



Techno Science Africana Journal

Journal homepage: www.technoscienceafricana.com



PREFERENCE FOR NEIGHBOURHOOD FACILITIES AMONG YOUNG HOUSEHOLDS IN THREE UNPLANNED NEIGHBOURHOODS IN KANO METROPOLIS, NIGERIA: A COMPARISON

Ado Abdu and Ahmad Hariza Hashim

Department of Geography, Faculty of Earth and Environmental Sciences, Kano University of Science and Technology, Wudil, Kano, Nigeria
Faculty of Human Ecology, Universiti Putra Malaysia, 43400 UPM, Serdang, Selangor, Malaysia

ARTICLE INFO

Keywords:

Preference, neighbourhoods, facilities, young households, Kano metropolis

* Corresponding

Author:

adoabdu08@gmail.com

ABSTRACT

This study compared preference for neighbourhood facilities among young households in some selected unplanned neighbourhoods namely; Wailari, Dorayi Karama and Gama E in Kano metropolis, Nigeria. Multistage cluster sampling was employed in selecting the three neighbourhoods and systematic random sampling was used to select 364 respondents for the study. Data for this study was generated using self-administered questionnaire from the respondents. Descriptive statistics and One-way Analysis of Variance (One-way ANOVA) were used to analyse the data. The results showed that the mean scores of preference for the neighbourhood facilities among the respondents in Gama E was (3.38), Dorayi Karama was (3.16) and the mean score was (3.41) in Wailari. One-way ANOVA revealed that there were statistically significant differences in the mean facility preference among the respondents in the three neighbourhoods ($F = 14.527, (2, 361), p = 0.001$). Post-hoc comparison test revealed that preferences for neighbourhood facilities differed between Wailari and Dorayi Karama, but did not differ between Wailari and Gama E and also differed between Gama E and Dorayi Karama. This finding suggests that policy makers and planning authorities should incorporate differences in neighbourhood facilities preferred by the residents of unplanned residential areas in future planning and housing improvement policies.

INTRODUCTION

Understanding the differences in preferences for neighbourhood facilities among households in unplanned residential areas in sub Saharan African countries is a major task for urban planning in the 21st century. Nigeria is one of the sub Saharan countries with over 70 per cent of its urban inhabitants living in

informal residential developments where there is inequality in the distribution of public facilities (Bashir, 2003; Nwaka, 2005). People highly appreciate neighbourhoods with good recreational facilities; local shops; public facilities such as transportation, schools and healthcare; and good environmental quality (Dekker et al., 2011; Hipp, 2010; Lu, 1999).

Although, public facilities in the major cities in the country are inadequate, the distribution of available facilities in the areas such as water supply, electricity, schools, shops, access roads, police protection, and drainage systems vary among residential areas (Bashir, 2003). It is often common for public facilities to vary between planned residential areas and unplanned areas because of adequate facilities planning in the planned areas. However, in major cities in Nigeria, facilities tend to vary among unplanned residential areas that accommodate greatest proportion of urban dwellers in the country. Equity in the distribution of facilities explains the adequacy of physical planning and determines the neighbourhood quality and wellbeing of the people. While, urban public facilities are to provide services to residents and maintain the environmental quality of urban living. They exhibit a variety of characteristics that are important to the urban planner among which is preference of residents for different types of facilities. However, to urban residents, each type of public facility possesses its own unique characteristics and satisfies particular needs (Tsou, et al., 2005). Urban planning efforts towards controlling and improving residential and other physical developments have to target the needs and preferences of the inhabitants for the enhancement of their quality of life and wellbeing. Thus, considerations of the needs and preferences for facilities among inhabitants and their variations among different sections of the urban areas are integral parts of better physical planning, especially in major cities in developing countries like Nigeria.

Kano metropolis is one of the major cities in Nigeria experiencing high population growth and rapid urbanisation that result in the emergence of unplanned residential developments (Home, 1986; Dankani, 2013; Muhammad and Bichi, 2014; Abdu et al., 2014; Abdu and Hashim, 2016). These unplanned residential areas were products of poor planning and inadequate enforcement by planning authorities for lack of compliance to planning and building regulations (Nwaka, 2005; Kironde, 2006; Khalifa et al., 2011). Sometimes, political office holders and some government officials disregard planning rules

and regulations without any form of remorse often weaken planning activities (Dankani, 2013). In addition, inability of the governments toward provision of accessible and affordable layouts and houses for poor and low income groups in the city have been the major bottle necks for better planning in the city (Abdu and Hashim, 2015). Dankani (2013) shows that urban planning problems in Kano emanates from failure of government and urban planners to handle adequate and equitable provision of basic infrastructure and amenities to all parts of the city, encouraged poverty which necessitates the residents adopting the notion of 'shelter first' and 'planning later'. Lack of equity in the distribution of facilities leads to increased desire and preference among the residents for the facilities they lacked compared to their neighbourhoods.

Preference for neighbourhood facilities varies among residents living in urban areas. Public facilities in the different residential locations have to satisfy residents' preferences for them to be satisfactory (Jansen, 2012, Caldieron and Miller, 2013). In addition, residents have different preferences for different types of public facilities, known as variant attraction/repulsion (Tsou & Hung, 2005). Thus, households living in planned areas preferred neighbourhood facilities in relation to their locations (Schwanen and Mokhtarian, 2004). While those living in informal residential areas place high importance for facilities such as adequate water supply, electricity, security and safety, police protection, shops, schools, health centres and facilities, access roads, drainages and transportation facilities and relationship with neighbours (Caldieron, 2011; Zanuzdana et al, 2012; Caldieron and Miller, 2013).

Preference for facilities varies among age groups at various life cycle and life course (Rossi, 1955; Galster and Hesser, 1981; Clark and Onaka, 1983; Dökmeçi & Berköz, 2000; Wu, 2010). Young household with children preferred neighbourhood facilities that satisfy the needs for its members including children such as schools, spacious housing, recreation facilities, shops, transportation, health centres and clinics, safety and security, water and electricity supplies (Wu, 2010).

While young household without children and elderly couples need facilities that satisfy their own personal preferences and desires, since they do not have children with them (Clark and Onaka, 1983). On the other hand, preference varies among locations in with the urban areas in either the core or periphery (Dökmeçi & Berköz, 2000). Such preferences among the households associated with inequality in the distribution of facilities, will continue to encourage unplanned developments in the urban centres. Thus, an insight into the preference for facilities among the households living unplanned neighbourhoods would provide a framework for future urban planning that aimed at enhancing wellbeing and quality of life of the residents.

Based on the above studies, preference towards residential attributes or neighbourhood facilities varies among individuals and households living in various residential environments. However, previous studies reviewed above had little concern on the variations of preference for neighbourhood facilities among young households living in unplanned neighbourhoods. Therefore, this paper compares the differences in preference for neighbourhood facilities among young households in three unplanned neighbourhoods in Kano metropolis, Nigeria.

Description of the Study Area

Kano City is the capital of Kano State. It is one of the largest cities in Nigeria located between latitude $11^{\circ} 55' 23.93''$ N and $12^{\circ} 3' 53.10''$ N and between longitude $8^{\circ} 27' 42.26''$ E and $8^{\circ} 36' 41.62''$ E (Abdu, et al, 2014). Kano is also metropolitan area consisting of eight Local Government councils including Municipal,

Tarauni, Gwale, Fagge, Dala, Kumbotso, Ungogo and Nassarawa. Kano is a commercial and industrial centre of Northern Nigerian and it is second to Lagos, a former capital city of the country (Mustapha, et al., 2013, Abdu et al., 2014). Since independence in 1960, Kano experienced high population growth and rapid urbanization (Nabegu, 2010; Dankani, 2013; Muhammad and Bichi, 2014). The population of the city was 295,432 in 1963, 760,000 in 1973 (Abdu, et al, 2014). In 1991, Kano had a population of 1.6 million. By 2006, the city had 2.84 million people and had an estimated annual growth rate of 5.5% (Olofin et al, 2008; Mustapha and Abdu, 2012; Dankani, 2013). National Population Commission of Nigeria (2009) showed that Kano city had a population of 770,000 young households whose heads aged between 25 and 44 years. This figure accounts for 4% of the national young households' figure. Young households had a high preference for housing and urban infrastructure and services that provide comfortable living and satisfaction of their members including children (Clark and Onaka, 1983). Among such infrastructural facilities are water, electricity, roads, schools, and hospitals in the city are preferred by households living in unplanned residential areas in the city (Abdu and Hashim, 2016). These types of unplanned residential areas in the city are develop without considering planning and building regulations and are characterised by overcrowding and poor services (Home, 1986; Nwaka, 2005; Kironde, 2006; Khalifa et al., 2011). The neighbourhoods are found at different locations in the city including Dorayi to the west, Wailari located at the south, and Gama E located to the east being the study locations (figure 1).

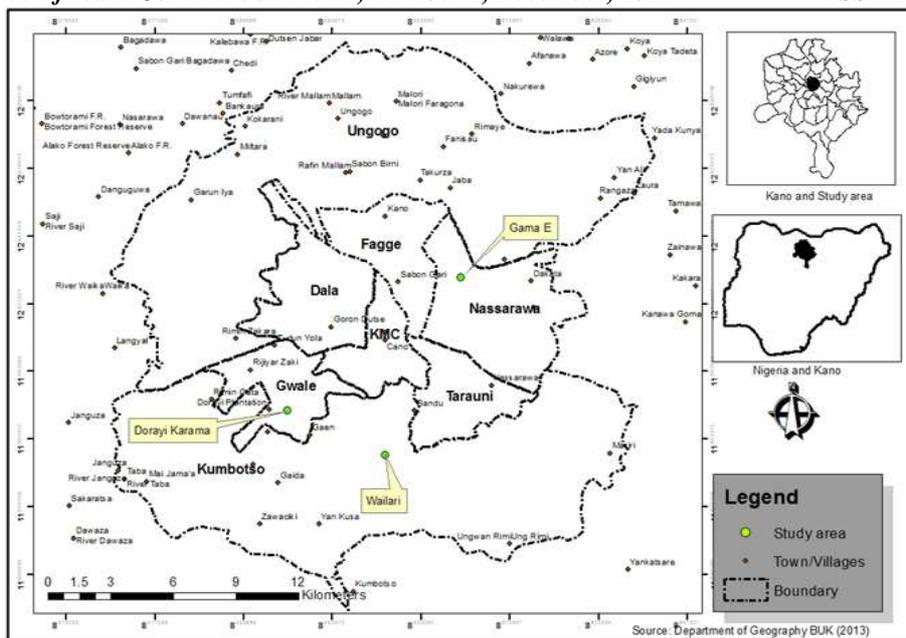


Figure 1: Kano Metropolis showing the threeneighbourhoods of study

METHODOLOGY

Sampling Procedure and Data Collection

This study was carried out in three randomly selected unplanned residential areas from Metropolitan Local Government Areas in Kano, Nigeria including Wailari, DorayiKarama and Gama E. A Multi-stage cluster sampling technique was adopted for selecting the neighbourhoods. Hankin (1984) stated that with two or more levels of sample selection, multi-stage cluster sampling is most appropriate for determination of sample size. At the first stage, five Local Government Areas with peripheral unplanned neighbourhoods in Kano metropolis were identified namely; Kumbotso, Dala, Gwale, Fagge and Nassarawa because such neighbourhoods are recently occupied by the households which revealed their choice of the locations compared to the inner areas. At the second stage, three Local Governments Areas were randomly selected which include Kumbotso, Gwale and Nassarawa from the five selected councils. Finally, from the three Local Gaovernment Areas, one neighbourhood was selected from each of the three Local Governments (DorayiKarama, Gama Eand Wailari) making three neighbourhoods. Thus, DorayiKaramawas from Gwale, Wailariwas selected from Kumbotso, and Gama E from Nassarawa Local Government Areas. Wailari neighbourhood is

relatively new compared to other two neighbourhoods, less populated with low density. Dorayi is a neighbourhood located at western section of Kano metropolis and attracted large number of households because of its proximity to core city of Kano (Birni) and two industries estate of Sharada and Challawa. The neighbourhood is an overcrowded area because it attracts poor and low income households as a result of availability of informal land transaction. The area had few facilities and poor accessibility. Lastly, Gama E is located at the eastern section of Kano metropolis and the oldest among the three neighbourhoods. It is overcrowded due to its population size and had access to some public facilities such as police and health services with little water supply and poor access to schools. Based on the above discussion, these neighbourhoods with almost similar socio-economic status but differed in terms of neighbourhood facilities.

A questionnaire survey was used to obtain data from the respondents in the three selected neighbourhoods. The survey was conducted between 24th November, 2013 and 5th February, 2014. The respondents for this study were young households whose household heads aged 45 years and below with children. A Krejcie & Morgan (1970) criterion was used to determine the sample size from the population.

According to the table of this criterion, a population (9,164) of the young households in the study area has a determined sample size of 368 respondents. National Population Commission (2009) showed the population of the young households in unplanned neighbourhoods in Kano metropolis was estimated at 9,164. Out of the total sample of 368, Wailari had 78, Dorayi had 136 and Gama E had 154 respondents. The sample size from the study neighbourhoods was determined at $\alpha = 0.05$ level of significance (95% confident interval). Systematic random sampling was used to select the respondents (heads of young households) for the study locations using population proportionate to size. In the selection, the researcher had no access to officially documented lists of the houses and heads of young households at the data collection period. Sampling unit for this study was a household headed by young people aged 45 years and below with children living in the current neighbourhood between 3 to 5 years. Selection of the respondents was through the systematic sampling technique. At the initial stage, the three selected neighbourhoods in this study, namely; Wailari, DorayiKarama and Gama E were mapped out to obtain sampling frame for this study. In accordance with the size of the neighbourhood, Wailari was divided into 10 sections (group of houses), Dorayi Karama divided into 15 sections, and Gama E being the largest was divided into 20 sections. In addition, 3 sections were selected randomly (using random tables) from Wailari, 4 sections from Dorayi Karama and 6 sections from Gama E making a total of 13 sections and lists of all houses were prepared for the 13 sections. Selection of younger households in this study began by determining the sampling interval for each section and it was calculated by dividing its total number of houses by the number of houses in the sample. The first house (random sample) in each section was selected randomly using simple random tables and the next house was obtained by adding the sampling interval to the first house number and so on. Only young households with attributes required for this study (those with children, at least one is six years of age, who moved to the current neighbourhoods

between 3 to 5 years and whose household head aged 45 years and below) were eligible for inclusion in the sample. If a household had not fulfilled these requirements, the interviewer continued with the next house until the determined sample was completed. The total sample size of the 9 sections in the three neighbourhoods was 368 heads of young households.

On the questionnaire administration in the study neighbourhoods, 368 copies of the questionnaire were administered with the help research assistants (enumerators), but only 364 were retrieved and used in the data analyses, while 4 copies were invalid. The questionnaire had two sections and the data generated from the sections was used in the analysis. The first section covered study locations which was used as the independent variable in the data analysis and it has three categories; DorayiKarama, Gama and Wailari. Second section consists of preference for neighbourhood facilities with ten items measured on five-point Likert scale with options "1" not important to "5" very important. The used of this scale for measuring preference was adopted from (McGirr, et al., 2014; Frank, et al., 2012). And the overall mean score of neighbourhood facilities preference was obtained from a composite score of all the ten items was used as the dependent variable in the analysis.

2.2 Data Analysis

The collected data for this study were analysed using descriptive statistics, One-way Analysis of Variance (One-wayANOVA) and multiple comparisons test using Tukey HSD. One-wayANOVA is used to compare mean differences of a continuous dependent variable and an independent variable with three or more categories (Pallant, 2011; Field, 2013). In this study, it was used to test a null hypothesis that states 'there is no significant difference in the mean preferences for neighbourhood facilities among young households in the three study neighbourhoods'. In addition, descriptive statistics was used also to describe the preferences for neighbourhood facilities among young households in the neighbourhoods.

RESULTS AND DISCUSSION

3.1 Preference for Facilities in the Neighbourhoods

Overall mean and standard deviations of preference for neighbourhood facilities which is the mean score of the total scores of ten items including relationship with neighbours, safety and security level, police protection, condition of roads/streets, drainage systems, local shops, health centres and facilities, water supply, bus-stop, and recreational facilities are shown in Table 1. The table shows that the respondents in wailari (3.41 ± 0.826), Dorayi Karama (3.14 ± 0.749) and Gama E had (3.37 ± 0.940). The finding reveals that overall mean and standard deviations of preference for neighbourhood facilities among the respondents in Wailari was highest, followed by Gama E, while the least was that of Dorayi Karama. However, the overall mean scores for all the neighbourhoods were above medium value of 3.00 (moderate). In terms of preference for individual neighbourhood facilities (items) among the respondents, the findings indicate that Wailari had the highest mean scores for preference for relationship with neighbours, local shops, health centres, facilities, water supply, and recreational facilities. This suggest the needs for these facilities among the respondents. Furthermore, the highest mean scores for Wailari could be because of its being the newest informal neighbourhood its young households had high desire for the facilities compared to Dorayi Karama and Gama E. Such desire could in addition be because of

the need for easy access to those facilities to ensure healthy and secured family, especially among young households with children. For Gama E, the respondents had highest preference for safety and security level in the area, police protection, condition of roads/streets and drainage systems in the area. This also suggests the desire of the young households to have these services and facilities for the protection of live and properties and health of their household members. While in Dorayi Karama, the respondents had almost moderate preferences for all the facilities, compared to other neighbourhoods. This finding suggests that the respondents' choice for all facilities in the areas and it also indicates the extent of needs and desire among the respondent to have facilities for the comfort, health, and security of all members of their households. Generally, this finding is in line with Bashir (2003) that shows uneven distribution of facilities among the sections within Nigerian cities and corroborates with Nwaka (2005) that shows informal residential areas in the cities lack adequate urban services and facilities including health facilities and police services. In addition to this, Dankani (2013) argued that the there is increasing need for the neighbourhood facilities among households living in informal residential areas in metropolitan Kano due to high population growth and rapid urbanization in the city. Consequently, these situations affect the planning activities and quality of life of the residents in the study area.

Table 1: Mean and Standard Deviation of preference for Facilities in the Neighbourhoods

Preferred Facilities	Wailari		Dorayi Karama		Gama E	
	Mean	SD	Mean	SD	Mean	SD
Relationship with neighbours	4.16	.642	3.78	.640	3.78	.778
Safety and security level	3.59	.859	3.32	.757	3.72	.836
Police protection	2.05	.842	2.55	.815	2.82	1.146
Condition of roads/streets	3.16	.683	3.27	.661	3.38	.985
Drainage systems	3.09	.743	3.31	.735	3.34	.993
Local shops	3.95	.639	3.64	.652	3.84	.872
Health centres and facilities	3.51	1.185	2.99	.915	3.49	.938
Water supply	4.24	.991	3.15	.857	3.49	.818
Bus-stop	3.35	.801	2.79	.668	3.40	.953
Recreational facilities	2.97	.875	2.61	.790	2.44	1.079
Overall Facilities Preference	3.41	.826	3.14	.749	3.37	.940

Source: Fieldwork, 2014

Differences in Preference of Facilities in the Three Neighbourhoods

The results of One way Analysis of Variance (ANOVA) showed that there is significant difference in the preference for the neighbourhood facilities among the three residential areas ($F = 14.527, (2, 361), p = 0.001$). This finding rejected the null hypothesis, which stated that ‘there is no significant difference in the preference for neighbourhood facilities

among young households in the three unplanned neighbourhoods’. This suggests that preference for neighbourhood facilities differed significantly among young households in Wailari, Dorayi Karama and Gama E. This finding corroborates, Bashir (2003) that shows uneven distribution facilities among the sections within Nigerian cities even within unplanned residential areas.

Table 2: One-Way ANOVA of Preference for facilities in the Neighbourhoods

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.571	2	2.286	14.527	.000
Within Groups	56.799	361	.157		
Total	61.370	363			

Source: Fieldwork, 2014

*. The mean difference is significant at the 0.05 level.

Post Hoc Comparison Test (Tukey HSD) of Preference for Facilities in the Three Neighbourhoods

Table 3 shows the post-hoc comparison test using Tukey HSD of preference for neighbourhood facilities in Wailari, Dorayi Karama and Gama E. The table reveals that the mean score of preference for the neighbourhood facilities in Wailari ($M = 3.41, SD = 0.826$) was significantly different from mean score of preference for neighbourhood facilities in Dorayi Karama ($M = 3.14, SD = 0.749$). This suggests that preference for neighbourhood facilities in Wailari was greater than that of Dorayi Karama and also indicates that greater needs and desires for young households in Wailari to have neighbourhood facilities compared to Dorayi Karama that might have less need for some facilities. This could be because some of those facilities were provided in Dorayi Karama being the oldest. The post-hoc comparison test using Tukey HSD also revealed no significant difference between the mean score of preference for neighbourhood facilities in Wailari ($M = 3.14, SD = 0.749$) and Gama E ($M = 3.37, SD = 0.940$). These suggested that the differences in the preference for neighbourhood facilities did not differ among young households in Wailari

and Gama E. This was because Wailari is new neighbourhood and the young households in the neighbourhood are satisfied with newly housing environment and have less preference for most of the neighbourhood facilities, though the facilities were inadequate. Moreover, in Gama E, some of these facilities might be available, even though inadequate being the most oldest. These suggest the reason for having no differences in the facilities preference among young households in Gama E and Wailari. While, the table indicates that the post-hoc comparison test using Tukey HSD shows that there was significant difference between the mean score of preference for neighbourhood facilities in Gama E ($M = 3.37, SD = 0.940$) and in Dorayi Karama ($M = 3.14, SD = 0.749$). This finding indicates that preference for the facilities among young households in Gama E and Dorayi Karama differed. This suggests that Gama E is the older neighbourhood in which both local authorities and community initiatives provide some facilities than Dorayi Karama. Dissimilarity between Gama E and Dorayi Karama in the preference for facilities among the respondents is attributed to the provision of the facilities in Gama E.

Table 3: Post Hoc Comparison Test (Tukey HSD) of Preference for Facilities in the Neighbourhoods

(I) Current locations		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound Upper Bound	
Wailari	Dorayi Karama	.253*	.057	.000	.12	.39
	GamaE	.033	.056	.822	-.10	.17
Dorayi Karama	Wailari	-.253*	.057	.000	-.39	-.12
	GamaE	-.219*	.047	.000	-.33	-.11
GamaE	Wailari	-.033	.056	.822	-.17	.10
	Dorayi Karama	.219*	.047	.000	.11	.33

Source: Fieldwork, 2014

* The mean difference is significant at the 0.05 level.

SE=Standard error

CI=Confidence Interval

CONCLUSION AND RECOMMENDATIONS

This study compares the preference for facilities among young households in three unplanned neighbourhoods in Kano. It can be concluded that there significant differences in the preferences for facilities among residents between the three localities within the metropolitan Kano. The reasons for the difference are attributed to available of the facilities provided by community initiatives and local authorities in the localities and the

facilities needs among the young households in the neighbourhoods. It is recommended that policy makers should focus on improving the quality of life of the households by providing of preferred facilities in the neighbourhoods. This will go a long way in reducing the disparity between the neighbourhoods and pulling effects available facilities in the neighbourhoods among the households.

REFERENCES

- Abdu, A.& Hashim, A. H. (2015). Comparison of Residential Satisfaction among Young Households in Three Unplanned Neighbourhoods in Kano Metropolis , Nigeria, *IOSR Journal Of Humanities And Social Science*, 20(3), Ver. IV (Mar. 2015),42-53.
- Abdu, A. &Hashim, A, H. (2016). Residential Preference of Young Households in Unplanned Neighbourhoods in Kano Metropolis, Nigeria. *Researchjournal's Journal of Geography* 3(4): May, 2016.
- Abdu, A., Hashim, A, H., Abu Samah, A.& Salim, A. S.S. (2014). Relationship between Background Characteristics and Residential Satisfaction of Young Households in Unplanned Neighbourhoods in Kano, Nigeria. *IOSR Journal of Humanities and Social Science* 19 (10), Ver.III, 138-145.
- Bashir, A. (2003). Regional Planning and Urban Infrastructure Development in the Gongola Region, North Eastern, Nigeria, *Global Journal of Social Sciences*, 2(1), 75 – 82.
- Caldieron, J. (2011). Residential satisfaction in la Perla informal neighborhood, San Juan, Puerto Rico. *OIDA International Journal of Sustainable Development*, 2(11), 77-84.
- Caldieron, J.& Miller, R. (2013). Residential Satisfaction in the Informal Neighborhoods of Ulaanbaatar, Mongolia. *Enquiry/The ARCC Journal of Architectural Research*, 7(1), 12-18.
- Clark, W. A.& Onaka, J. L. (1983). Life cycle and housing adjustment as explanations of residential mobility. *Urban studies*, 20(1), 47-57.
- Dankani, I. M. (2013). Constraints to sustainable physical planning in metropolitan Kano, *International Journal of Management and Social Sciences Research*, 2(3), 34 – 42.

- Dökmeci, V., & Berköz, L. (2000). Residential location preferences according to demographic characteristics in Istanbul. *Landscape and Urban Planning*, 48, 45–55.
- Dekker K, de Vos S, Musterd S, et al. (2011). Residential satisfaction in housing estates in European cities: A multi-level research approach. *Housing Studies* 26(4): 479–499.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*, 4th edition. London: Sage publications Ltd.
- Galster, G. C. & Hesser, G. W. (1981). Residential Satisfaction. *Environment and Behavior*, 13(6), 735-758.
- Hakin, D.G.(1984). Multistage sampling designs in fisheries research: applications in small streams. *Canadian Journal of Fisheries and Aquatic Sciences*, 41(11), 1575-1591.
- Home, R. K. (1986). Urban development boards in Nigeria: the case of Kano. *Cities*, 3(3), 228-236.
- Hipp, J. (2010). What is the 'neighbourhood' in neighbourhood satisfaction? Comparing the effects of structural characteristics measured at the micro-neighbourhood and tract levels. *Urban Studies* 47(12): 2517–2536.
- Khalifa, M. A. (2011). Redefining slums in Egypt: Unplanned versus unsafe areas. *Habitat International*, 35(1), 40–49.
- Kironde, J. L. (2006). The regulatory framework, unplanned development and urban poverty: Findings from Dar es Salaam, Tanzania. *Land Use Policy*, 23(4), 460-472.
- Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. *Educational Psychology Measurement*.
- Lu, M. (1999). Determinants of residential satisfaction: Ordered logit vs. regression models. *Growth and Change* 30(2): 264–287.
- McGirr, E., Skaburskis, a., & Donegani, T. S. (2014). Expectations, preferences and satisfaction levels among new and long-term residents in a gentrifying Toronto neighbourhood. *Urban Studies*, 52(1), 3–19. doi:10.1177/0042098014522721
- Nwaka, G. I. (2005). The urban informal sector in Nigeria: towards economic development, environmental health, and social harmony. *Global Urban Development Magazine*, 1(1), 1–11.
- Muhammad, M. & Bichi, A. M. (2014). Constraints and challenges on housing provision in Kano city, Nigeria. *International Journal of Advancements in Research & Technology*, 3 (6), 4 – 23.
- mustapha, a., & abdu, a. (2012). application of principal component analysis & multiple regression models in surface water quality assessment. *journal of environment and earth science*, 2(2), 16–23.
- Mustapha, A., Abdu, A., & Geidam, A. L. (2013). The Influence of land use and land-cover changes on surface water quality variations in the Jakara basin North- Western Nigeria. *International Journal of Advanced and Innovation Research & Technology*, 2(3) 158-164.
- Nabegu, A. B. (2010). An analysis of municipal solid waste in Kano metropolis, Nigeria. *Journal of Human Ecology*, 31(2), 111–119.
- National Population Commission (NPC), (2009). 2006 Population and Housing Census of the Federal Republic of Nigeria Priority Tables (Volume 1): National and State Population and Housing Tables. Abuja, Nigeria. Retrieved, 9/05/2011, <http://www.population.gov.ng/index.php/publications/136-housing-characteristics-and-amenities>. 130 - 222.
- Olofin E.A, (2008). The physical setting. In E.A. Olofin, A.B. Nabegu & A. M. Dambazau. *Wudil within Kano Region: A Geographical Synthesis* (pp. 5-34). Kano: Adamu Joji Publishers.
- Pallant, J. (2011). *SPSS Survival Manual 4th edition: A step by step guide to data analysis using SPSS version 18*. Maidenhead, Berkshire: Open University Press. Retrieved on from <http://www.allenandunwin.com/spss>

- Rossi, P. H. (1955). *Why families move: a study in the social psychology of urban residential mobility, conducted under the joint sponsorship of the Bureau of Applied Social Research and the Institute for Urban Land Use and Housing Studies of Columbia University*: Free Press.
- Schwanen, T. and Mokhtarian, P.L. (2004), "The extent and determinants of dissonance between actual and preferred residential neighbourhood type", *Environment and Planning B: Planning and Design*, Vol. 759 -84.
- Tsou, K., & Hung, Y. (2005). An accessibility-based integrated measure of relative spatial equity in urban public facilities, 22(6), 424-435. doi:10.1016/j.cities.2005.07.004
- Wu, F. (2010). Housing environment preference of young consumers in Guangzhou, China. *Property Management*, Vol. 28, pp. 174-92.
- Zanuzdana, A., Khan, M., & Kraemer, A. (2013). Housing satisfaction related to health and importance of services in urban slums: evidence from Dhaka, Bangladesh. *Social indicators research*, 112(1), 163-185.