

Park Users' Characteristics That Influence Satisfaction In Urban Parks In Kisumu County, Kenya

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Abstract: The study examined the users' characteristics that influence satisfaction in urban parks. Data was collected from 120 park users. Multiple linear regression was used to examine the impact of demographic and socio-economic characteristics of the park users on satisfaction. The findings showed that the demographic and socio-economic characteristics of park users determined their satisfaction with the park attributes of location, safety, aesthetic and washrooms condition with the overall model explaining 14.4, 13.9, 12.6 and 13.2 percentage of variance respectively, which was revealed to be statistically significant at $F(6,113) = 3.163, p < .05.$, $F(6,113) = 3.032, p < .05.$, $F(6,113) = 2.709, p < .05$ and $F(6,113) = 2.865, p < .05$ respectively. The study recommends that for the needs of the users to be met in the parks and increase the satisfaction levels, there should be provision of requisite facilities like seats, washroom, shades and enhanced security within the parks

Keywords: Urban parks, Satisfaction, Kisumu city, park attributes

I. INTRODUCTION

A. BACKGROUND INFORMATION

Parks are important features in an urban area. They are multi-purpose public spaces offering health, environmental, social and economic benefits to the city dwellers. Public parks supported by the Municipal governments date back to 1840s in Britain and 1850s in the United States and Canada. This is because initially public parks were not public they were used only by a privileged part of the population (Cranz et al, 2004). Parks and open spaces have since become an integral component in planning for and the design of healthy communities (Kwalski, 2009). In the recent past, Kwalski (2009) notes that many urban development projects in large cities such as Toronto or New York are being led by large park projects. This is to demonstrate the recognition of planners on the importance of urban parks. Despite of all these efforts, little is known about the satisfaction of the visitors as they use these parks.

During the colonization period in the late 19th century, Europeans introduced the concept of urban parks to Africa.

This was to cater for the recreation and leisure needs of their families, citizens and local affluent people (Yuen, 1995). In Kenya and Kisumu in particular, most parks were created in the 1940s and 1950s by the British settlers. During the early town planning in the 20th century when the basic layout of the town was done, provision was made for five urban parks which currently are, Market Park (Oile), Jamhuri Park, Uhuru Garden, Taifa Park and Jomo Kenyatta Sports Ground, which are all located in Kisumu City (Conseil, 2013). Throughout the past century, the world's urban population has continued to increase in urban areas, the world's population had been rapidly congregating in urban areas. The urban population in the world was approximately 2.4 billion in 1995 number that is expected to duplicate at about the year 2025 (Antrop, 2000). This has led to the increased alienation of urban dwellers from nature and increased deterioration of the urban quality of life.

Rapidly urbanizing cities are in developing nations of Asia and Africa. For instance, the population of Kisumu City, a fast growing city in Kenya, is projected to rise by over 75% by the year 2030 (Conseil, 2014). This means that the need to escape from the busy city life will be high. This calls for the understanding on the users' characteristics that influence

satisfaction in the parks in Kisumu City which will aid in providing information for planning for parks that meet these arising needs

B. SATISFACTION

User satisfaction lies at the core of many sectors and work areas today: housing, commerce, tourism, service industry and recreational (Sivaliöglu and Berköz, 2012). Visitors' satisfaction is a complex, multi-dimensional concept. Chan and Baum, 2007, Oh and Parks, 1997 indicate that there is complexity and controversy in the nature of the definition of consumer satisfaction. Definitions of satisfaction have varied amongst researchers. For instance Yuksel and Yuksel (2001) define satisfaction as the cognitive or emotional response resulting from the consumption experience, or a comparison of benefits and costs to anticipated consequences. Oliver, 1997 explain that satisfaction is a cognitive-affective state resulting from cognitive evaluations, as well as from emotions these evaluations evoke. Satisfaction is therefore a fulfilment response, a judgement that the product and services provided have led to a pleasurable experience, a cognitive-affective state derived from a tourist experience (Bosque and Martin, 2008).

Visitors usually come with already clear expectations as to the quality and types of services that a certain place provides. The degree to which their expectations are met during the visit will determine the visitor satisfaction level (Doucouliagos and Hall, 2010). When general performance during or after visiting the destination meets or exceeds the expectation, a visitor is considered to be satisfied. However, when perceived performance falls beneath the expectation, the visitor, in this case, may be dissatisfied. Moreover, satisfaction is influenced by the experiences in the parks and its characteristics because motives occur before a visit and satisfaction after the visit.

Visitor satisfaction is affected by many variables including use levels, perceived crowding, absence of litter, the visitors' characteristics, level of development among others (Weber, 2007). This study, however, focused on the users' characteristics and their influence on satisfaction in urban parks. The users' characteristics under study included: age, sex, income level, occupation, marital status and educational level.

II. METHODOLOGY

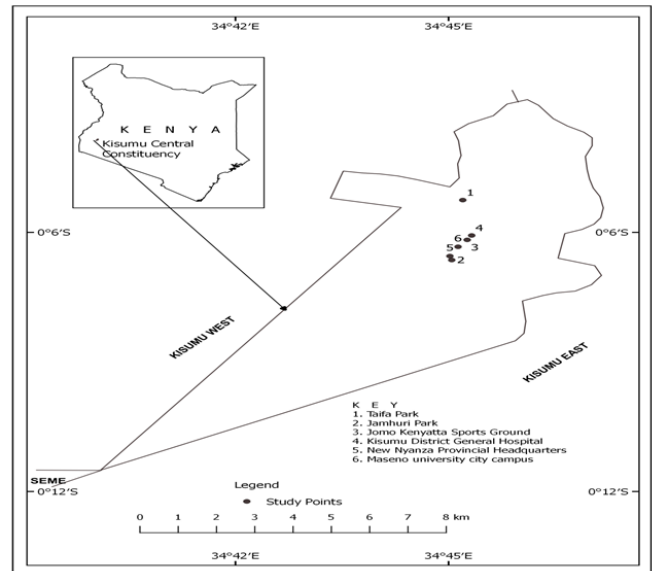
A. RESEARCH DESIGN

This study employed descriptive research design. This scientific method involves collecting data that enables the description of subjects or a situation (Mugenda and Mugenda, 1999). It involved collecting qualitative and quantitative data on the park users' and parks' characteristics that influence the utilization of the parks

B. STUDY AREA

Kisumu City (figure1) is located 1,146 m above sea level on the Eastern shore of Lake Victoria, the continent's largest fresh-water body (68,800 sq. km) at the heart of the African Great Lakes region. Kisumu is located 0°6' south of the Equator and 34°45' east.

Kisumu City has approximately 410,000 inhabitants and Kisumu County has about 970,000 people (Conseil, 2013). The average population density in the urban areas of Kisumu is 1,390 persons per Km² (UN-Habitat, 2006). However, the density varies largely in different areas of the city. Kisumu is in general a segregated city where different income groups live in geographically separated areas. Approximately 60% of the urban populations live in informal settlements where the density varies between 6,000 and 21,000 persons per Km².



(Source: Kisumu County Government, 2010)

Figure1: Kisumu Central Constituency Showing Location of Study Sites

C. SAMPLING PROCEDURE

Multi-stage sampling technique was used. Parks were the primary sampling units and were selected purposively depending on their sizes and locations. There are a total of five parks in Kisumu City but three parks were selected for the study. They include; Jomo Kenyatta Sports Ground, Jamhuri Park and Taifa Park. Jamhuri Park was selected because it is near Millimani estate, a high-income area and is approximately 1.8 hectares. Jomo Kenyatta Sports Ground was selected because it is located within the Central Business District (CBD) and is approximately 9.8 hectares while Taifa Park was selected because it is located near Obunga estate, a low-income area of approximately 0.7 hectares. Oile Park was not selected for the study because at the time of the study it was not in use and was heavily guarded to restrain the traders from getting in.

In the second stage, the selection of the park users was done using simple random sampling where each individual was chosen randomly and entirely by chance such that each individual has the same probability of being chosen at any

stage during the sampling process. Research assistants were instructed to carry out interviews continuously in a period of two weeks both on the weekdays and weekends and throughout the day. This was to ensure that a more representative sample was reached at. Purposive sampling technique was used to select the key informants who included the city managers, assistant city manager, city planner and the manager of Jomo Kenyatta Sports Ground.

D. SAMPLE SIZE

In contrast to the city’s housing stock, schools and hospitals, there was no census, enrollment or admission data to describe the population of the park users. The sample size was therefore calculated using Creative Research Systems (CRS) (2009) software. The Creative Research Systems (2009) software uses the following formula in the calculation of a sample size:

$$S = \frac{Z^2 \times p \times (1-p)}{c^2}$$

Where S=sample size, Z=Z value (1.96 for 95% Confidence level) p=percentage picking a choice, expressed as decimal (0.5) and c=confidence interval, expressed as decimal (0.09). This formula calculated the number of park users for the study across the three parks as,

$$\frac{1.96^2 \times 0.5(1 - 0.5)}{0.09^2} = 118$$

This sample size was adjusted up to 120 park users.

The questionnaires were administered to one hundred and twenty park users while an interview schedule was conducted among the four key informants (one park manager and three county officials (city manager, assistant city manager and the city planner).

E. DATA COLLECTION TOOLS

The questionnaire was the main instrument for collecting primary data from the park users. To complement the information gathered using the questionnaires, structured interviews were used to collect data from key informants while the observation checklist on the other hand was used to collect data on various facilities in the parks. This included checking on their availability, total numbers and conditions.

III. RESULTS AND DISCUSSIONS

This section entails the results for Multicollinearity test and those obtained from the field study.

SATISFACTION OF THE PARK USERS

Satisfaction is the degree to which the expectations of the park users are met (Doucouliagos and Hall, 2010). The study sought to find out the satisfaction of the park users on different park attributes. The park attributes included; the location of the parks from the park users’ residence, safety within the parks, aesthetics of the parks, availability of park personnel, seats in the parks, shades in the parks, washrooms condition in the parks, grass maintenance and general cleanliness of the

parks. Participants were asked to indicate their levels of satisfaction on a five–point likert scale where 1= very dissatisfied and 5 = very satisfied.

Multicollinearity was first assessed before the regression analysis was conducted. This was to check on the value of the variation inflation factor (VIF) and the Tolerance value of the independent variables. Tolerance measures the influence of one independent variable on all other independent variables. Tolerance levels for correlations range from zero to one where a value close to zero indicates that a variable is almost a linear combination of the other independent variables. Acceptable tolerance range is above 0.30. The VIF is an index of the amount that the variance of each regression coefficient is increased over that with uncorrelated independent variables. Small values for tolerance and large VIF values show the presence of multicollinearity (Keith, 2006). From (Table 1), it is observed that the VIF factors for all the six variables were within 2.0 while the tolerance value of the independent variables was above 0.30. All the six variables were therefore included in the multiple regression analysis.

Model variables	Tolerance	VIF
Age	.881	1.135
Sex	.968	1.033
Educational level	.882	1.134
Occupation	.568	1.762
Income level	.553	1.809
Marital status	.814	1.229

Source: Fieldwork, 2015

Table 1: Test for Multicollinearity

Multiple regression was conducted to see whether the independent variables (age, sex, educational level, income level, occupation and marital status) impacted on the satisfaction of the park users with the park attributes. Table 2 gives a summary of the multiple regression models indicating the parks attribute, the R-squared value and the significance of each model. From the table, it can be concluded that the models explaining the impact of the demographic and socio-economic characteristics on the satisfaction with location of the parks, safety within the parks, park aesthetics and the conditions of the washrooms were significant (p<0.05) while those of shades in the parks, seats in the parks, cleanliness in the parks, park personnel and grass maintenance in the parks were insignificant (p>0.05). This implies that though the demographic and socio-economic characteristics of the park users influenced satisfaction on location, safety, aesthetic and washrooms, they did not influence satisfaction on shades, seats, cleanliness, park personnel and grass maintenance in the parks.

Park attribute	R-squared	Sig. F change
Park location	.144	.007
Park safety	.139	.009
Aesthetics of the park	.126	.014
Park personnel	.089	.098
Seats in the park	.050	.432
Shades in the park	.052	.413
Washrooms	.132	.012
Grass maintenance	.073	.190
Cleanliness	.068	.229

Source: Fieldwork, 2015

Table 2: Summary of the multiple regression models

A. SATISFACTION WITH THE LOCATION OF THE PARKS

Multiple regression was conducted to see whether age, sex, educational level, occupation, income level and marital status of the park users impacted on satisfaction with the location of the park. The overall model explained 14.4 percent of variance in satisfaction with the location of the parks (Table 2), which was revealed to be statistically significant $F(6,113) = 3.163, p < .05$.

An inspection of individual predictors revealed that age (Beta = -0.198, $p < .05$) and income level (Beta = -0.322, $p < .05$) were significant predictors of satisfaction with the location of the park. However, sex (Beta = 0.019, $p = .831$), educational level (Beta = -0.02, $p = .985$), occupation (Beta = -0.054, $p = .639$) and marital status (Beta = .103, $p = .288$) were not significant predictors of the park users satisfaction with the location of the park (Table 3).

Model	Standardized Coefficients	Sig.
	Beta	
(Constant)		.000
Age	-.198	.035
Sex	.019	.831
Educational level	-.002	.985
Occupation	-.054	.639
Income level	-.322	.007
Marital status	.103	.288

Source: Fieldwork, 2015

Table 3: Regression coefficients on satisfaction of park users with location

This means that age and income level of the park users are associated with satisfaction with the location of the parks. The negative sign of the beta value of age and income level indicate an inverse relationship between age and income levels of the park users and their satisfaction. This means that as the age and the income level of the participants increases their satisfaction decreases. Young visitors have high mobility and are able to cover any distance to visit the parks of their choices while old people have limited mobility thus easily affected by the location of the parks (Askari *et al.*, 2014).

B. SATISFACTION OF THE PARK USERS WITH THE SAFETY IN THE PARKS

To find out if age, sex, educational level, occupation, income level and marital status of the park users impacted on the satisfaction with the safety in the parks, linear multiple regression was conducted. The results indicated that the overall model explained 13.9 percent of variance in satisfaction with the safety in the parks which was statistically significant $F(6,113) = 3.032, p < .05$ (Table 2). An inspection of individual predictors revealed that marital status (Beta = 0.289, $p < .05$) and income level (Beta = -0.285, $p < .05$) are

significant predictors of satisfaction with the safety of the park. However, sex, educational level, occupation and age were not significant predictors of satisfaction with the safety of the park ($p > 0.05$) (Table 4). This indicates that marital status and income level are associated with satisfaction with the safety in the park. The negative sign of the beta value of income level indicate an inverse relationship between the satisfaction and the income level of the park users, that is, as the income level increases, satisfaction decreases and vice versa

Model	Standardized Coefficients	Sig.
	Beta	
(Constant)		.000
Age	-.148	.114
Sex	.009	.916
Educational level	-.081	.383
Occupation	-.127	.276
Income level	-.285	.017
Marital status	.289	.004

Source: Fieldwork, 2015

Table 4: Regression coefficient on satisfaction with safety

C. SATISFACTION OF THE PARK USERS WITH PARK AESTHETICS

Aesthetic refers to the perceived attractiveness and appeal of the various design elements of a park (Bedimo-rung *et al.* 2005). Having something beautiful or interesting to look at while in the park can increase the levels of satisfaction in the park.

Multiple regression was conducted to see if age, sex, educational level, occupation, income level and marital status of the park users impacted on the satisfaction with the park aesthetics. The overall model explained 12.6 percent of variance in satisfaction with the aesthetic of the parks, which was revealed to be statistically significant $F(6,113) = 2.709, p < .05$ (Table 2). An inspection of individual predictors revealed that occupation (Beta = -0.288, $p < .05$), marital status (Beta = .225, $p < .05$) and income level (Beta = -0.268, $p < .05$) are significant predictors of satisfaction with the aesthetic of the park. However, sex (Beta = -0.061, $p = .494$), educational level (Beta = -0.031, $p = .739$) and age (Beta = -0.100, $p = .286$) are not significant predictor of satisfaction with the aesthetic of the park (Table 5). Occupation, marital status and income level are associated with satisfaction with the aesthetic of the park. The negative sign of the beta value of income level indicate an inverse relationship between the satisfaction and the income level of the park users, as the income level increases satisfaction decreases and vice versa

Model	Standardized Coefficients	Sig.
	Beta	
(Constant)		.000
Age	-.100	.286
Sex	-.061	.494

Educational level	-.031	.739
Occupation	-.288	.015
Income level	-.268	.026
Marital status	.225	.023

Source: Fieldwork, 2015

Table 5: Regression coefficient on satisfaction with aesthetics

D. SATISFACTION WITH THE WASHROOMS IN THE PARK

Multiple regression was conducted to see whether age, sex, educational level, occupation, income level and marital status impacted on satisfaction with the washrooms of the park. The overall model explained 13.2 percent of variance in satisfaction with the washrooms of the park, which was revealed to be statistically significant $F(6,113) = 2.865, p < .05$ (Table 2). An inspection of individual predictors revealed that only income level (Beta = -0.418, $p < .05$) is a significant predictor of satisfaction with the washrooms of the park. However, age (Beta = -0.089, $p = .341$), sex (Beta = -0.107, $p = .232$), educational level (Beta = .074, $p = .429$), occupation (Beta = -0.209, $p = .075$) and marital status (Beta = .030, $p = .760$) are not significant predictor of satisfaction with the washrooms of the park (Table 6). Income level is associated with satisfaction with the washrooms of the park.

Model	Standardized Coefficients	
	Beta	Sig.
(Constant)		.000
Age	-.089	.341
Sex	-.107	.232
Educational level	.074	.429
Occupation	-.209	.075
Income level	-.418	.001
Marital status	.030	.760

Source: Fieldwork, 2015

Table 6: Regression coefficient on satisfaction with washrooms

IV. CONCLUSION AND RECOMMENDATIONS

Satisfaction with the location of the parks was influenced by age and income level of the participants while satisfaction with the safety of the parks was influenced by marital status and income level of the participants. Satisfaction with the aesthetic of the park, on the other hand, was influenced by occupation, income level and marital status of the participants while satisfaction with the condition of the washrooms in the parks was only influenced by the income level of the participants. The variances explained by the models were low with the highest having 14.4%. This indicates that apart from the demographic and socio-economic characteristics of the park users, satisfaction of the park users could be influenced by other factors

It is evident from the above findings that income level of the visitors is one single socio-economic characteristic that is associated with satisfaction in the parks. The negative sign of

the beta value indicate an inverse relationship between the income level and satisfaction. This means that as the income of the users increase, their satisfaction decreases. Ghandehari *et al.* 2012 had indicated that people of low-income level are found to use the parks more than their counterparts in high socio-economic status who have better options for recreation and leisure. These places are relatively well maintained than public parks as noted by one of the respondents. To meet the needs of visitors in public urban parks and increase satisfaction levels, there a need for the concerned authorities to increase budgetary allocations to the maintenance of various facilities within the parks.

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