Journal of Science and Technology, Vol. 38, Nos. 1, 2 &3 (2020), pp81-94 81

http://dx.doi.org/10.4314/just.v38i1.8

RESEARCH PAPER

THE RELEVANCE AND PREFERRED FEATURES OF GREEN PARKS IN GHANA: A STUDY OF MANHYIA DISTRICT IN KUMASI

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ABSTRACT
Different socio-economic characteristics of users affect preferred green park features which in turn correlate with park usage and activities. This study used questionnaires to examine firstly, the perception of the residents of Manhyia sub-metro about the relevance of green parks using the relative importance index formula and secondly, their preferred green park features since the sub-metro has made a decision to create a new green park. The study revealed that, the residents of Manhyia put a high premium on the creation of green parks, since 60.6 % of them deem green parks as very important, 28.7% as important and 9.6% as quite important. Only 1.1% opined that green parks are not important. Among the perception variables, the results showed a high perception index of 0.87 for green parks as places of relaxation and stress relief. The presence of a) water/fountains/ponds b) serene atmosphere with benches under trees, and c) play equipment for children were the three most preferred green park features by the respondents. The study also revealed that, the socio-economic backgrounds of residents are strong determinants of green park features. For green parks to be well patronized, park features should satisfy the needs of potential users.

Keywords: *Green parks, green park features, perception, socio-economic characteristics*

INTRODUCTION

The study sought to facilitate the creation of green parks in cities to help curb issues of pollution, high temperatures and lack of social cohesion and thus promote quality life in urban areas by examining the relevance of green parks and preferred green park features in Kumasi, using the residents of Manyhia sub-metro as the respondents. This introductory section includes discussions on the background of the study, the location of the study, the benefits of green parks, the relevance of parks and green park feature preferences.

Background

Cities constitute three percent of the world's total land area but they are home to as much as half of the world's population (Singh et al., 2010). Studies have revealed that more than 60 percent of the world's population is projected to live in cities by 2030 (Devy *et al*., 2009) and in the next four decades, cities in developing

countries will accommodate an overwhelming 95 percent of the total number of dwellers in urban settings (UN-HABITAT, 2008). Ghana is experiencing a rapid rate of urbanization. Estimates show that more than 50 percent of Ghana's population of 24,658,823 dwell in urban areas, notably in Accra (its capital), Kumasi (the second largest city after Accra) and Sekondi-Takoradi (UN-HABITAT, 2011).

Though urbanization has its own benefits such as the creation of wealth and provision of employment, it has its downside too. Forest areas, landscape areas, prime agricultural lands, natural habitats and wetlands in the cities are depleted to make way for the construction of accommodation facilities for their growing population, roads to ease traffic and facilitate movements, industries for mass production and public structures such as educational institutions and sport stadia (Abloh, 1972; Corubolo and Mattingly, 1999). Urbanization, thus, depletes the urban greenery that has the capacity to help reduce rising temperatures and the accumulation of pollutants in cities; the two major problems which continue to challenge the wellbeing of urban residents. As cities absorb majority of people in the world, it is important that more natural environments such as green parks be created in them. Parks are 'the lungs' of cities (Scheer, 2001) and making cities green will not only enhance their image and the well-being of its dwellers, it will also make them more sustainable (Chiesura, 2004). Thus, urban soft landscape projects including the creation of urban green parks, urban forests, parking lot trees, street trees, shaded gardens, urban agriculture, urban green roofs and facades are among the remedies to the rising temperatures and high pollution levels in the cities (Quagraine, 2011).

Study location

The location of the study is in Kumasi metropolis, specifically at Manhyia, one of its sub-metros. To facilitate efficient administration of the metropolis, Kumasi was divided into ten (10) sub-metros namely Manhyia, Oforikrom, Asokwa, Nhyiaeso, Subin, Suame, Asawase, Bantama, Kwadaso and Tafo. However, since 2017, six of the sub-metros have been raised to municipal status and are therefore administratively autonomous, (Barimah, 2018). The remaining sub-metros that currently make up the Kumasi metropolis are Manhyia, Subin, Nhyiaeso and Bantama. The map of Kumasi Metropolis with the newly created Municipalities and the remaining Sub-metros is shown in Fig. 1.

Kumasi is situated in the forest zone of Ghana and it is about 270km north of Accra. Kumasi stretches between latitude 6.35^{o} N – 6.40^{o} N and longitude 1.30^{o} W – 1.35^{o} W. Kumasi, the capital of the Ashanti region of Ghana, occupies a land area of 214.3 km^2, about 0.9 percent of the region's land area of 24,389 km^2, though it is home to 1,730,249 people which is 36.2 percent of the region's population of 4,780,380. Its population consists of 826,479 males (47.8%) and 903,779 females (52.2%). The population density of the city is 8,075 persons per sq. km. Also, 60 percent of the city's population is 18 years and above (Ghana Statistical Services (GSS), 2014).

Kumasi, the fastest growing (at 5.7 percent per annum) city in Ghana, is experiencing rapid rate of urbanization (Afrane and Asamoah, 2011), and this rapid growth is expected to continue to rise (Mensah-Bonsu and Owusu-Ansah, 2011). The rapid urbanization of the city is affecting its much greener landscape created during the pre-colonial and colonial times. The landscape was adorned with numerous parks and gardens which made Kumasi one of the greenest cities in Africa (Mensah, 2014a). However, according to Asare (2013), the several parks which were created to serve the growing needs of residents during the colonial period have been abandoned. The much cherished green cover in the city is however fast disappearing. A landsat image in 1986 of Kumasi revealed that the vegetation cover was about 74.08 percent of total land area whereas that of the built environment was about 17.16 percent. However, in 2007, it was observed that the vegetation cover had decreased to 40.52 percent (Tontoh, 2011). The colonial green parks including the Kejetia (now the Adehyeman) Gardens, the Suntreso Gardens (now the Department of Parks and Gardens), the Kumasi Zoo, and the Amakom Green Park (now Children's Park) have all been abandoned. Kumasi, therefore, needs urban green projects

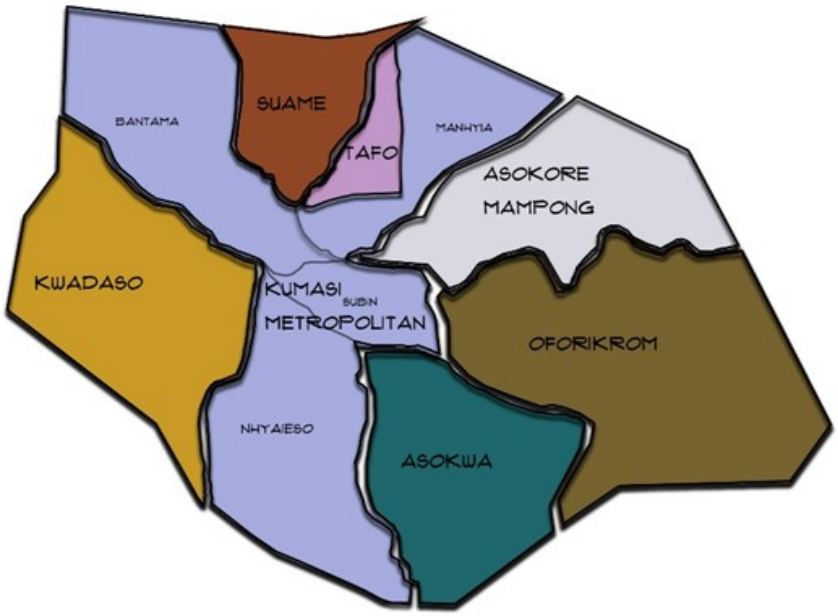

Fig. 1: The current map of Kumasi Metropolis
(*Source: Adapted from Kumasi Metropolitan Assembly, 2015 and Barimah, 2018*)

to help ameliorate the high temperatures and air pollution situation (Quagraine, 2011). The Rattray Park, situated in the Nyhiaeso sub-metro of Kumasi and which was commissioned in 2015, is the only major green park created in Kumasi since the colonial period.

Manyhia was created as a sub-metro of Kumasi by the Legislative Instrument 1614, 1995. It is bounded on the north by the Offinso municipality, to the east by Asokore Mampong municipality, to the west by Tafo municipality and to the south by the Bantama sub-metro (Kumasi Metropolitan Assembly, 2015). It has a population of 152,225, a land area of 15.23km^2, a density of about 10,000 persons per sq. km (GSS, 2014), 41,886 households, and an average household size of 3.6 (GSS, 2012). The percentage of males and females is 47.1 and 52.9 respectively. It houses the main traditional landmarks of the Asanti Kingdom that dates back to the 17th century, including the palace of the Asantihene (GSS, 2014).

The Manhyia sub-metro was chosen for this study since it is the sub-metro with the least green park coverage of 11.11% and also the least green park coverage per capita of the remaining sub-metros in the Metropolis (Amasa, 2015). Manhyia recently recognized the necessity to create a new green park for its 152,225 residents. It is one of the sub-metros that are predominantly residential in the Kumasi metropolis and therefore would benefit from higher green park per capita.

Benefits of green parks

Green parks are known to affect health positively due to their ability to purify the atmosphere of polluted air and reduce high temperatures in cities. They are active in stress reduction (Ward-Thompson *et al.,* 2012) and mental disorder reduction (Van Dillen *et al.,* 2012). Green parks also improve psychological well-

being (Tinsley *et al.,* 2002) and reduce respiratory disorders (Richardson *et al*., 2010). The reduction in green cover within the city of Kumasi has given rise to increase in respiratory diseases in the metropolis (Quagraine, 2011). Mensah-Bonsu and Owusu-Ansah (2011), confirm that cough, cold and other acute respiratory infections have been the most frequently reported cases at health facilities in Kumasi.

Green parks also promote social cohesion since parks are ideal environments for social interaction (Kuo *et al*., 1998). With the expected large influx of people into the city of Kumasi in the near future (Mensah-Bonsu and Owusu-Ansah, 2011), it is important that social cohesion (Kuo *et al*., 1998), through which interaction leads to shared values and norms, not only be encouraged but be fortified. The presence of attractive green parks promotes social integration in cities.

Economically, studies have revealed that property prices increase with their proximity to green parks (Brander and Koetse, 2011). The incorporation of green spaces in residential places could lead to increase in rent and subsequently more rental income and taxes would accrue to house owners and governments respectively. Cities with green settings naturally attract investors and are also liked by residents (Haq, 2011). For instance, the beautification of Singapore and Kuala Lumpur with greenery among other factors, enticed major foreign investments that helped propel their rapid economic growth (Dali, 2017; Hee, 2017).

Environmentally, urban green parks promote biodiversity and are rich in different species (Konijnendijk *et a*l., 2013). They conserve plants, soil and water quality (Haq, 2011) and also serve as home to birds and other animals and insects. Studies reveal that green spaces are able to check flooding in urban centres (Kubal *et al*., 2009), absorb various gaseous pollutants (Yin *et al*., 2011), and improve the microclimate of the city (World Forest Center (WFC), 1993). The amount of vegetation cover determines the extent of air pollution removal (Paoletti *et al*., 2011).

Relevance of green parks

The perception of potential users about the relevance of green parks is very important since it indicates if people will use the parks and therefore gain from their benefits (Beaney, 2009). Hence, a possible relationship between perception and usage exists, and according to Giles-Corti *et. al* (2002), perceptions have strong influence on decisions to use certain spaces and thus investigating perceptions will elicit the importance people attach to green parks. For example, green parks are perceived as suitable places of nature for relaxation (Chiesura, 2004). They are also seen as ideal settings to enjoy the weather and fresh air, reduce stress, exercise to keep in shape, be in a peaceful and quiet environment and interact with people (Schipperijn, 2010).

Green park feature preferences

The patronization of green parks depends on the presence of users' preferred features and consequently the activities to be present. Thus, the incorporation of the viewpoints of the users into the design becomes a requirement. The development of green parks must satisfy the needs of the users and this requires an integration of the viewpoints of the user into the design (Haq, 2011). The activities in the park must also correlate with the park's features since there exist a positive association between increased levels of activity and certain park features (Kaczynski *et al*., 2008). Research has revealed differences in preferences of green park features among different user groups (Gobster, 2002). Park features such as walking and running trails, water elements (including ponds and fountains), benches, peaceful atmosphere, and pleasant landscape (Oguz, 2000), presence of trees, varied plants and animal life, lawns, lights, flowerbeds, play equipment for children and soccer fields (Schipperijn *et al*., 2010) as well as cycling tracks and events spaces (Henderson, 2013) are predominant park features for users. For example, a study in Turkey revealed that park features which facilitate walking and running trails, and other features such as water, benches, peaceful atmosphere and pleasant landscape are the predilection of its users (Oguz, 2000). The different socio-economic characteristics of users affect their choice of park features (Wilkerson, 2018).

METHODOLOGY

Research design

From literature, seven (7) perception variables were arrived at to assess the relevance of green parks at Manhyia. They are green parks as places for 1) fun and entertainment, 2) learning and education, 3) relaxation and stress relief, 4) meeting new people for socialization, 5) keeping children off the street, 6) different forms of crime, and 7) the perception that the creation of green parks is waste of resources. Several studies (Oguz, 2000; Gobster, 2002; Chiesura, 2004; Schipperijn, 2010; Wilkerson, 2018) have confirmed these variables as relevant to green park creation. These perception variables were used for the formulation of the questionnaire to measure the perception indices of the respondents.

Internal consistency of the 7 Likert items was tested using Cronbach alpha (Cronbach, 1951) which is widely used for testing internal reliability (Bryman, 2001). The Relative Importance Index (RII) formula was used to determine the inhabitants' perception on the importance of green parks. The reliability coefficient of the perception variables was tested using Cronbach's alpha (α) analysis. Cronbach alpha is a commonly used method where alpha coefficient values range between 0 and 1, with higher values indicating higher reliability among the indicators (Hair *et al*., 1992). All perception indices of value greater than 0.700 are regarded as variables the respondents held important and an indicative of good scale reliability, whereas those below 0.700 were held less important (O'Leary-Kelly and Vokurka, 1998). Further, a Likert-type of scale was used with four answers; 'strongly agree, agree, disagree and strongly disagree' regarding the importance or the relevance of green parks. The study used a 'forced choice' method since there was no neutral position; the authors wanted each respondent to take a position.

Questionnaire design and administration

The questionnaire was also used to elicit preferred green park features responses. Thus, green park features affirmed in literature (Oguz, 2000; Gobster, 2002; Schipperijn *et al.,* 2010; Wilkerson, 2018) were organized in the questionnaire and provided to respondents.

Sampling procedure

The Kumasi Metropolis, according to the 2010 Population and Housing Census, has a peculiar case regarding the population structure, with the age range of 20-24 years as the largest group which accounts for 11.8 percent of the population. This according to the census report could be as a result of the brisk commercial activities as well as the presence of numerous educational institutions in the metropolis which admit a large number of non-household population. The 20-24 age group also has the highest rate of unemployment of 9.6 percent among the economically active age groups. The data further shows that 55.7% of the population is skewed towards the age range of 20 and 39 years (GSS, 2014). Hence, the study purposefully adapted and modified the structure of the 2010 population pyramid into age ranges of 20-24, 25-29, 30-39, 40-49 and 50^{+} according to the peculiar characteristics associated with respondents.

The study employed the work of Yamane (1967) to determine the sample size from the population of 152,225. A 95 percent confidence level which is widely used in social sciences and a 5 percent margin of error resulted in 399 as the sample size. A simple random sampling method was used to select respondents from 20 years and above.

RESULTS AND DISCUSSIONS

Out of the 399 questionnaires distributed, 282 representing 70.7 percent were received, analysed and discussed. The major socio-economic characteristics of the residents of Manhyia submetro that influence green park creation include age, educational level, marital and employment status. The result of the socio-economic data is presented in Table 1.

Perception of respondents on the relevance of green parks

In general, the study reveals that 60.6 % of respondents perceived, as very important, the creation of green parks, 28.7% as important, 9.6% as quite important and 1.1% opine that green park creation is not important. Table 2 presents the frequencies of the responses of the respondents, the weighting and by extension the perception indices. In accordance with the

Table 1. Socio-economic background of respondents

		Frequency	Percentage
Gender			
	Male	156	55.3
	Female	126	44.7
		282	**100.0**
Age of Inhabitants			
20-24		102	36.2
25-29		71	25.2
30-39		64	22.7
40-49		42	14.9
50+		3	1.0
Total		**282**	**100.0**
Educational level			
	Basic/No Formal Education	69	24.5
	Senior High School, Vocational, Technical	183	64.9
	Post-Secondary, Higher National Diploma (HND)	22	7.8
	Bachelor Degree, Post Graduate	8	2.8
	Total	**282**	**100.0**
Occupation			
	Employed	137	48.6
	Unemployed	145	51.4
	Total	**282**	**100.0**
Marital Status			
	Married	43	15.2
	Unmarried	239	84.8
	Total	**282**	**100.0**
Ethnicity			
	Akan	150	53.2
	Others (Ewe, Ga, Dagaaba, Frafra, Gonja, etc)	132	46.8
	Total	**282**	**100.0**
Religion			
	Christianity	200	70.9
	Islamic	75	26.6
	Others	7	2.5
	Total	**282**	**100.0**

Cronbach alpha test, the total scale of reliability for the perception variables of 0.701 (more than 0.700) indicates an overall higher reliability of the perception factors as identified by Manhyia respondents. The residents at Manhyia already perceive green parks as relevant.

The perception index of 0.87 (the highest among the 7 indicators) shows that most respondents highly perceived green parks as

Table 2: Perception of Manhyia residents on public green parks

Perception variables of green public parks	Scale				Weight	Perception Index
	(1)	(2)	(3)	(4)		
Place of fun and entertainment for people	0	11	178	93	928	0.82
Place to know and meet new people or to socialize	6	16	159	101	919	0.81
Place for relaxation and stress relief.	7	0	122	153	985	0.87
Place for learning and education.	34	6	146	96	868	0.77
Public green parks keep children off the street.	10	63	95	114	877	0.78
Public green parks are used as avenues for different forms of crime.	142	78	60	2	486	0.43
The development of public green parks is waste of money and resources.	205	70	7	0	366	0.43

Rank: [1-Strongly Disagree, 2-Disagree, 3-Agree, 4-Strongly Agree]

places of relaxation and stress relief. This perception is consistent with existing literature which shows that green parks help reduce stress (Ward-Thompson *et al*., 2012). Green parks as places of fun and entertainment had the second highest perception index of 0.82. This is also in consonance with a study conducted by Henderson (2013) which revealed that green parks are suitable places for both private and public entertainment events. Green parks as places of meeting new people for socialization came third with perception index of 0.81, and this is also consistent with studies (Loukaitou-Sideris and Stieglitz, 2002) which revealed that green parks are ideal environments for social interaction. The respondents also perceived green parks as places that help keep children off the streets and also as places of learning and education (Henderson, 2013) with perception index of 0.78 and 0.77 respectively.

However, the perception indices for green parks as places of different forms of crime (0.43) and green park creation as waste of resources (0.43) were very low. Findings of Kuo and Sullivan (2001) affirm that levels of aggression and violence (crime) are significantly lower in green parks. Even though city authorities do not put premium on the creation of green parks in Ghana (Mensah, 2014b), respondents regard their creation as important. The indices for all the seven perception variables show that respondents have high perception of the importance of green parks and consequently would not be averse to their development in the community. The perception indices also imply that cost and energy that would be involved in educating residents about the importance of green parks will be minimal since the respondents from Manhyia sub-metro already know the relevance of green parks.

Green park features preferences by respondents

Fig.2 shows the results of the overall respondents' preferred features of green parks. The presence of Water, Fountain and Pond (WFP) recorded the highest percentage of 39.0. It has been established that any activity on green settings improves self-esteem and mood, and the presence of water generates even a greater effect (Barton and Pretty, 2010). The second highest recorded percentage (19.9) was for the presence of Serene atmosphere with Benches under Trees (SBT), followed by the presence of Play Equipment for Children (PEC) at 14.5

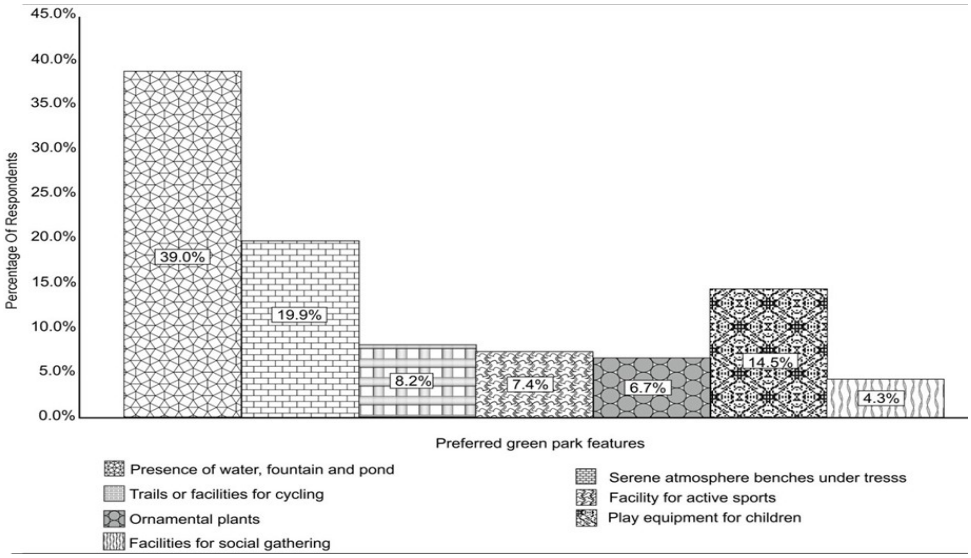

Fig. 2: Green park feature preferences of respondents

percent. Since studies have shown that socio-economic factors influence the use of green parks (Ward-Thompson *et al*., 2008), the discussion concentrated on preferences of green park features on the basis of four major socio-economic clusters, namely age, educational level, employment status and marital status.

The cross-tabulation result of the socio-economic clusters is presented in Table 3.

Green park features preferences by age

Different age groups have varied tastes for green park features. Age group 20-24 had the largest representation of 36.2 percent of the respondents. The most preferred green park features of this group were Water, Fountain and Pond (WFP) at 52.0 percent, and followed by Play Equipment for Children (PEC) at 21.6 percent. Apparently, the group did not show interest at all in Serene atmosphere with Benches under Trees (SBT). Interestingly, the youngest age group of 20-24 at Manhyia did not score much in the Trails or Facilities for Cycling (TFC) with only 8.8 percent. Their interest in PEC was even higher, though most of them may not have children. The age group 25-29 came second with regard to the numbers of respondents' participation in the study at 25.2 percent. Like the 20-24 age group, the 25-29 group's most preferred green park features were WFP at 42.2 percent and followed by SBT at 15.5 percent. The rest of the respondents were fairly distributed among Trails or Facilities for Cycling (TFC), Facilities for Active Sports (FAS), Ornamental Plants (OP), Play Equipment for Children (PEC) and with Facilities for Social Gathering (FSG) scoring the lowest at 4.2 percent.

The results of the age group 30-39 is similar to that of age group 25-29 with the most preferred green park features being WFP at 37.5 percent, followed by SBT at 20.3 percent. The rest of the 25-29 age group respondents' scorings were fairly distributed among the rest of the green park features. The 40-49 age group displayed a slight different pattern. The highest scoring was registered for SBT at 76.2 percent, followed by both WFP and PEC at 7.1 percent each. The group, however, did show zero interest in both FAS and FSG. There were only 3 respondents from the 50^{+} age group and their interest were in PEC at 66.7 percent and WFP at 33.3 per-

Table 3: Preferred green park features by demographic clusters

	Preferred Green Park Features														
	WFP		**SBT**		**TFC**		**FAS**		**OP**		**PEC**		**FSG**		
Age category	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	∑*f*
20-24 years	53	52.0	0	0	9	8.8	8	7.8	5	4.9	22	21.6	5	4.9	102
25-29 years	30	42.2	11	15.5	8	11.2	6	8.5	6	8.5	7	9.9	3	4.2	71
30-39 years	24	37.5	13	20.3	4	6.3	7	10.9	6	9.4	7	10.9	3	4.7	64
40-49 years	3	7.1	32	76.2	2	4.8	0	0	2	4.8	3	7.1	0	0	42
50 years+	1	33.3	0	0	0	0	0	0	0	0	2	66.7	0	0	3
Educational level															
Basic Education/No Formal Education	27	39.1	16	23.2	4	5.8	5	7.3	5	7.3	9	13.0	3	4.3	69
SHS/Vocational/Technical Education	73	39.9	34	18.6	17	9.3	13	7.1	12	6.5	28	15.3	6	3.3	183
HND/Post-Secondary	8	36.4	5	22.7	1	4.5	3	13.7	1	4.5	2	9.1	2	9.1	22
Bachelor Degree/Post Graduate Education	3	37.5	1	12.5	1	12.5	0	0	1	12.5	2	25.0	0	0	8
Employment status															
Employed	53	38.7	25	18.2	16	11.7	6	4.4	9	6.6	24	17.5	4	2.9	137
Unemployed	58	40.0	31	21.4	7	4.8	15	10.4	10	6.9	17	11.7	7	4.8	145
Marital status															
Married	23	53.5	5	11.6	5	11.6	3	7.0	2	4.7	5	11.6	0	0	43
Not married	88	36.8	51	21.4	18	7.5	18	7.5	17	7.1	36	15.1	11	4.6	239

***WFP**-Water, Fountain and Pond; **SBT**-Serene atmosphere with Benches under Trees; **TFC**-Trails or Facilities for Cycling; **FAS**-Facility for Active Sports; **OP**-Ornamental Plants; **PEC**-Play Equipment for Children; **FSG**-Facilities for Social Gathering*

cent.

Among all the age categories, the preference of WFP in green parks recorded the highest score of 39.4 percent (111 out of 282). The frequency or the number of respondents who preferred WFP among the age groups declined as the age group rose from younger age groups to older age groups in this study with the exception of the age group 40-49 that had a lower score than the 50^{+} group. Second to WFP feature was the SBT at 19.9 percent, followed by PEC at 14.5 percent. The rest of the features scored less than 10.0 percent among all the age groups: TFC at 8.2 percent, FAS at 7.4 percent, OP at 6.7 percent and FSG at 3.9 percent. The preferences were concentrated mostly on WFP, SBT and PEC, though if green parks are to satisfy the needs of all age groups, then they must contain fairly distributed green park features that span all ages as explained in Kaczynski *et al.* (2008).

Green park features preferences by educational level

The most preferred green park feature of the Basic/No formal Educational level group was WFP (scoring 39.1 percent) and followed by SBT and PEC at 23.2 percent and 13.0 percent respectively. The rest of the scores for the Basic/No formal Educational group were below 10.0 percent including FAS and OP at 7.3 percent each, TFC at 5.8 percent and FSG with the lowest score at 4.3 percent. The SHS/ Vocational/Technical educational level group had the highest number of respondents at 64.9 percent (of the educational level group) and like the Basic/No formal Educational level group, the WFP feature was the most preferred at 39.9 percent, followed by SBT at 18.6 percent. PEC was the third most preferred green park feature at 15.3 percent and the rest of the features scored below 10.0 percent each.

The HND/Post-Secondary educational level group had a similar pattern with that of both the Basic/No formal Educational level group and the SHS/Vocational/Technical educational level group with the highest preferred green park feature being WFP at 36.4 percent, followed by SBT at 22.7 percent. The rest of the HND/Post-Secondary educational level group preferences were fairly distributed among TFC (at 4.5 percent), FAS (at 13.7 percent), OP (at 4.5 percent), PEC (at 9.1 percent) and FSG (at 9.1 percent) features. The Bachelor/Post Graduate educational level group had only 8 (2.8 percent of the) respondents of the educational level group and most of them preferred WFP (37.5 per cent), followed by PEC at 25.0 percent. The group did not show interest at all in FAS and FSG but recorded a score of 12.5 percent each for SBT, TFC and OP.

Green park features preferences by employment and marital statuses

Out of the 282 respondents, 137, representing 48.6 percent were employed whereas the remaining 145 (51.4 percent) were unemployed. In a declining order, the most preferred green park features of the unemployed were WFP (38.7 percent), SBT (18.2 percent), PEC (17.5 percent) and TFC (11.7 percent). The rest of the scores in this category were below 10.0 percent. Following a similar pattern, the most preferred features of the employed group were WFP at 40.0 percent, followed by SBT at 21.4 percent and then by PEC at 11.7 percent. Thus, the patterns for both the unemployed and the employed were very similar, except that the unemployed preference for FAS came fourth instead of sixth for the employed. In the study, 43 (15.2 per cent) respondents were married whereas the majority, 239 (84.8 percent) respondents were not married. This percentage of the unmarried respondents (84.8 percent) in the study area (Manhyia) was proportionally larger compared to that (unmarried people) of total population of Kumasi metropolis which stands at 49.2 percent (GSS, 2014). Among the married, 53.5 percent preferred WFP features, and 11.6 percent each preferred SBT, PEC and TFC. Only 7.0 percent and 4.7 percent preferred FAS and OP respectively. The five most preferred green park features of the unmarried in descending order were WFP (36.8 percent), SBT (21.4 percent), PEC (15.1 percent), TFC (7.5 percent) and FAS (7.5 percent). The similarities between the choices of the married and unmarried were striking.

CONCLUSION

The study pivoted on users' perception of the

relevance of green parks and the kinds of green park features which would satisfy their park needs. It revealed that the respondents have a high perception of the relevance of green parks and the three most important park features identified were the presence of Water/ Fountains/Ponds (WFP), Serene atmosphere with Benches under Trees (SBT), and Play Equipment for Children (PEC). Hence, the incorporation of these three green park features in green parks in Kumasi will most likely be the main determinants for park visitation. Thus, the decision concerning which green park features to be included in the design should not be left to the discretion of only the designers.

From the study, the effective integration of desired features of potential park users into park design is very important and authorities must take this into account in green park development. Further, different populations or cultures have varied socio-economic backgrounds and these differences can be said, on the basis of this study, to influence the type of preferred green park features of each group of users. This study postulates that green parks when created must be tailored to meet the needs of various cultures and user groups. This can be achieved when the needs are identified and incorporated.

FURTHER RESEARCH

Studies of the relevance and preferred features of green parks for children and adolescence (under 20 years) in Kumasi will indicate if their opinions are significantly different from those found above, since they were not included in this study. Studies have revealed that adults perceive the presence of teenagers in outdoor recreational centres such as green parks as a nuisance since teenagers are perceived as always causing trouble (Tucker and Matthew, 2001). Consequently, the study at Manhyia, Kumasi left out inhabitants in this age brackets. It is hope that children and teenagers in Kumasi will be treated as a special case in subsequent studies.

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