildings	"…the buildings are mostly old and inherited…" (Akure) "…most of the houses are old and …" (Owo) "…there is no new building in the street, all are …" (Okitipupa)	Structural decay increases with the age of buildings' exposure to environmental and health risks.
	Maintenance	Buildings are poorly maintained	"…no single maintenance or repair since…" (Owo) "…we are only managing the building, it is in a very bad state…" (Male, Okitipupa)	Structural decay increases the exposure to environmental and health risks.
	Building Material		"…most buildings in the neighbourhoods are built with old and weak material…" (Akure)	Weak building materials increase structural vulnerability
Infrastructure & Basic Services	Irregular electricity	Unstable power supply	"…we don't have power for 6months…" (Akure) "…our power has just been connected…" (Owo) "…power is irregular…" (Okitipupa)	Energy insecurity decreases adaptive capacity and service delivery.
	Inadequate water supply	Lack of potable water	"…no portable water at all…" (Akure) "…water is a serious problem…" (Okitipupa) "...water is a serious problem…" (Owo)	Water insecurity increases sanitation-related diseases.
	Poor drainage system	Flood-prone and blocked drains	"…drainage system is fair but…" (Akure) "… the street is usually flooded during rain …" (Okitipupa) "… street is sometimes flooded …" (Owo)	Weak drainage contributes to environmental health shocks.
Environmental Conditions	Waste Collection	Poor waste management	"…poor refuse collection…" (Akure) "…refuse is dumped openly along the streets…" (Owo)	Poor sanitation increases disease exposure.
	Pollution	Environmental contamination	"…burning of waste affects us…" (Akure)	Pollution worsens public health outcomes.
Spatial Structure & Accessibility	Poor road connectivity	Narrow, unpaved streets	"…cars cannot easily enter some areas…" (Akure) "…street cannot be assessed…" (Okitipupa) "…very bad roads around here…" (Owo)	Poor connectivity delays emergency response

Theme	Sub-Theme	Description	Illustrative Quotes	Interpretation
Institutional & Governance Context	Unequal facility distribution	Lack of nearby health facilities	"…5minutes walking distance to a clinic…" (Akure) "…average of 10minutes walking distance to a clinic…" (Owo) "…20 minutes walking travel to a clinic…" (Okitipupa)	Spatial inequity affects healthcare access
	Poor government presence	Very limited public intervention	"…there is no Governments facility here…" (Akure) "…we do not enjoy any intervention…" (Owo) "…they are only seen on the television screen…" (Okitipupa)	Governmental neglect causes structural vulnerability.
	Enforcement of planning regulations	Unregulated planning and development	"…development is anyhow in…" (Okitipupa) "…buildings are constructed to the owner's choice…" (Owo) "…there is no new development but everyone to his/her choice…" (Okitipupa)	Improper land use contributes to environmental and health risks.

Conclusion and Recommendations

This study comparatively evaluates the socio-physical neighbourhoods' characteristics of the selected inner-city residential neighbourhoods in Ondo State, Nigeria. It offers evidence-based insights that promote sustainable urban and neighbourhood revitalization. The neighbourhoods demonstrate the severity of occurrences of challenges and the consequent impacts on the social, economic, institutional, environmental, and infrastructural components. The study unpacks that rather than assuming a straight causal relationship between physical improvements and social capacity, an integrated strategy that simultaneously solves infrastructural inadequacies and strengthens existing social capital is crucial. The results show that correlations between physical and social variables are often weak. Findings also point to the need for a two-pronged strategy in which social systems are simultaneously reinforced and physical upgrades are prioritised. This supports the understanding that the physical and social characteristics of urban neighbourhoods are major determinants of urban dynamics. The empirical findings demonstrate significant socio-spatial inequalities, thus confirming the heterogeneous nature of the neighbourhoods. Furthermore, the strength of social systems and institutions that support collective action is more pronounced in secondary cities. Thus, rebalancing through the assessments of the socio-physical characteristics of the selected inner-city neighbourhoods is crucial. This requires targeted interventions that address infrastructural deficits, enhance housing quality, and promote civic engagement. The study advances knowledge by promoting sustainable and equitable neighbourhood development in rapidly urbanising contexts of the Global South.

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