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Human Interaction in Open Spaces

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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.

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Keywords: Open spaces; physical health; outdoor urban environment; human interaction

1. 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. In the other way, the purpose of an open space is to

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allocate space for the city dwellers for a natural setting enjoyment ranging from low-activity leisure to a mire high-activity recreation. 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), define open space normally as a space that is exposed to the environment or external factors by means of a nature orientated outdoor recreation and trail-related activities. It normally 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.

Thus, open space can be defined as an area where it has certain function and intention that is usually for the purpose of recreational activities. Open space normally is bounded by the element of natural either in fully or semi-bounded way whereby recreation is an activity done by people without any force of anyone (voluntarily) which then aim for self-satisfaction and done during their own free time (Shuib, 2008:4). Examples of recreational activities are cycling, jogging and playing badminton. Furthermore in the Islamic context, recreation is very much emphasised as it contributes a great deal to life satisfaction, quality of life, health and wellness.

2. 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. Hence, 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. Under the nature needs, there are three variables that can be measured which are, contact with nature, aesthetic preference, and recreation or play. 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 Participation	Sense of Community	
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

3. Issues on human interaction

According to Rasidi, Jamirsah, & Said (2012), there is an increasing trend of research regarding on significance of open spaces. The development of recent decades resulting in the loss of forest, farm, forest fringe and other open space lands that somehow contributes to urban residents' quality of life. The growing scarcity of open space is at concern of local authorities nowadays since there are not much of quality open spaces areas left.

Concurrently, 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). Hence, several questions to be raised in this paper are; Why do people need open spaces? What are the interactions do they get from visiting open spaces? And what are the benefits they get and do these benefits really affect their quality of life? These are the main research questions that will be addressed by this paper. Issues investigated concern the human interaction for open spaces, the emotional component involved in their experienced of nature and the benefits perceived. Results from a survey questionnaire conducted at the Shah Alam Lake Garden, Selangor will then be presented in this paper.

4. Research methodology

4.1. Variables measured

This research explores human interactions in open spaces and the perceived benefits from the interactions towards the area. The design of the spatial configuration could serve as a platform for human-nature interaction or human-human interaction. In order to comprehend design qualities that encourages interactions, it is recommended to measure the open spaces properties (i.e green quality, green setting, accessibility, facilities and amenities) and interactions (human-nature interaction and human-human interaction) of the open space through documented responses. The unit of analysis is the various range of age group of the open spaces in Shah Alam Lake Garden, Selangor. 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).

4.2. Methods

A total of 500 of survey questionnaires were distributed within the Shah Alam Lake Garden, Selangor. However, only 427 reliable respondents were taken for further analysis due to the other 73 respondents left the questionnaires blank. The unanswered can be considered as incomprehensible, undecided, and ignored.

In this survey, 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. Apart from that, 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.

4.3. Study area

The selected study area for the study is Shah Alam Lake Garden, Selangor Darul Ehsan, Malaysia. Shah Alam Lake Garden serves the area as the urban park of Shah Alam. 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. Taman Tasik Shah Alam or Shah Alam Lake Garden 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. All of the three sections are surrounded by beautiful gardens that are ideal for family outing and picnic. 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 that are available within the vicinity of the lake that could cater for both young and old. It 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.



Fig. 1. Panoramic view of Taman Tasik Shah Alam (Section West).

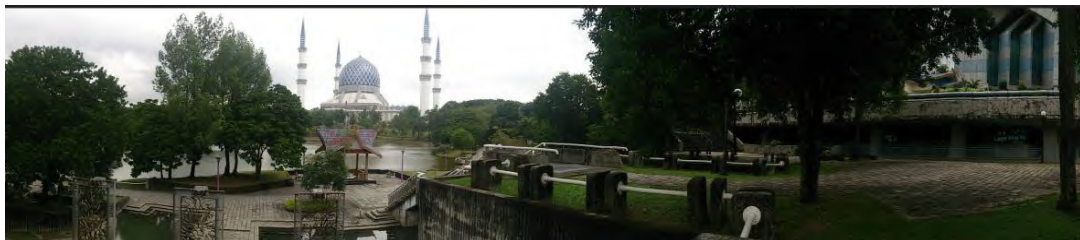


Fig. 2. Panoramic view of Taman Tasik Shah Alam (Section East).



Fig. 3. View of activities and users in Taman Tasik Shah Alam.

5. Results and findings

The data from survey questionnaires were coded into SPSS software for descriptive statistical analysis, e.g., the production of cross-tabulation and correlation 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 2 gives a cross-tabulation overview of the number of users by gender involved in activities according to specified days for Shah Alam Lake Garden.

Table 2. Descriptive Findings of Personal and Visit Information of the Respondents in Taman Tasik Shah Alam.

Categories	Variable Measured	Descriptive Findings				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	
	Marital status	60 years and above	0	4	4	.9	
		Single	139	125	264	61.7	
		Married	53	108	161	37.6	
	Nearby	Divorce	0	2	2	.5	
		Yes	103	77	180	42.1	
	Come from	No	89	159	248	57.9	
		Home	116	156	272	63.6	
		College or school	61	51	112	26.2	
		Office	8	15	23	5.4	
	Range	Others	7	14	21	4.9	
		Less than 1km	29	14	43	10	
		1km-2km	26	74	100	23.4	
	Job	2km-5km	81	52	133	31.1	
		More than 5km	56	96	152	35.5	
		Government	24	50	74	17.3	
		Private	38	63	101	23.6	
	Race	Student	120	102	222	51.9	
Others		10	21	31	7.2		
Malay		173	223	396	92.5		
Chinese		9	4	13	3.0		
Indian		10	7	17	4.0		
Visit Information	Frequency of visits	Others	0	2	2	.5	
		First time	18	25	43	10	
		Once a week	72	145	217	50.7	
		Twice a week	57	43	100	23.4	
	Day of visits	Three times a week	14	5	19	4.4	
		More than three times	31	18	49	11.4	
		Weekend	121	160	281	65.7	
	Time of visits	Weekdays	14	24	38	8.9	
		Both	57	51	108	25.2	
		Morning	36	16	52	12.1	
	Time spends	Evening	148	214	362	84.6	
		Afternoon	2	0	2	.5	
		Night	5	6	11	2.6	
		5-10 minutes	8	7	15	3.5	
	Transportation	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	
		On foot	54	68	122	28.5	
	Companionship	Public transportation	5	14	19	4.4	
		Motorcycle	72	14	86	20.1	
Car		61	140	201	47.0		
Others		0	0	0	0		
Alone		44	29	73	17.1		
	With partner or friends	114	124	238	55.6		
	With family members	33	79	112	26.2		

5.1. 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 respondent 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.

5.2. Satisfaction level of interactions in relation to open spaces

In this survey, 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. In Table 4 shows a summary of overall satisfaction level of respondents towards the interaction in the Taman Tasik Shah Alam.

Table 4. Overall satisfactory level of interactions by respondents in Taman Tasik Shah Alam.

	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	

Hence, as shown in Table 4, the overall satisfactory level of interactions by respondents in Taman Tasik Shah Alam 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.

5.3. 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, 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. Hence, in Table 5 shows the satisfactory level of perceived benefits by respondents in Taman Tasik Shah Alam.

Table 5. Satisfactory level of perceived benefits by respondents in Taman Tasik Shah Alam.

Frequency (n) Percentage	Unity with Nature		Unity with self		Freedom		Recreational Satisfaction		Adventure		Happiness		Vitality of Open Spaces	
	(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	

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.

6. Conclusions

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 benefits the human but at the same time positively effects natural ecosystem as both elements correlate with each other. Apart from that, this study 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 in this study 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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