Open Spaces and Human Interaction

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Abstract

There are various studies on how open spaces provide a positive reaction to human. Apparently, in relation to open spaces, Malaysia has received very little attention from researchers. The objective of this paper is to provide valuable insights into how human interact with outdoor urban environments. The analysis in this study will address human-human interaction and human-nature interaction in the open spaces at Taman Tasik Shah Alam in Selangor, Malaysia. The findings of this study will show the main domains of interaction towards open spaces together with the perceived benefits to the open spaces users.

Keywords: Open Spaces; Physical Health, Outdoor Urban Environment; Human Interaction

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1.0 Introduction

Open spaces can be seen as among vital social infrastructure that is required in any housing development. It plays an important role in improving environmental ecosystem (Marzukhi, Karim, & Latfi, 2012). The major function of open space is to satisfy people's recreational need (Chiesura, 2004).Arifin (2005) claimed that open spaces with its plant represents as a green open space that act as production for the oxygen, controlling the surrounding ecosystem and controlling the soil water. Moreover, open spaces also take the role as a buffer towards sounds, wind, dust and the sun. But the truth is the designer will plan the open spaces based on real or perceived notions of recreation needs. The three important devices according to Philips (1996) in measuring the successfulness of open spaces are good design, proper management and supportive people. Apart from that, open spaces are positive elements of our urban environment and landscape. Properly designed open spaces are an asset to the entire city (Philips, 1996).

According to Federal Department of Town and Country Planning of Peninsular Malaysia (2004) open space means any land whether enclosed or not which is laid out or reserved for laying out wholly or partly as a public garden, park, sports and recreation ground, pleasure ground, walk or as a public place.Chiesura (2004), defined open space as a space that is exposed to the environment or external factors by means of a nature orientated outdoor recreation and trail-related activities and can be divided into two which are public open space and private open space. Public open space is for the public enjoyment whereby the private open space is to fulfil certain group of society.

2. 0 Literature Review

People's relationship with the open spaces is different based on some factors such as socio-economic, gender, type of activities and park facilities. According to Mutiara & Isami, (2012) people's involvement and interaction in the open spaces can enhance the sense of belonging to people and at the same time increase the degree of neighbourhood attachment. According to Matsuoka & Kaplan, (2008), they provide a valuable insights into how human interact with outdoor urban environments, which included open spaces itself. Thus, they come out with major themes that are directly linked to the open spaces that are the human-nature interaction and human-human interaction. As for the human needs, the variables to be measured are social interaction, citizen participation, and a sense of community as shown in Table 1.

Table 1: Theoretical Framework of Human Interaction in Open Spaces (Matsuoka & Kaplan, 2008)

Author	**Nature needs**			**Human needs**			**Primary Data**
	Contact with nature	Aesthetic Preference	Recreation/ play	Social interaction / privacy	Citizen Partici pation	Sense of Community	Quantitative / Qualitative Data

Austin (2004)	●			●		●	Qualitative
Chiesura (2004)	●		●	●	●		Quantitative
Gobster (2001)	●	●	●		●	●	Both
Oguz (2000)	●	●	●	●			Qualitative
Ozguner and Kendle (2006)	●	●		●			Quantitative
Abu-Ghazzeh (1996)	●				●	●	Qualitative
Crow et.al (2006)	●	●	●	●			Quantitative
Dokmeci and Berkoz (2000)	●	●		●			Quantitative
Hull et.al (1994)	●					●	Qualitative
Lucy and Phillips (1997)	●					●	Qualitative
Vogt and Marans (2004)	●	●	●	●			Qualitative
Herrington &Studtman (1998)	●			●			Qualitative
Coles and Bussey (2000)	●			●	●		Both
Simson (2000)	●	●				●	Qualitative
Yuen and Hien (2005)	●	●	●	●			Qualitative

2.1 Issues On Human Interaction

According to Rasidi, Jamirsah, & Said (2012), there is an increasing trend of research regarding on significance of open spaces. The growing scarcity of open space is at concern of local authorities nowadays since there are not much of quality open spaces areas left.

Malaysia is developing towards' urban and suburban landscapes, hence maintaining quality of open spaces needs a vital attention in ensuring open spaces are fully utilized, and the users are interact towards the nature or human (Rasidi et al., 2012). Issues investigated concern the human interaction for open spaces, the emotional component involved in their experienced of nature and the benefits perceived.

3.0 Methodology

3.1 Variables Measured

This research explores human interactions in open spaces and the perceived benefits from the interactions towards the area. The unit of analysis is the various range of age group of the open spaces in Shah Alam Lake Garden, Selangor, Malaysia. The approach in dividing the variables into two major categories were for collecting data systematically and to see how daily usage pattern of open spaces was related to the interactions (Rasidi et al., 2012).

3.2 Methods

A total of 500 of survey questionnaires were distributed within the study area. However, only 427 reliable respondents were taken for further analysis due to the other 73 respondents left the questionnaires blank. Respondents were provided with a survey form with few subsections to determine their level of background, such as gender, income, companionship, mode of transportation to the open spaces, frequency of visits and time spend per visits. The respondents also were asked their main purposes of coming to the open spaces that are can be divided into two sub-sections that are human-nature interaction or human-human interaction.

3.3 Study Area

The selected study area for the study is Shah Alam Lake Garden, which serves as the urban park. It functions as one of the favorite retreat of the residents in the vicinity in the evening and during the weekends. It is a man-made lake with beautiful landscape in the middle of the city center of Shah Alam which can be divided into three sections namely the east, the west and the central. The east section is called Tasik Damai whereby the west section is called Tasik Permai. As for the middle section is called Tasik Indah. The total are for this urban park is 43 hectares with well built raised platform at certain sections of the lake for the users to enjoy the nature and water habitat surrounding the area. There are a number of facilities available includes a water theme park called Wet World Shah Alam, a floating seafood restaurant that serves Malaysian cuisine, children playgrounds, benches and kayak for rent facility. The urban park also hosts numerous events including international events such as the annual International Orchid Exhibition and the International Boat Show.

Figure 1: Panoramic view of Taman Tasik Shah Alam (Section West)

Figure 2: Panoramic view of Taman Tasik Shah Alam (Section East)

Figure 3: View of Activities and Users in Taman Tasik Shah Alam

4.0 Results and Discussions

The data were coded into SPSS software for descriptive statistical analysis. The main focused this analysis is to understand the relationship of human-human interactions and human-nature interactions that occurred in the open spaces area. However, additional attributes such as users' gender, race, age group, and home distance to open spaces were also considered to give additional information about the relationship. Descriptive analysis in Table 2gives a cross-tabulation overview of the number of users by gender involved in activities according to specified days.

Table 2: Descriptive Findings of Personal and Visit Information of the Respondents

Categories	Variable Measured	Descriptive Findings	Gender		N=428	
			Male	Female	All	%
Personal Information	Age Group	13-19 years old	45	26	71	16.6
		20-50 years old	133	198	331	77.3
		50-60 years old	14	8	22	5.1

		60 years and above	0	4	4	.9
	Marital status	Single	139	125	264	61.7
		Married	53	108	161	37.6
		Divorce	0	2	2	.5
	Nearby	Yes	103	77	180	42.1
		No	89	159	248	57.9
	Come from	Home	116	156	272	63.6
		College or school	61	51	112	26.2
		Office	8	15	23	5.4
		Others	7	14	21	4.9
	Range	Less than 1km	29	14	43	10
		1km-2km	26	74	100	23.4
		2km-5km	81	52	133	31.1
		More than 5km	56	96	152	35.5
	Job	Government	24	50	74	17.3
		Private	38	63	101	23.6
		Student	120	102	222	51.9
		Others	10	21	31	7.2
	Race	Malay	173	223	396	92.5
		Chinese	9	4	13	3.0
		Indian	10	7	17	4.0
		Others	0	2	2	.5
Visit Information	Frequency of visits	First time	18	25	43	10
		Once a week	72	145	217	50.7
		Twice a week	57	43	100	23.4
		Three times a week	14	5	19	4.4
		More than three times	31	18	49	11.4
	Day of visits	Weekend	121	160	281	65.7
		Weekdays	14	24	38	8.9
		Both	57	51	108	25.2
	Time of visits	Morning	36	16	52	12.1
		Evening	148	214	362	84.6
		Afternoon	2	0	2	.5
		Night	5	6	11	2.6
	Time spends	5-10 minutes	8	7	15	3.5
		10-30 minutes	101	109	210	49.1
		30 minutes-1hour	59	93	152	35.5
		More than 1 hour	24	27	51	11.9
	Transportation	On foot	54	68	122	28.5
		Public transportation	5	14	19	4.4
		Motorcycle	72	14	86	20.1
		Car	61	140	201	47.0
		Others	0	0	0	0
	Companionship	Alone	44	29	73	17.1
		With partner or friends	114	124	238	55.6

	With family members	33	79	112	26.2

4.1 Purpose of Using Open Spaces

In the survey, the respondents were asked about their purpose of using the open spaces. The questions are divided into two major themes that are human-nature interaction and human-human interaction. The subthemes under human-nature interactions are; contact with nature, aesthetic preference, and recreational purposes. As for the human-human interaction subthemes, it includes social interaction and privacy, citizen participation, and community events. The result can be seen in Table 3.

Table 3: Overall Percentage of Respondents' Purposes to Taman Tasik Shah Alam

	Human-Nature Interaction			**Human-Human Interaction**		
	Contact with nature	Aesthetic Preference	Recreational Purposes	Social Interaction	Citizen Participation	Community Events
Yes	274	90	305	193	34	39
Percentage	64.0	21.0	71.3	45.1	7.9	9.1
No	154	338	123	235	394	389
Percentage	36.0	79.0	28.7	54.9	92.1	90.9
Total	428	428	428	428	428	428
Total Percentage	100	100	100	100	100	100

Thus, in Table 3, it can be seen that the highest percentage of respondents coming to Taman Tasik Shah Alam is for the recreational purposes (71.3%) with the total number of 305 people. It is followed by contact with nature (64%) with the total number of 274 respondents, social interaction (45.1%) with total respondents of 193, aesthetic preference (21%) with 90 respondents, community events (9.1%) with 39 respondents and lastly, citizen participation (7.9%) with the total number of respondents 34.

4.2 Satisfaction Level of Interactions in Relation to Open Spaces

The respondents were asked to rate their level of satisfaction with the human-nature interaction and human-human interaction. The subthemes were then divided into several topics such as the design of the open spaces, the natural and physical elements of the open spaces, the ability to pursue the interaction required, the sense of calmness and happiness in the open spaces, the appreciation of the open spaces towards the level of interactions and the overall satisfaction level of interactions that respondents experienced in the open spaces. Table 4 shows a summary of overall satisfaction level of respondents.

Table 4: Overall Satisfactory Level of Interactions by Respondents

	Human-Nature Interaction						Human-Human Interaction					
	Contact with Nature		Aesthetic Preference		Recreation/ Play		Social Interaction/ Privacy		Citizen Participation		Sense of Community	
Frequency (n) Percentage	(n)	%	(n)	%	(n)	%	(n)	%	(n)	%	(n)	%
Not Available	7	1.6	10	2.3	4	.9	5	1.2	5	1.2	3	.7
Strongly Disagree	1	.2	5	1.2	5	1.2	5	1.2	4	.9	6	1.4
Disagree	11	2.6	5	1.2	7	1.6	10	2.3	22	5.1	41	9.6
Moderate	137	32.0	129	30.1	118	27.6	168	39.3	206	48.1	198	46.3
Agree	217	50.7	234	54.7	247	57.7	182	42.5	145	33.9	142	33.2
Strongly agree	55	12.9	45	10.5	47	11.0	58	13.6	46	10.7	38	8.9
Total	**428**	**100**	**428**	**100**	**428**	**100**	**428**	**100**	**428**	**100**	**428**	**100**
Mean	**3.6846**		**3.6519**		**3.7290**		**3.6145**		**3.4486**		**3.3645**	

Table 4 shows the overall satisfactory level of interactions by respondents can be seen as at the satisfied level. The highest satisfactory levels is for recreational and play with the total mean of 3.7290, whereby followed with contact with nature (3.6846), aesthetic preference (3.6519), social interaction and privacy (3.6145), citizen participation (3.4486) and lastly sense of community with the total mean of 3.3645.

4.3 Perceived Benefits of Interactions in Open Spaces

In this section, the respondents were asked to rate their level of perceived benefits and opinion toward Taman Tasik Shah Alam. The respondents are rated through their level of unity with nature, the unity with themselves, and sense of freedom, recreational satisfaction, adventure, and happiness. The respondent was also asked on the vitality of open spaces as part of the city sustainability. Table 5 shows the satisfactory level of perceived benefits by respondents.

In Table 5, the respondents were asked for their perceived benefits of open spaces to their daily activities. Majority of the respondents agreed that the open spaces can bring them happiness with the total mean of 3.7290. They also agreed that the open spaces provide them a sense of freedom with the total mean score of 3.6682. It is followed by the needs of recreational satisfaction (3.5514), unity with self (3.5304), unity with nature (3.4626) and lastly the sense of adventure (3.3154). The respondents were also asked the question on the vitality of open spaces as part of the city sustainability, and they respond with the highest score of mean 3.8341.

Table 5: Satisfactory Level of Perceived Benefits by Respondents

	Perceived Benefits and Opinion													
	Unity with Nature		**Unity with self**		**Freedom**		**Recreational Satisfaction**		**Adventure**		**Happiness**		**Vitality of Open Spaces**	
Frequency (n) Percentage	(n)	%	(n)	%	(n)	%	(n)	%	(n)	%	(n)	%	(n)	%
Not Available	5	1.2	6	1.4	4	.9	5	1.2	4	.9	4	.9	7	1.6
Strongly Disagree	6	1.4	2	.5	0	0	6	1.4	13	3.0	6	1.4	4	.9
Disagree	22	5.1	15	3.5	12	2.8	31	7.2	65	15.2	9	2.1	4	.9
Moderate	188	43.9	180	42.1	159	37.1	146	34.1	150	35.0	142	33.2	117	27.3
Agree	167	39.0	186	43.5	196	45.8	186	43.5	154	36.0	189	44.2	202	47.2
Strongly agree	40	9.3	39	9.1	57	13.3	54	12.6	42	9.8	78	18.2	94	22.0
Total	**428**	**100**	**428**	**100**	**428**	**100**	**428**	**100**	**428**	**100**	**428**	**100**	**428**	**100**
Mean	**3.4626**		**3.5304**		**3.6682**		**3.5514**		**3.3154**		**3.7290**		**3.8341**	

5.0 Conclusion

In conclusion, this study has shown that the open space is vital to the city sustainability. Human interactions are important in relation to the open spaces as both elements respond well to each other. The interactions not only benefited the human but at the same time positively effects natural ecosystem as both elements correlate with each other. This study also has shown that the nature and human interactions needs elements of open spaces such as the green spaces, water elements, physical attributes to enhance the interactions between human-human and human-nature.

Hence, further recommendations are recommended for ensuring the city sustainability especially in terms of human-nature and human-human interaction.As for human-nature interactions, among the aspect such as ecological and biological diversity should be taken into consideration as forest has lost its identity due to development of new cities. For human-human interaction, a lot of aspects for further recommendation of the study can be enhanced in terms of psychological benefits and human wellness.

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