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Perceived Importance of Recreational Park within Residential Neighbourhood in Nigeria Cities

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Author's contribution

All work on this manuscript was completed by the sole author who name appeared on the title page.

Case Study

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ABSTRACT

Aims: The study focused on the importance of locating recreational park within residential area. It aims at assessing the social, environmental and physical planning implications of recreational park development on the residents.

Methodology: The research purposively selected Victoria Garden City (VGC) where two recreational parks are located as the study area. From the 1431 household heads, 143 (10%) were randomly selected for questionnaire administration, while only 139 questionnaire was retrieved from the sampled household in the study area. The questionnaire inquired the socio-economic characteristics of the residents and their perceived importance of the identified parks in the study area. Data were analysed using Perception Index (PI).

Result: Using *PI*, there were 6 basic factors that are perceived to be the important benefits or advantages of having recreational park in the residential area. These were; creation of place for recreation (4.906), serve as a social point of meeting (4.791), and prevention of wind force (wind breaker) (4.784). Others were promoting friendliness among residents (4.727), reduce/control soil erosion (4.727) as well as prevent idleness and social vices in the neighbourhood (4.604).

Conclusion: The study concluded that action is urgently needed to ensure that recreational parks serve more residential neighbourhoods in the cities across Nigeria.

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1. INTRODUCTION

A vital component of any residential neighbourhood or a community is the space that is dedicated and devoted to satisfying active and passive recreational needs. This means that the quality and type of open space/park as well as recreational areas/facilities could be a direct reflection of the quality of life enjoyed by the residents of any neighbourhood [1,2,3]. Open spaces such as parks and recreation areas in a residential neighbourhood can have a positive effect on nearby residents. This is because, being physically active is more than a personal decision; community design and the availability of open spaces and recreation areas strongly influence the physical activeness of residents [4,5]. According to Sugiyama [6], recreational green spaces in neighbourhoods (such as parks) merit consideration in addition to providing opportunities for physical activity; such spaces enable people to have contact with nature.

Recreation is an essential part of human life and finds many different forms which are shaped naturally by individual interests but also by the surrounding social construction and availability of required facilities. Recreational activities can be communal or solitary, active or passive, outdoors or indoors, healthy or harmful, and useful for society or detrimental [7].

The benefit derived from recreation parks goes beyond provision of place and facilities for physical activities (PA). Studies revealed that an increased PA levels are associated with reduced risks of physical and mental illnesses [8]. Parks also facilitate social contacts, for instance through providing opportunities to meet others or participate in group activities, which is also referred to as social capital, [9,10]. Exposure to recreational parks (green space) can also promote social well-being (psychosocial) through recovery from stress and fatigue as a result of visual or physical contact with parks [11,12]. Aside these physical and social advantages of locating recreational parks within residential neighbourhood, studies also revealed that there are ecological benefits attached to recreational park [12].

This research is an attempt to examine the importance attached to recreational parks within residential areas. It aims at assessing the social, environmental and physical planning implications of recreational park development on the residents. It posits that the relationships between green space, recreational park and residential development should be empirically understood in research and academics.

1.1 The Study Area

Lagos is considered as Nigeria's commercial nerve centre. The city lies in southwestern Nigeria, on the Atlantic coast in the Gulf of Guinea, west of the Niger River delta. Victoria Garden City (VGC) is arguably one of the most planned, serviced, and ideal living environment in Metropolitan Lagos, Nigeria. The residential neighbourhood is a living haven that is void of the negative characteristics identified with larger part of metropolitan Lagos. Victoria Garden City is a uniquely planned comprehensive housing scheme comprising residential houses, flats, and commercial buildings. It is a beautiful enclave positioned on about 200 hectare land by the scenic and tranquil shore of the Lagos Lagoon on the Lekki Peninsula. It was designed to create an ideal living and recreational environment for a population of over 30,000 residents [13]. The greatest point in VGC is in the way and

manner the houses, green-spaces and recreational parks and landscape roads are synchronized in perfect harmony.

1.2 Justification for the Study

Lagos accounts for over 40% of commercial, industrial and institutional activities in Nigeria [14]. This phenomenon has meaningful impact on the population of the metropolis. For example, the population of the municipal boundary of Lagos rose from 230, 256 in 1956 to 650,000 in 1963 and 3.3million people in 1975 [15,16]. The 1991 census put the population of Lagos State at about 5.7 million and the projected figure using a highly conservative national growth rate of 2.83% (the growth rate of Lagos is actually about 6%) is about 7.5 million. Lagos is expected to add nearly 10m people between 2000 and 2015 [17]. The rapid population growth is one of the major factors responsible for the spatial growth and the associated pressure on different land use component leading to conversion of land. This pressure on residential land use among other land uses has led to the development of larger percentage of residential areas for economic gain with little or no consideration for laws and regulations on the creation of park and recreational facilities in residential neighbourhoods. It is therefore imperative to study the extent of this scenario. There is therefore the need to appraise planning activities in effecting the laws that emphasises the need for recreational park in the residential area where the inhabitants reside. Even where this law is complied with, expected facilities are not always provided. The resultant effects of this on health, aesthetics and pollution control among others are less documented in literature of residential land use planning and urban green space provision and compliance.

2. THE CONCEPT OF SOCIAL CAPITAL

The study of social capital has varied roots, it often seek to address issues arising out of the well-established tension between individual interests and the collective good of the community. While there are varying definitions, the common essence can be considered as the stock of active connections among people such as the trust, mutual understanding, and shared values and behaviours that bind the members of human networks and communities and make cooperative action possible [18]. The Concept is different from individual social connections [19], hence distinguishing it from concepts such as social support. It also draws attention to the social structures of neighbourhoods or other groups which are sometimes confused with the differences between individual and broader social systems orientations [20].

The general drift of literature suggests that social capital may also be influenced by the way in which the physical neighbourhood environment is planned and designed [21], as well as social characteristics of a neighbourhood [22], or by the interplay between the two [23].

The provision of social and recreational facilities goes beyond actual service provision but may contribute to perceptions and the extent to which people feel connected with their community. While some elements of the environments in which people live are fixed, many local features are socially constructed and can be changed, improved, added, or better used for social capital gain. Such is the provision of recreational parks within residential neighbourhoods. The role that leisure plays in the creation of social capital through the initiation of opportunities for interaction of like-minded people, and fostering associational memberships, can lead to increases in social capital [24]. Warde and Tampubolon [25] have

suggested that there is a relationship between greater recreation consumption and greater civic and public participation.

The level of social capital within the study area can be relatively measured from the residents' responses on some factors that were perceived to be the benefit of locating the parks within the residential neighbourhood. These factors were; recreational parks serve as a social point of meeting, promote friendliness among residents, as well as prevent idleness and social vices in the neighbourhood.

2.1 Open Space and Recreation Needs Based on Population

There are standards in place that can assist communities in measuring the effectiveness of their recreation and open space programs. According to Open Space Guidelines and Standards released by the National Recreation and Park Association, a park should be composed of a core system of parks that total 6.25 to 10.5 acres of developed open space per 1,000 people [26]. This should consist of local spaces, regional spaces and unique space. Examples of local spaces are: mini-parks, neighbourhood parks and playgrounds, as well as community parks. Regional space are: metropolitan parks and regional park reserves, while unique space includes; linear parks, special uses such as golf courses or nature centres, and conservancy properties. There are two major recreational parks in Victoria Garden City (VGC) located at two extremes and each one serves the residents at about 10m to 870m radius. These recreational parks can be classified under local space. This is moderately adequate when compared with specifications in literatures. For example Cheng and Zhang [27], specified that a residential neighbourhood park should serve a radius of about 500m to 1km, while a community garden is expected to serve radius of 300m to 500m. Modern method of design and reservation of land for all forms of green space (parks inclusive) considered accessibility as a primary factor. With a proposed population of 30,000 at inception the identified area of land reserved as park in VGC is 20.66 acres.



Plate 1. Pictorial view of a recreational park in the study area

Source: Author's fieldwork 2012.

3. RESEARCH METHODOLOGY

The research purposively selected Victoria Garden City (VGC) where two recreational parks are located as the study area. There were 1431 households in VGC; the study randomly selected 10% of the household heads for questionnaire administration. This brings the number of household heads sampled to 143. However; only 139 questionnaire was retrieved from the sampled household in the study area; this brings the rate of return to 97%. The selection of 10% was based on existing literature; Siegel et al. [28] suggested 3% sample size for empirical studies that are to be conducted within homogenous or semi-homogenous population. The questionnaire inquired the socio-economic characteristics of the residents and their perceived importance of the identified parks in the study area. Data were analysed using descriptive statistics (Perception Index {PI}) as derived from Resident Satisfaction Index (RSI) in the work of Afon [29].

4. REPORT OF FINDINGS AND ANALYSIS

4.1 Available Recreational Parks

When compared with places like Berlin in Germany, the availability of green space or recreation parks in cities across Nigeria is far below expectation. This is why the study purposively selected Victoria Garden City (VGC) where recreational park can be found. The precise area of land of the residential neighbourhood is 207 hectares (517.5 acres or 2094248.2m²) with a perimeter of about 7 kilometres (6955.10metres).

There are two major recreational parks in VGC located at two extremes and each one serves the residents at about 10m – 870m radius. This is moderately adequate when compares with specifications in literatures. For example according Cheng and Zhang (2007), a residential neighbourhood park should serve a radius of about 500m – 1km, while a community garden is expected to serve radius of 300m to 500m.

The smallest among the two (2) parks have a total land area of about 25018.328m² (6.69 acres) with a perimeter of about 653.4143m. It is located at the west end of the estate. The second is located at the entrance of the estate. This parcel of land is about 52475.9791 (13.97 acres) with a perimeter of about 925 metres.

4.2 Socio-Economic Characteristics of Residents

As presented in Table 1, the study sampled 100 male and 39 female. The educational status of the sampled residents revealed that 4.3% had no formal education, 5% attended primary school, 30% attended secondary school, while the remaining 60% attended tertiary institution. Out of the 139 residents sampled, 35 were single, 94 were married, while the number of those that were widowed was 5. Among the residents sampled, the predominant form of occupation was the business tycoon representing 32.4% of the residents. This was closely followed by the professional (31.7%). The students, civil servants and artisans represented 12.2%, 14.4%, and 7.9% respectively. The occupational status of the residents was a reflection of the status of the people living in the residential neighbourhood as Victoria Garden City is a high income earners neighbourhood. From the surveyed population, there were more Christians (68.3%) than Muslims (31.4%). These were the only two forms of religion that was embraced by the residents of the study area.

Table 1. Socio-economic characteristics of residents

Variables	Categories	Frequency	Percentage
Gender	Male	100	71.9
	Female	39	28.1
	Total	139	100.0
Educational qualification	No formal education	6	4.3
	Primary	7	5.0
	Secondary	43	30.9
	Tertiary	83	59.7
	Total	139	
Marital status	Single	35	25.2
	Married	94	67.6
	Divorced	5	3.6
	Widowed	5	3.6
	Total	139	100.0
Occupation	Student	17	12.2
	Civil servant	20	14.4
	Professional	44	31.7
	Business tycoon	45	32.4
	Artisans	11	7.9
	Others (specify)	2	1.4
	Total	139	100.0
Religion	Christianity	95	68.3
	Islam	44	31.7
	Total	139	100.0

Source: Author's fieldwork, 2012.

4.3 Residents' Perception of the Importance of Parks

Perception index study is a common method of analysis in the field of environmental psychology. To measure residents' perceived Importance of the recreational park, eighteen variables were identified and scaled using one of the five ratings: *strongly agreed (SA)*, *agreed (A)*, *partially agreed (PA)*, *partially disagreed (PDA)* and *strongly disagreed (SDA)*. Each of this was respectively assigned value 5, 4, 3, 2 and 1. The summation of weight value (SWV) for each perceived factor was obtained through the addition of the product of responses for each rating of the factors and their respective weight values.

Mathematically, this is expressed as: $SWV = \sum_{i=1}^5 x_i y_i$ equ. (1)

Where: SWV is the summation of weight value,

x_i is the respondent rating a particular variable's effect and

y_i is the weight value assigned to each variable.

The perception index (*PI*) for each variable was arrived at by dividing the summation of weight value by the addition of the number of residents to each of the five ratings.

This is expressed mathematically as: $PI = \frac{SWV}{\sum_1^5 x_i}$ equ. (2)

Where *PI* is perception index, *SWV* and x_i are as previously defined. The closer the *PI* of a particular variable is to five (5), the higher is the residents' perception of the importance of such variable. The perception index obtained is as presented in Table 2. Also indicated in the Table is the average *PI* denoted by \overline{RPI} for all the identified variables. This was obtained by summing up the *PI* for each variable and dividing it by the total number of variables observed (N = 18).

Computation of PI Values in Table 2

- Column 1: Serial Number
- Column 2: Perceived importance of recreational park
- Column 3: Respondents that rated the factors as strongly agreed (SA)
- Column 4: Respondents that rated the factors as agreed (A)
- Column 5: Respondents that rated the factors as just agreed (JA)
- Column 6: Respondents that rated the factors as partially disagreed (PDA)
- Column 7: Respondents that rated the factors as strongly disagreed (SDA)
- Column 8: Addition of the product of individual respondents rating of identified importance of recreational park and their respective weight values.
- Column 9: Resident perception index (PI) of importance of recreational park equal summation of weight value (SWV) divided by the addition of individual respondents on factors affecting provision of green space
- Column 10: The deviation equals to mean of perception index for all the 18 variables that are perceived as importance of Recreational park in residential neighbourhood. For example $\frac{81.813}{18} = 4.550$, Deviation $(PI - \overline{RPI}) = 4.906 - 4.550 = 0.356$ for 'create place for recreation'.

$$\sum RPI = 81.813, \overline{RPI} = \frac{\sum RPI}{(N = 18)} = \frac{81.813}{18} = 4.550$$

The resident perception index (*RPI*) was 4.550. As presented in Table 2, there were six basic factors that are perceived to be the most important benefits or advantages of having recreational park in the residential area. These were the factors that had their *PI* above 4.550. These include; creation of place for recreation (4.906), serve as a social point of meeting (4.791) and prevention of wind force (wind breaker) (4.784). Others were promoting friendliness among residents (4.727), reduce/control soil erosion (4.727) as well as prevent idleness and social vices in the neighbourhood (4.604). It is important to note that all the factors that could be used in measuring social capital as earlier discussed were among the six (6) factors with a *PI* above the *RPI* of 4.550.

On the other hand, the factor that were rated below the *RPI* were; improve the health of the people in the residential neighbourhood (4.547), reduce/control high temperature (4.532), increase building monetary value (4.518), increase aesthetic view of the housing environment (4.496) and reduce/control noise pollution (4.475). Others include; reduce/control water pollution (4.468), reduce/control air pollution (4.453), reduce/control

land pollution (4.396), reduce stress and psychological imbalance (4.374), improve oxygen borne air in residential area (4.353), promote economic development (4.353) and help to combat global warming (4.309).

Table 2. Perceived benefits of recreational parks

S/No	Factors	Rating and weight value						PI	PI - \overline{RPI}
		SA (5)	A (4)	JA (3)	PDA (2)	SDA (1)	SWV		
1	Create place for recreation	125	12	3	0	0	682	4.906	0.356
2	Serve as a social point of meeting	120	10	8	1	0	666	4.791	0.241
3	Prevention of wind force (wind breaker)	116	19	2	1	1	665	4.784	0.234
4	Promote friendliness among residents	110	20	9	0	0	657	4.727	0.177
5	Reduce/control soil erosion	119	6	12	2	0	657	4.727	0.177
6	Prevent idleness and social vices in the neighbourhood	104	18	14	3	0	640	4.604	0.054
7	Improve the health of the people in the residential neighbourhood	112	7	4	16	0	632	4.547	-0.003
8	Reduce/control high temperature	105	17	3	14	0	630	4.532	-0.018
9	Increase building monetary value	107	13	3	16	0	628	4.518	-0.032
10	Increase aesthetic view of the housing environment	105	14	4	16	0	625	4.496	-0.054
11	Reduce/control noise pollution	105	13	4	16	1	622	4.475	-0.075
12	Reduce/control water pollution	102	15	10	10	1	621	4.468	-0.082
13	Reduce/control air pollution	99	21	3	15	1	619	4.453	-0.097
14	Reduce/control land pollution	98	15	10	15	1	611	4.396	-0.154
15	Reduce stress and psychological imbalance	91	28	2	17	1	608	4.374	-0.176
16	Improve oxygen borne air in residential area	97	12	14	15	1	605	4.353	-0.197
17	Promote economic development	91	17	20	11	0	605	4.353	-0.197
18	Help to combat global warming	94	14	12	18	1	599	4.309	-0.241
Total								81.813	

Source: Author's fieldwork, 2012

5. CONCLUSION

Major findings revealed that there were more male household heads than female and that residents of the surveyed neighbourhood are literate with about 60% attaining higher institutions. There are 6 basic factors that were perceived to be the most important benefits or advantages of having recreational park in the residential area. These were; create place for recreation, serve as a social point of meeting, prevention of wind force (wind breaker), promote friendliness among residents, reduce/control soil erosion, as well as prevent idleness and social vices in the neighbourhood. These benefits are basically related to the social and the natural environment.

Recreational parks are popular and precious resource, which can make a valuable contribution to the attractiveness of a residential neighbourhood, to the health and wellbeing of local people and expand the opportunities for social capital. However, despite their perceived importance, previous studies revealed that there has been a worrying decline in the quality of urban recreational parks particularly in the developed countries, and there non availability in the developing countries. In the light of the findings of this study, action is therefore urgently needed to ensure that recreational parks serve more residential neighbourhoods in the cities of Nigeria; a developing country.

COMPETING INTERESTS

Author declares that no competing interest exist on the manuscript.

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