

# Sokoto Journal of Geographical Studies (SJGS)



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# **Sokoto Journal of Geographical Studies (SJGS)**

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**“THE ENCLAVES OF THE MARRIED AND EDUCATED PEOPLE”:  
CHARACTERIZING THE RESIDENTS OF GATED COMMUNITIES IN KANO  
METROPOLIS**

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**Abstract**

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*Gated communities are the fastest growing housing types in many countries of the world. Such residential developments heighten residential segregation more intensely than the most exclusive urban neighbourhoods. In Kano metropolis gated communities constitute significant physical, spatial and socio-economic realities. This paper is aimed at describing the socio-economic characteristics of gated communities in the metropolis. Quantitative data on the socio-economic and demographic attributes of the residents of the gated communities were sourced through structured interviews with the residents and in-depth interviews with the various estate firms and private land developers operating in the metropolis. Using convenient sampling based on availability of respondents, a total of 342 out of the 1,352 gated households were sampled. It is found that majority of the heads of the gated households were male (98.2%), married (90%), have children and maintain between 1–9 family members (69%); and 48.5 % of them have post-secondary school education. The results indicated that close to 40% of the heads of the gated households were civil servants, some 42% of them live in their own personal houses and 35% stay in rented houses. It is concluded that gated communities are parts of the physical and socio-economic realities of the metropolis, and they served as the enclaves or communities of specific types of residents that are relatively similar in their demographic, social and economic characteristics. It is recommended that mixed-use development and inclusive zoning regulations should be encouraged within and outside the gated communities to promote diversity and reduce residential segregation.*

**Keywords:** *Urban gating, Occupations, Tenure, Demographics and Exclusive.*

**Introduction**

The rapid growth of proprietary urban community is one of the important characteristics of urbanization in the last quarter of 20th century and gated communities have been the typical forms of this development (Hammad, Li & Vrcelj, 2024). As a result of the real estate boom of the late 1980s there was a wide spread emergence of modern walled communities as forms of residential neighbourhoods in many parts of the world (Ajibola, Oloke & Ogungbemi, 2011) and they are now challenging the spatial, organizational, and institutional order that has shaped modern cities (Webster, Glasze & Frantz, 2008).

By the 21<sup>st</sup> century these new gated communities became part of the fashion of suburbanization that is based on the establishment of self-sufficient detached communities with carefully created personality (Hammad, Li & Vrcelj, 2025). The fastest growing housing types in the present century, they represent the hope for security, they appeal to customers searching for a sense of community and identity, they offer an important niche marketing strategy for developers, keep out the unwelcome, come with attractive amenities and increase property value (Blakely & Snyder, 1997a; Hammad, Li & Vrcelj, 2025).

Such types of neighbourhoods accentuate patterns of residential segregation more profoundly than the most exclusive urban neighbourhoods because they separate their dwellers from those living outside them by means of physical barriers. Such degree of segregation may greatly limit opportunities for positive spatial, interpersonal and group interactions as well as shared experiences amongst people of diverse backgrounds and it may contribute to the fragmentation of greater communities (Macionis&Parillo, 2017).

The estates are situated right beside other non-gated communities within cities. Therefore, they may have some distinctive social and economic characteristics that distinguish them from other neighbourhoods within the same area. Individual gated communities are usually occupied by residents that are homogenous in one or more demographic, social or economic variables. For instance, they can be homogenous by age, class, race, ethnicity, social status, occupation and income (Grant & Mittlesteadt, 2004; Sam, 2017). In the long run, these could lead to socio-economic and demographic fragmentation and segregation by creating pockets of homogeneity and structural variations within the metropolis thereby promoting social exclusion.

With the introduction of modern gated living in Nigeria there has been a considerable transformation of living space and work-life rituals for the urban residents. The gated community model is a fast growing one principally in reaction to safety and security all over the country. Road/street closures can equally be found in major cities of the country such as Abuja, Kano and Port Harcourt. The development and spread of the communities in the country came largely as a response to high level of insecurity in the nation's urban centres. It is not unusual presently to see major streets close up with gates all in an effort to secure the neighbourhoods (Ajibola *et al.*, 2011). The flow of revenue from the rising oil economy and the imitation of American 24-hour lifestyle further intensified the individualistic/capitalist cities which developed. Lagos was changed from being a calm former colonial trading port and commercial city to being the financial and commercial hub of the five biggest oil generating countries of the world (Uduku, 2012). Therefore, former public housing estates quickly gave way to private housing projects.

In Kano, gated communities are structurally recognizable urban forms in the metropolis. Today they formed important residential developments or housing types as there are tens of gated housing developments within the metropolis. These contain thousands of housing units that are homes to hundred thousand of the city's population. There are also several hundred or perhaps thousands of gated streets or privatized road enclosures in almost every section of the city. It can be understood therefore, that gated communities constitute significant physical, spatial and socio-economic realities of the metropolis (Abba, 2024). Thus, within the metropolis the phenomenon has started to generate academic interests. The work of Abba (2023) traces the emergence and temporal development of the phenomena in the metropolis from the colonial period to the year 2018. Another study describes the locations and physical forms of gated residential developments in the metropolis (Abba, 2024).

This paper therefore, examines the demographic and socio-economic characteristics of the residents of gated communities in the area. The characteristics of the residents of gated residential development can contribute to urban segregation and studying them can help planners understand its extent. Knowledge of the characteristics of gated communities can inform policies aimed at promoting more inclusive and equitable urban development. More so, studying the demographics of gated communities can contribute to the broader field of urban studies, including research on urbanization, segregation and inequality.

## Literature Review

### Typology of Gated Communities

Blakely and Snyder (1997b) offered one of the most comprehensive studies of gated communities obtainable and presented the most often discussed typology of the phenomenon. This model made a fundamental input to understanding the most important features of gated communities (Hammad, Li & Vrcelj, 2024). It identified three types of gated community these are; lifestyle, prestige, and security zone communities. In theory, these groups represent the perfect types that serve specific markets. However, in practice, one type of community may show a combination of features from other types (Grant & Mittelsteadt, 2004; Abba 2019) (Table 1).

Even though typologies alone do not constitute theory; however, they facilitate description by simplifying complex realities. At the same time, they provide an important step in the process of theory building around new urban forms by offering a framework for observation and a lens for analyses (Baldan, Torrado & Susino, 2024). Lifestyle communities focus on leisure activities with recreational facilities, common amenities, and collective services at their centre. They may comprise retirement villages, golf communities, or suburban new towns. Developers of such projects try to commodify community. They expect to attract residents searching for identity, security, and a shared lifestyle with their neighbours. They also seek to build a sense of community through common interests and activities. Security may be secondary to the amenities offered in the community (Table 1) (Grant & Mittelsteadt, 2004; Abba 2019).

Prestige communities serve as symbols of prosperity and status for image-conscious inhabitants. Even though these projects featured beautiful surroundings, they did not often include common amenities or facilities. Three types of contemporary prestige communities were identified by Blakely and Snyder (1997b) according to the level of wealth of residents. The Enclaves for the rich-and-the-famous offer privacy and seclusion for the wealthiest in the society; these enclaves usually have ornate gates and walls, and are manned by security personnel. They demonstrated a significant fear of crime against property and person, and the wish of those within to keep away from contact with the public (Shi & Ling, 2023). They have become refuge for professional athletes, financiers, and celebrities. The attractiveness of the landscape and the quality of security provided are the most important features of these projects. Purchasers are seldom interested in developing a sense of community with their neighbours (Yekple, Overa & Hidle, 2024) (Table 1).

Security zone communities shut off public roads to non-inhabitants. They reflect a fear of strangers who disturb neighbourhoods. While developers put security in place in the other types of gated communities, in security zones the residents themselves may lobby for and contribute in erecting the barriers. As urban nuisance overpowers residents, they may ask for local authorities to close off roads or surround neighbourhoods to stop outsiders from gaining entrance. Walls and gates are erected to discourage crime, reduce traffic, or preserve property values. Residents usually see gating their roads as a final alternative to take back their community (Blakely & Snyder, 1997a; Asfour, 2022).

**Table 1: General Typology of Gated Communities**

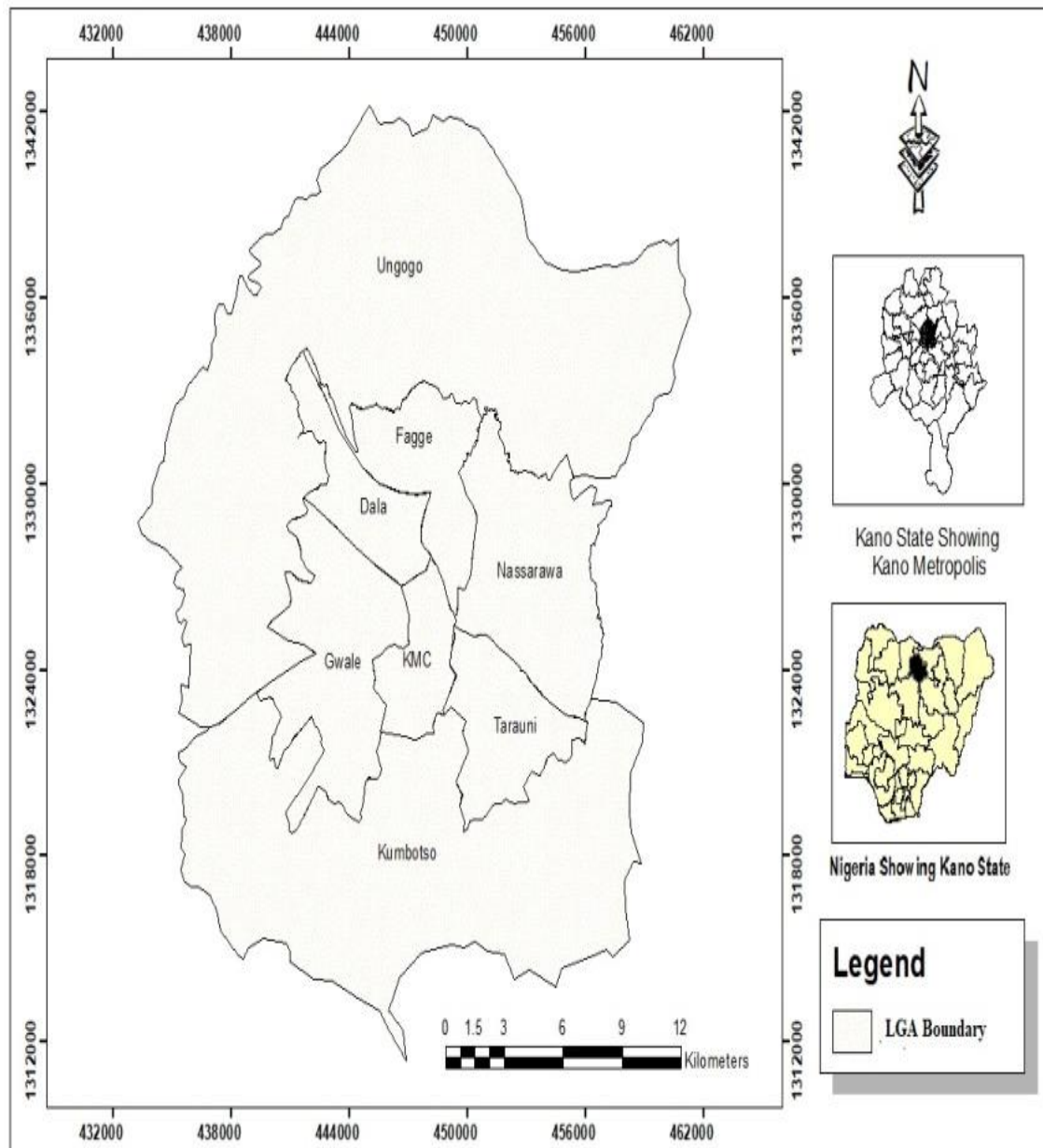
Major Type	Main Functions	Subtypes	Characteristics
Lifestyle Communities	These projects emphasize common amenities and cater for a leisure class with shared interest; may reflect small town nostalgia; may be urban villages, luxury villages or resort villages.	Retirement Villages	Age-related complexes with suits of amenities and activities
		Golf and Leisure Communities	Shared access to amenities for an active lifestyle
		Suburban New town	Master-planned projects with suite of amenities and facilities
Prestige Communities	These projects reflect desire for image, privacy, and control; they focus on exclusivity over community; few shared amenities and facilities	Enclaves for the rich and famous	Secured and guarded privacy to restrict access for the celebrities and very wealthy; attractive locations
		Top-fifth developments	Secured access for the up-coming wealthy; often have guards
Security Zone	These projects reflect fear; involve fences and gates on public streets; controlling access	City perch	Restricted public access in inner-city area to limit crime or traffic
		Suburban perch	Restricted public access in inner-city area to limit crime or traffic
		Barricade perch	Closed access to some streets to limit through traffic

Source: Grant and Mittlesteadt (2004)

## Research Methodology

### The Study Area

Kano metropolis is located between latitudes 11° 50' to 12° 07' N and longitude 8° 22' to 8° 47' E, and has an altitude 472 meters above sea level (Olofin, 2014). The area is bordered by Minjibir LGA to the Northeast and Gezawa LGA to the East, Dawakin Kudu LGA to the South East and Madobi and Tofa LGAs to the South West. It is one of the rapidly expanding cities in Nigeria (Nabegu, 2010) and it covered eight local government areas (Figure 1).



**Figure 1: Kano Metropolis**

**Source: Cartography Lab. Dept. of Geography, BUK (2023)**

In 2019, the metropolis was projected to be populated by close to 4.5 million people (Mohammed, Hassan & Badamasi, 2019), this makes it the second most populous city in the country after Lagos (Liman, 2015). The speedy growth of population in the city went hand by hand with the city's spatial expansion as several neighbouring rural areas were encompassed into the urban premises. There was also the in-filling of alleexisting open spaces within the built-up areas (Maiwada, 2014). The metropolis is situated at the centre of Kano closed settled zone, thus it has the high population and building densities. It also has a result of industrialization and other economic development, it has also through time become a cosmopolitan city with several ethnic groups (Ibrahim, 2014).

The residential area, which is the dominant land use in the metropolis, is generally divided into two major clusters (Liman & Adamu, 2003; Liman, 2015). These are: (a) The Kano old city consisting of the space within the wall and the adjoining Fagge settlement just outside it and (b)

The Township area which is further subdivided into: (i) Nasarawa G.R.A covering Nasarawa, Bompai and Magwan areas located east of Kano old city; (ii) The Lebanese-Syrian quarters located at Fagge-Ta-Kudu between railway station and Kantin Kwari market is composed of mixed residential and commercial land uses around Beirut Road, Ibrahim Taiwo Road (iii) Sabon Gari area and (vi) Tudun Wada Area: This area comprises Tudun Wada, Gwagwarwa (Gabari), Gama (Brigade), Dakata, Dawakin-Dakata and Kawaji.

Several efforts were made by successive federal and state administrations to meet the ever-increasing housing demands in the area. These efforts translated into the creation of a number of housing estates such as the Kundila Housing Estates, Shagari Quarters, Gwammaja Housing, Ja'oji Estate, Kabuga Housing, Danladi Nasidi Housing, Zawaciki Housing and Ibrahim Kunya Estate (Abdullahi, 2004). In 2014 three major estates were constructed mainly for the high-income earners. These are the Kwankwasiyya, Amana and Bandirawo estates consisting thousands of housing units with modern infrastructure and amenities. Public organizations such as police, army and air force, Railway Corporation, Universities, Prison, Immigration and Costume Services, hospitals, local governments and a host of others have also provided estates which serve as quarters for their staff (Abdullahi, 2004).

### Research Method

The quantitative data used in the research relate to the demographic and socio-economic data such as age, sex, household size, ethnic and racial composition, level of education, occupations and income of the residents of gated communities. The data were sourced from structured interviews and in-depth interviews with the residents of the gated communities and various estate management firms and private land developers that operate in the metropolis respectively.

Probability sampling could not be applied for the sampling of individual households for interview administration. This is because firstly there was no sampling frame for the households within the gated communities secondly, because of the exclusive nature of most of the gated communities. Instead, a convenient sampling, based on availability, was employed to select samples for the household interviews. All the 32 fully occupied estates identified were covered in the survey (Table 2). Inventory revealed that apart from the existing gated residential estates in the metropolis there are also several gated streets or "privatized public streets" found in almost every part of the city. For this reason, some gated streets were purposively selected for the research. The selection was based on the number and the length of the gated streets; as well as the number of housing units within the residential areas. Thus, three gated streets that satisfied these attributes were selected. These are: Unity gated streets, *Janbulo* gated streets and Hausawa gated streets.

In total, the gated residential developments covered were 2,656 residential units situated within 32 gated estates; these formed the population of the research. However, seven (7) out of the 32 estates were found to be highly exclusive and private in nature hence individual households within these estates cannot be covered in the structured interview survey. As a result, another interview instrument was designed and administered on managers of these estates to elicit general information about their socio-economic characteristics. The estates covered by the second type of interview survey were: Hassan Estate, Dantata Estate, Abubakar Rimi Memorial Estate, Alu Avenue Estate, President Avenue Estate, Burma Road Estate and Oyo Road Estate (Table 2).

**Table 1: Determination of Sample Size**

S/N	Gated Communities	Location	Population (Occupied Houses)	Sample Size	Sample Collected
1	Ibrahim Kunya Estate	Farawa/Mariri	90	21	21
2	Abba Maikwaru	Farawa	41	10	11
3	Sabo Nanono Housing	Tarauni GRA	24	6	6
4	Shehu Musa Estate	Tarauni GRA	24	6	6
5	UDB Quarters	Hotoro/Kwanar Magi	20	5	5
6	CBN Quarters	Hotoro GRA	30	8	5
7	NIPOST Quarters	Hotoro GRA	40	10	9
8	Nigerian Airways Quar.	Kwairanga Road	85	22	19
9	HadejiaJama'are Quar.	UDB Road	12	3	3
10	NTA Quarters	UDB Road	7	2	3
11	Lamido Crescent Estate	Lamido Crescent	12	3	0
12	Gida Tara Estate	Ahmadu Bello Way	10	3	2
13	Batawa Estate	'Yankaba	10	3	9
14	Al'mukab City	Tamburawa	30	8	9
15	Wailari Estate	Western Bye – pass	50	13	15
16	BUK Staff Quarters	Court Road	64	16	0
17	Sahelian Ranch Estate	DorayiBabba	210	53	35
18	GTC Quarters	State Road	72	18	15
19	Divine Estate	Jaba/ Panisau Road	60	15	16
20	Unity Estate	Jaba/ Panisau Road	87	22	22
21	NCCA Quarters	Jaba/ Panisau Road	63	16	4
22	Aviation (FAAN) Estate	Jaba/ Panisau Road	16	4	4
23	Janbulo Streets	Janbulo Quarters	167	42	32
24	Borno Avenue	Off – Sokoto Road	33	8	9
25	Hausawa Gated Estate	Hausawa Quarters	95	24	21
			<b>1352</b>	<b>342</b>	<b>281</b>

**Source: Field Work (2022); Krejcie and Morgan (1970)**

Therefore, only the remaining 25 less exclusive gated communities were covered by the structured interview survey (Table 2). The total number of occupied housing units within this category of estates is 1,352. This number was used as the population of the study. Thus, with the population of 1,352 residential units, the sample size based on Krejcie and Morgan (1970) was 342. Therefore, the total number of housing units within occupied gated communities = 1,352. Sample size of 1,352 based on Krejcie and Morgan (1970) =  $297$ ;  $15\%$  of  $297 = 45$ . Therefore, sample size is  $297 + 45 = 342$ . This sample was then shared proportionately amongst the 25 gated estates covered by the survey, based on the number of housing units in each one. However, out of the 342 households, only a total of 281 households were covered by the survey (Table 2). This is because only these numbers of households were available and were willing to respond to the interviews.

The resident's demographic and socio-economic data were analyzed using simple percentages. The results were depicted in forms of tables and graphs. The qualitative data on economic, social and demographic attributes of the residents of the gated communities revealed homogeneity or

otherwise of the individual estates, it therefore indicated the presence or absence of ethnic, religious or racial gated enclaves in the metropolis.

## Results and Discussion

### Demographic and Socio-Economic Characteristics of Gated Communities

#### Demographic Characteristics

The study shows that gated communities in Kano are mainly the ‘enclaves for the married and the family men’. Almost all the households within the communities are headed by males and nine out of every ten heads of the households are married (Table 3). However, in spite of being dominated by married family the gated communities consist of significantly small sized households. More than two-thirds of the married men had one wife and less than one-fifth of them had two wives (Table 3). In addition, exactly half of the households had 1 – 4 children and a few between 10 – 23 children. More than one-third of the households had just 1 – 4 people and only a small percentage had household size of 15 – 25 people (Table 3).

**Table 3: Some Demographic Attributes of the Households**

Gender of the Heads of the House Holds	Frequency	Percent	Cumulative Percent
Male	276	98.2	98.2
Female	5	1.8	100.0
Total	281	100.0	
Marital Status of the Heads of the Households	Frequency	Percent	Cumulative Percent
Single	21	7.5	7.5
Married	253	90.0	97.5
Widower/Widow	6	2.1	99.6
No response	1	0.4	100.0
Total	281	100.0	
No. of Wives	Frequency	Percent	Cumulative Percent
0	23	8.2	8.2
1	198	70.5	78.6
2	48	17.1	95.7
3	5	1.8	97.5
4	1	0.4	97.9
No response	6	2.1	100.0
Total	281	100.0	
No. of Children	Frequency	Percent	Cumulative Percent
Nil	35	12.5	12.5
1-4	139	49.5	62.4
5-9	64	22.8	85.3
10-14	21	7.5	92.8
15-19	10	3.6	96.4
20-24	5	1.8	98.2
Not Indicated	5	1.8	100.0
Total	279	99.3	
No. of People	Frequency	Percent	Cumulative Percent
1-4	102	36.3	36.4
5-9	92	32.7	69.3
10-14	42	14.9	84.3
15-19	23	8.2	92.5
20-25	8	2.8	95.4
Not Indicated	13	4.6	100.0
Total	280	99.6	
Missing		1	0.4
Total	281	100.0	

Source: Field Work (2022)

This is mainly due to the fact that the gated communities are largely occupied by people that are mostly within the medium to high income brackets. This economic group, according to Robertson, Ndebele and Mhango (2011), usually maintain small family size as proved by cross tabulation analysis which shows a significant relationship between the monthly income and the family size of the residents of gated communities (Table 4). This result is in harmony with what Mahgoub and Khalfani (2012) reported that 70 % of the residents of gated communities in Doha, Qatar are married and 68 % have household size of less than five people.

**Table 4: Crosstab of Number of People in Household and Income Range**

		Income range								Total	
		50,000 - 100,000	101,000 -	151,000 -	201,000 -	301,000 -	401,000 -	Others	Not Indicated		
			150,000	200,000	300,000	400,000	500,000				
No. of People in house	1-4	F	22	14	15	5	0	0	1	45	102
		%	21.6	13.7	14.7	4.9	0.0	0.0	1.0	44.1	100.0
	5-9	F	22	23	11	10	4	1	2	19	92
		%	23.9	25.0	12.0	10.9	4.3	1.1	2.2	20.7	100.0
	10-14	F	9	6	7	10	4	1	0	5	42
		%	21.4	14.3	16.7	23.8	9.5	2.4	0.0	11.9	100.0
	15-19	F	1	5	2	3	3	0	0	9	23
		%	4.3	21.7	8.7	13.0	13.0	0.0	0.0	39.1	100.0
	20-25	F	1	0	2	1	2	0	0	2	8
		%	12.5	0.0	25.0	12.5	25.0	0.0	0.0	25.0	100.0
	Not Indicated	F	2	2	2	1	0	0	0	6	13
		%	15.4	15.4	15.4	7.7	0.0	0.0	0.0	46.2	100.0
Total	F	57	50	39	30	13	2	3	86	280	
	%	20.4	17.9	13.9	10.7	4.6	0.7	1.1	30.7	100.0	

**Chi-Square Tests**

	Value	Df	Asymp. Sig. (2- sided)
Pearson Chi-Square	59.868 <sup>a</sup>	35	.006
Likelihood Ratio	63.579	35	.002
Linear-by-Linear Association	1.124	1	.289
N of Valid Cases	280		

a. 33 cells (68.8) have expected F less than 5. The minimum expected F is .06.

**Source: Data Analysis (2022)**

**Social Characteristics**

Gated communities in Kano are multi-cultural in nature; because they house people from diverse racial, ethnic, linguistic and religious affiliations, but the Hausa Muslims dominate these estates (Table 5). This is basically because majority of the gated estates are located within the predominantly Hausa / Muslims residential areas of the metropolis. However, there was considerable number of people from other ethnic groups, especially Igbo, Yoruba, Ebira and Igala, residing in various gated estates especially those located in Sabon-Gari and Jaba / Panisau areas as well as in some of the gated staff housings. As a result, there were few Christians residing in such estates as well.

Majority of the residents of the estates are Nigerians, with few foreign nationals particularly Syrians, Lebanese, Indians, Chinese and Egyptians; consequently, there are other religious

affiliations, such as Hindus and Buddhists, found particularly in the GRAs (Table 5). These findings are in conformity with that of Levent and Gulumser (2004) in Istanbul, Turkey which established that gated communities are part of the new trends of urbanization based on communities that are separate, self-contained and with carefully constructed identities.

**Table 5: Some Social Characteristics of the Households**

<b>Ethnic Groups</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Cumulative Percent</b>
Hausa	201	71.5	71.5
Yoruba	16	5.7	77.2
Igbo	28	10.0	87.2
Others	30	10.7	97.9
No response	6	2.1	100.0
Total	281	100.0	
<b>Nationality</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Nigeria	272	96.8	96.8
Non-Nigeria	9	3.2	100.0
Total	281	100.0	
<b>Religions</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Islam	225	80.1	80.1
Christianity	48	17.1	97.2
Others	1	0.4	97.5
No response	7	2.5	100.0
Total	281	100.0	
<b>Level of Education attained by Family Member</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Primary	29	10.3	10.3
Secondary	57	20.3	30.6
Post secondary	56	19.9	50.5
First degree/HND/PGD	61	21.7	72.2
Master/PhD	19	6.8	79.0
Others	2	0.7	79.7
No response	57	20.3	100.0
Total	281	100.0	

**Source: Field Survey (2022)**

The gated estates are also largely occupied by highly educated communities. Almost all the heads of the households have one form of formal education or another. Out of this, two – thirds of the household heads attained either first degree or doctorate degree as their highest educational qualification (Table 5). Again, up to one – quarter of the heads of the households attained other post-secondary qualifications such as national diploma and NCE (Table 5). Similarly, virtually all other members of the households within the gated estates had one form of formal education or another (Table 5). This also was the finding of Doha which shows that 97% of residents are highly educated (Mahgoub & Khalfani 2012).

### **Economic Characteristics**

The estates are also largely occupied by the working class, especially those working in the public sectors, the manufacturing industries and the commercial sector. Close to 40% of the heads of the households were civil servants employed in the local, state or federal governments (Table 7).

This number does not include those working in the primary, secondary and tertiary educational institutions which equally accounted for relatively significant number. In addition, just 13% of the household heads were employed in either wholesale or retail commercial activities. There are also considerable numbers of retirees in some of the estates. Apart from the heads, virtually all the households have at least one or more members of the family who were employed (Table 7).

A little over one – fifth of the households earned between 50,000 to 100,000 naira monthly. Again, slightly less than 1/5 of the households earned 101,000 – 200, 000 naira monthly (Table 8). Majority of the residents were living in their personal houses and more than one – third were staying in rented homes; others were living in staff housing and very few were residing in mortgage houses (Table 6). These analyses clearly indicated that majority of the residents of gated communities in Kano metropolis can be categorized under the middle-income group described as having mostly people within the age of 40 years, well educated (90 % have obtained post-secondary education), small sized households, mostly live in rented/leased accommodation, majority work in the public sector and having a monthly income range of 75,000 – 100,000 naira (Robertson, Ndebele and Mhango, 2011).

**Table 6: Tenure of the Households**

Type of Tenure	Frequency	Percent	Cumulative Percent
Personal Property	118	42.0	42.0
Rent	101	35.9	77.9
Staff Housing	39	13.9	91.8
Mortgage	6	2.1	94.0
Others	4	1.4	95.4
No response	13	4.6	100.0
Total	281	100.0	

Source: Field Survey (2022)

### The Most Exclusive Gated Communities

The socio-economic characteristics of the other seven very private and exclusive gated communities were also quantitatively analysed. As in the case of the other gated communities, majority of the households were headed by males; though significant numbers were also headed by females, most of them were married and within the age of 30 – 50 years (Table 7). The households also maintained significantly small size of families with maximum of six children and a total of not more than eight people per house (Table 7).

Most of the household heads were Nigerians and a considerable number of foreigners reside in the estates. There were more Christians residing in these communities than Muslims due largely to the location of sizeable number of the estates within the Christian dominated Sabon Gari area of the metropolis (Table 8). The estates were dominated by highly educated heads of the families with more than half of them having first degree and almost one – third attaining up to masters and doctorate degree levels (Table 8).

**Table 7: Occupation of the Household's Heads**

Occupation	Frequency	Percent	Cumulative Percent
Local Government Service	8	2.8	2.8
State service	48	17.1	19.9
Federal service	48	17.1	37.0
Retiree	28	10.0	47.0
Nursery/Primary	4	1.4	48.4
Secondary	10	3.6	52.0
Tertiary Institutions / University	10	3.6	55.5
Bank	19	6.8	62.3
Accounting Firm	2	0.7	63.0
Insurance	1	0.4	63.3
Mass Media	3	1.1	64.4
Medical Doctor	2	0.7	65.1
Pharmacist	1	0.4	65.5
Paramedic	2	0.7	66.2
Electricity Company	7	2.5	68.7
Water Supply	3	1.1	69.8
Military	2	0.7	70.5
Others	2	0.7	71.2
Whole Sale	20	7.1	78.3
Retail	16	5.7	84.0
Petty Trading	2	0.7	84.7
Large Scale / Commercial Farming	5	1.8	86.5
Manufacturing	13	4.6	91.1
Refinery	1	0.4	91.5
Construction	6	2.1	93.6
Legal Firm	2	0.7	94.3
Estate Firm	4	1.4	95.7
Others	4	1.4	97.2
No response	8	2.8	100.0
Total	281	100.0	

Source: Field Work (2022)

**Table 8: Monthly Income Range of the Households (Naira)**

Monthly Income (₦)	Frequency	Percent	Cumulative Percent
50,000 - 100,000	57	20.3	20.3
101,000 - 150,000	50	17.8	38.1
151,000 - 200,000	39	13.9	52.0
201,000 - 300,000	30	10.7	62.6
301,000 - 400,000	13	4.6	67.3
401,000 - 500,000	2	0.7	68.0
Others	3	1.1	69.0
No response	87	31.0	100.0
Total	281	100.0	

Source: Field Survey (2022)

Unlike the other less exclusive gated communities, majority of the heads of the families were employed in the private sector; primarily commerce, manufacturing and construction. With the exception of the Dantata Estate, the residents of all the remaining six estates lived in rented houses as majority of them were either foreign nationals or Nigerians but non indigenes of Kano state, who will not likely establish permanent residences in the area. These estates can be regarded as being occupied by medium to high-income groups considering their socio-economic characteristics and their locations within the GRAs and the wealthy quarters of the metropolis. This also corroborates the research findings of Mahgoub and Khalfani (2012) in which all the housing units in Doha's gated communities were rented and not owner occupied.

**Table 7: Demographic Characteristics of the Exclusive Gated Communities**

S/N	Gated Estates	Sex of the Head of the Households	Age of the Head of the Households	Marital Status of the Head of the Households	No. of Wives	No. of Children in the House	No. of People in the House
1.	Abubakar Rimi Memorial Estate	Male: (80%) Female: (20%)	30 – 40 (60%) 41 – 50 (40%)	Married: (90%) Single: (10%)	1 wife: (100%)	2 – 4	2 – 6
2.	Alu Avenue Estate	Male: (100%)	30 – 40 (10%) 41 – 50 (70%) Above 50 (20%)	Married: (100%)	1 wife: (100%)	2 – 6	3 – 8
3.	Burma Road Estate	–	30 – 40 (50%) 41 – 50 (40%) Above 50 (10%)	Married: (90%)	1 wife: (100%)	2 – 6	4 – 8
4.	Dantata Estate	Female: (100%)	30 – 40 (100%)	Married: (100%)	1 wife: (100%)	2 -5	3 – 8
5.	Hassan Estate	Male: (100%)	30 – 40 (45%) 41 – 50 (40%) 51 – 60 (10%) Above 60 (5%)	Married: (90%) Single: (10%)	Nil: (10%) 1 wife: (90%)	2 – 6	4 – 8
6.	Oyo Street Estate	Male: (80%) Female: (20%)	30 – 40 (60%) 41 – 50 (40%)	Married: (90%) Single: (10%)	1 wife: (100%)	2 – 4	4 – 8
7.	President Avenue Estate	Male: (100%)	Below 30 (15%) 31 – 40 (50%) 41 – 50 (35%)	Married: (90%) Single: (10%)		2 – 5	3 – 8

Source: Field Work (2022)

**Table 8: Social Characteristics of the Exclusive Gated Communities**

S/N	Gated Estates	Nationality	Ethnicity	Religion	Education
1.	Abubakar Rimi Memorial Estate	Nigerian: (30%) Non Nigerian: (70%)	Hausa: (30%)	Islam: (30%)  Others (70%)	Post Secondary: (10%) First Degree: (80%) Masters/Doctorate: (10%)
2.	Alu Avenue Estate	Nigerian: (60%) Non Nigerian: (40%)	–	–	–
3.	Burma Road Estate	Nigerian: (100%)	Yoruba: (15%) Igbo: (50%) Others: (35%)	Christianity: (100%)	Post Secondary: (30%) Masters/Doctorate: (70%)
4.	Dantata Estate	Nigerian: (100%)	Hausa: (100%)	Islam: (100%)	First Degree: (100%)
5.	Hassan Estate	Non Nigerian: (95%)	–	Islam: (90%)	–
6.	Oyo Street Estate	Nigerian: (100%)	Yoruba: (20%) Igbo: (50%) Others: (30%)	Christianity: (100%)	Post Secondary: (20%) Masters/Doctorate: (80%)
7.	President Avenue Estate	Nigerian: (20%) Non Nigerian: (80%)	Hausa: (30%)	Islam: (33%) Christianity: (17%) Hinduism: (50%)	First Degree (100%)

Source: Field Work (2022)

## Conclusion

Gated communities are parts of the physical and socio-economic realities of Kano metropolis because they physically separated residential areas with walls and gates and they served as the enclaves or communities of specific types of residents that are relatively similar in their demographic, social and economic characteristics. In terms of their exclusivity, the gated communities in the study area can be divided into two. The first category are the usual gated communities that provide security and restrictions of movements through their walls and gates, these are less restrictive and private in character. The second class are the highly exclusive and private gated communities that are very restrictive in nature. The heads of the households of both the two categories were largely married, educated and formally employed with usually small family. The gated communities are largely occupied by people within the medium to high income brackets. The communities have also depicted a significant relationship between the monthly income and the family size of the residents.

It is recommended that urban planning authorities and estate developers in the metropolis should encourage mixed-use development and inclusive zoning regulations to promote diversity and reduce residential segregation on economic racial and ethnic bases within the gated developments. Government should invest in public transportation systems that connect gated communities to other parts of the city, promoting accessibility and reducing reliance on personal vehicles. Community facilities such as parks, recreational centres, and public spaces, should be provided to cater to the needs of the families within and outside the gated communities in order to foster community cohesion.

## References

- Abba, M. (2023). The Emergence and Growth of Gated Communities in Kano Metropolis, In Abdulkadir, M. S., Suleiman, S. and Isa, K. H. (eds.) *Economic and Social History of Northern Nigeria: Revisiting Milestones and Exploring New Frontiers. Essays in Honour of the Late Philip James Shea*, Markurdi-Ibadan-Abuja: Aboki Publishers. pp. 631 – 653.
- Abba, M. (2024). Locational Pattern and Physical forms of Gated Communities in Kano Metropolis, Nigeria. *Sokoto Journal of Social Sciences*, 14 (1): 149 – 169.
- Abdullahi, A. (2004). Spatial Variation of Housing Rent in Kano Metropolis. Unpublished M.Sc Dissertation Land Resource (Administration). Geography Department, Bayero University, Kano.
- Ajibola, M. O., Oloke, O. C. and Ogungbemi, A. O. (2011). Impacts of Gated Communities on Residential Property Values: A Comparison of Onipetesi State and Its Neighbourhoods in Ikeja, Lagos state, Nigeria. *Journal of Sustainable Development* 4 (2): 72 – 79
- Asfour, O. S. (2022). Housing Experience in Gated Communities in the Time of Pandemics: Lessons learned from COVID – 19, *International Journal of Environmental Research and Public Health* 19(4): 1925.
- Baldan, H., Torrado, J. M., and Susino, J. (2024). Beyond Gated Communities: A Typology of Residential Compounds in Granada, *Land*, 13(8): 1116.
- Blakely, E. J. and Snyder, M. G. (1997a). Separate Places: Crime and Security in Gated Communities. In: Felson, M. and Peiser, R.B. (eds.), *Reducing Crime Through Real Estate Development and Management*. Washington, D.C.: Urban Land Institute. pp. 53 – 70.
- Blakely, E. J. and Snyder, M. G. (1997b). *Fortress America: Gating Communities in the United States*. Washington, DC: Brookings Institution Press and Lincoln Institute of Land Policy.
- Grant, J. and Mittelsteadt, L. (2004). Types of Gated Communities, *Environment and Planning B: Planning and Design*. 31: 913 – 930.
- Hammad, A., Li, M. and Vrceelj, Z. (2024). The Infectious Divide: A Comparative Study of the Social Impact of Gated Communities on the Surrounding in the Middle East, *Journal of Housing and the Built Environment*, 39, 1395 – 1421.
- Hammad, A., Li, M. and Vrceelj, Z. (2025). Space Syntax Analysis of Gated Communities in Jordan: Examining Urban Connectivity and Social Impact, *Sustainability*, 17(2): 599.
- Ibrahim, A. M. (2014). Population Growth in the Kano Region. In Tanko, A.I, and Momale S.B(eds.), *Kano, Environment, Society*. London: Adonis and Abbey Publishers. pp. 106 – 116.
- Krejcie, R. V., and Morgan, D. W. (1970). Determining Sample Size for Research Activities *Educational and Psychological Measurement*, 30, 607 – 610.
- Levent, T. B. and Gülümser, A. A. (2004). Production and Marketing of Gated Communities in Istanbul. 44<sup>th</sup> European Congress of the European Regional Science Association, Regions and Fiscal Federalism. Portugal, 25-29 August, 2004.
- Liman, M. A. (2015). A Spatial Analysis of Industrial Growth and Decline in Kano Metropolis, Nigeria. Unpublished PhD Thesis, Department of Geography, ABU Zaria.
- Liman, M. A. and Adamu, Y. A. (2003). Kano in Time and Space: From a City to a Metropolis. In Hambolu, M.O (ed.), *Perspectives on Kano-British Relations*. Kano: Pyramid Text Prints. pp. 144 – 169.

- Macionis, J. J. and Parrillo, V. N. (2017). *Cities and Urban Life*, 7<sup>th</sup> Edition. London: Pearson
- Mahgoub, Y. and Khalfani, F. (2012). Sustainability of Gated Communities in Developing Countries. *Developing Country Studies*, 2 (6): 53 – 63.
- Maiwada, A. D. (2014). Urban Planning in the Context of Rapid Growth. In Tanko, A. I. and Momale, S.B(eds.) *Kano, Environment, Society*. London: Adonis and Abbey Publishers. pp. 401 – 410.
- Mohammed, M. U., Hassan, N. I. and Badamasi, M. M. (2019). In Search of Missing Links: Urbanisation and Climate Change in Kano Metropolis, Nigeria. *International Journal of Urban Sustainable Development*. 11 (3): 1 – 10.
- Olofin, E. A. (2014). Location, Relief and Landforms. In Tanko, A.I, and Momale S.B(eds.) +*Kano, Environment, Society* London: Adonis and Abbey Publishers. pp. 21 - 32.
- Robertson, C., Ndebele N. and Mhango Y. (2011). A Survey of the Nigerian Middle Class. Nigeria: Renaissance Capital Research Team.
- Sam, Sarpong (2017). Building Bridges or Gates? Gated Communities' Escape from Reality, *International Journal of Social Economics*, 44(12): 1584 – 1596.
- Shi, X. and Ling, G. H. T. (2023). Factors Influencing Collective Action of Gated Communities: A Systematic Review Using an SES Framework, *Open House International*, 48(2): 325 – 355.
- Uduku, O. (2012). Lagos: Urban Gating as the Default Condition. In: Bagaeen, S. and Uduku, O. (eds.) *Gated Communities: Social Sustainability in Contemporary and Historical Gated Developments*. Second Edition, London: Routledge pp. 39 - 47.
- Webster, C., Glasze, G. and Frantz, K. (2002). The Global Spread of Gated Communities. *Environment and Planning B: Planning and Design* 29 (3): 315 – 320.
- Webster, C., Glasze, G. and Frantz, K. (2008). *Special Issue: Gated Communities. Editorial. Urban Design International*, 29: 315 – 320.
- Yekple, E.E.Y., Overa, R. and Hidle, K.B. (2024). Living Together but Gates Apart: Aspirations and Place Caring Practices among Residents Living Outside a Gated Community in Peri-urban Accra, *GeoJournal* 89, 147.