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URBAN PARK AND PHYSICAL ACTIVITIES AMONG RESIDENTS IN KLANG VALLEY

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Abstract:

Urban park is a green space that is located in the center of cities which corporate places to offer recreation and green areas to publics. The purpose of research is to investigate the relationship of urban park and physical activities among residents in Klang Valley. This research attempts to study the elements of urban parks in Malaysia, determine the users' acceptance towards urban park and to highlight the relationship between users's satisfactions and use pattern of urban parks. Questionnaires were used to collect the data and they were analyzed by Statistical Packaging for Social Science. Data was collected in these three parks which are Taman Tasik Perdana, Taman Tasik Shah Alam and Taman Bukit Kiara. 19.7% of findings shows that the urban parks were not maintained well in order to serve the publics. For example, tree and turf in the parks were not properly chosen to give comfort to the public. Most of the parks have their own elements to serve the public such as shaded area, open areas, pathway design, facilities, activity zones and others. Findings also indicate that most users were generally satisfied with the facilities provided in the park. By using correlation analysis, it indicates that the satisfaction level of the urban park elements will influence the users' use pattern in the park. This research has been successfully analyzed which elements of parks will determine the users' satisfaction and use pattern in parks. This research can provide useful information for interpreting user patterns, and in particular, when designing and assessing interventions intended to improve the amount and intensity of physical activity.

Keywords: Urban parks; Elements; Satisfaction; User preference; Use Pattern

1.0 INTRODUCTION

Urban Park is known as a public park or is a park in cities which corporate places to offer recreation and green space to residents. Most of the urban parks have their own categories which have been differentiated by their sizes and functional requirements. The design, operation and maintenance are usually done by the government, typically on the local level, but may occasionally be contracted out to private companies. These spaces may act, among others, as leisure, sport and recreational resources, as safe and exciting play areas for children, and as attractive back-drops to urban development (Bullock, 2008). Green spaces may also provide significant psychological benefits as a result of the associated environmental services (Latinopoulos et al., 2016). Deterioration of natural resources value and benefits will give bad influence to the urban lifestyle and urban community. Urban parks, an open green space area can improve the quality of people's lifestyle and enhance the city's environment. Urban park is a place with nature condition that is encompassed by the urban setting. Urban park is not only a place for existing vegetation and environments conservation, it is also a place that gives positive impacts on human's social and psychological (Ward et al., 2010; Othman et al., 2015).

There are two types of parks which are active and passive recreational areas. Active recreational area is a place which has an urban character and requires intensive development. It involves playgrounds, courts and fields, swimming pools and skate parks. Active recreation such as team sports, due to the need to provide substantial space to congregate, typically involves intensive management, maintenance, and high costs. Contradictorily, passive recreation is known as low intensity recreation. Some open space managers provide nothing other than trails for physical activity in the form of walking, running, horse riding, mountain biking, snow shoeing, or cross-country skiing; or sedentary activity such as observing

nature, bird watching, painting, photography, or picnicking. Some users do not go to park due to low maintenance of parks. Parks maintenance requires professionals in handling and maintaining the plants and facilities of the parks. Special attention should be given to trimming trees and shrubs in order to maintain the trees. Regular maintenance will not only prolong the life of the plants but will also prevent overturning of top-heavy plants due to strong winds. However, based on observations, 40% of the respondents agreed that maintenances would give impacts towards the use pattern and numbers of people who go to the parks.

1.2 Problem Statement

Urban park is common in Malaysia. There are a lot of urban parks in the country such as Taman Awam Bukit Kiara, Taman Awam Bukit Lagi and others. So, there are some problems occur in order to conduct and construct the project either before, during or after construction. Usually, high maintenance is the major problem of each park. Most of them were not fully conducted or well conducted due to the maintenances. As we know, the parks need high maintenance in order to take care of the plants, pathways, facilities and others. Regular professional maintenance of the plantings and facilities should be accounted for in budgeting and planning. Special attention should be given to pruning trees and shrubs in order to maintain balance between branching and root growth. Regular maintenance will not only prolong the life of the plants but will also prevent overturning of top-heavy plants due to strong winds.

In addition, normally some of the parks also choose wrong plants to be planted in the parks. Sedum and other succulents are the most pervasive plants used in urban park, and are the only appropriate plants for thin extensive profiles in most cases. Increased medium thickness and supplemental irrigation do allow a greater variety of plants to be used, but cannot fully counteract the unique and extreme conditions experienced on an urban park. Where inappropriate plant selections prevail, the plants must be replaced wholesale (General Service Administration, 2006). Hence, the aim of this paper is to investigate the relationship of urban park and physical activities among residents in Klang Valley.

2.0 LITERATURE REVIEW

2.1 Elements of Urban Parks in Malaysia

2.2.1 Accessibility of Park

The public usually do not have much time to spend in parks in weekdays. The main reason for this is most people are too busy to go to the parks because they are located far from their walking distance or housing area. So, one of the main components of urban green space is accessibility which is used as a measure of a park's ability to provide services, and the distance to a park is considered as an important component of accessibility (Yang et al., 2017). Nicholls and Shafer (2001) evaluated equity and accessibility of local parks by analyzing fixed buffer zones.

Parks provide important recreational services that offer variety of physical, social and psychological benefits for the residents (Wolch et al., 2014; Koohsari et al., 2015). It is difficult to identify the appropriate distance which park services become inaccessible although distance can be used to reflect the area of park that provide services. Studies by Kaczynski et al., (2014) and McCormack et al., (2010) have analysed an understanding of spatial physical factors that influence the park access and use. Normally, natural environment, sense of space and degree of quietness and facilities available for parks will be the factors which can influence the users. Erkip (1997) states that distance to the park is the key factor in determining park accessibility.

2.2.2 Features of the Parks

Ding et al. (2011) stated that walking in the parks is considered as leisure walking but it also can be considered as effective walking. As for that, leisure walking by the elderly is based on the pathways. That is why the design characteristics of pathways is important to facilitate people. The design characteristic is

based on the three level concepts which are pathway attributes, pathway surroundings and pathway connection with activity zones. Features of the pathways itself within or along its boundary is normally called as pathways attributes. Pathways attributes are the things that are usually seen in the parks like the pavements, width and the presence of benches. Besides, pathways surrounding are the surrounding environments of the parks, covering spatial and visual dimensions such as the degree of enclosure connections with water of parks. Furthermore, pathway connection is the connection of pathways segments which users can direct towards the activity zones.

Besides, locations are important to encourage useful walking for people (Handy, 1996). Accordingly, locations refer to the zones that people can engage with activities. For example, elder people will engage in group of aerobics, dancing and wushu. Physical activity has positively associated with more specific higher number of facilities in urban parks (Lindberg & Schipperijn, 2015). Facilities that provide opportunity for games and physical activity are more attractive and being used compared to facilities directed at individual training fitness. By doing physical activities, opportunity of socializing and playing will act as important to the users.

According to Lindberg and Schipperijn (2015) impacts of using the facilities could be influenced by the facilities arrangements which need to be arranged close to each other as well as the design and quality of the facilities. The number of users depend on the facilities used for physical activity. Normally, facilities that provide opportunities for play activities such as multiple courts, fields, swings, climbing frame and skate park will be more useful rather than physical activities that focus on individual training of fitness such as fitness equipment, gymnastics and boxing ring (Lindberg & Schipperijn, 2015).

2.3 Users' Acceptance towards Urban Park in Malaysia

2.3.1 Users' Characteristic

The risk of many chronic diseases can be reduced by participating physical activities which provide mental and physical health benefits (Owen et al., 2004). Evidence on the influence of the built environment on physical activity behaviour is beginning to accumulate. Built environment can enable and limit physical activity participation. To be specific, neighbourhood park characteristics need to include proximity and mix of land uses, pedestrian connectivity, aesthetics and interesting scenery and safety of users because they are important in correlating physical activity (Wendel-Vos et al., 2007; McCormack et al., 2004). However, some types of park facilities need to support the type of behaviours among different segment of people (Edwards et al., 2015). The recreational facilities and amenities will influence the physical activities of the population (Kaczynski et al., 2008)

According to Cohen et al. (2012), elements of urban parks such as playgrounds, basketball courts, walking and jogging path, bicycle lanes, swimming areas, lighting, shade and drinking fountains would be important in encouraging users to have their physical activity in the parks. Nevertheless, Edwards et al. (2015) states that quality of parks and open space need to be considered. As an example, the urban parks size, the presence of sport fields, trails, paths, and sidewalks, are the provided facilities which may stimulate the park use and physical activity of users. However, no users would go to urban parks which have presence of litter with dirty washrooms and vandalism (Gobster, 2002). Issues that will be influencing the usage of parks are lack of maintenance. Cleanliness within parks was regularly identified for playing surfaces which may be important to adults and children.

2.3.2 Social and Physical Environments

Social and physical environments are one of the ways that influence the park use and park based physical activity. The influence direction can be either negative or positive. As an example, one of the studies had identified that organized celebrations or festivals in urban parks may bring people from divergent backgrounds, and will encourage people to use the park more useful (Gill & Simeoni, 1995). Women and girls think that this will create opportunities for them to socialize in a safe and supportive social environment. Normally, girls will meet their friends at the parks that facilitate both active and passive

leisure quests. For adolescents, this is the opportunity to socialize in the park independent of adults an important contributor to the park usage, even though where the physical environments within the parks was less supportive of park activity such as no playing equipment, patchy grass and narrow pathways (Veitch et al., 2007).

2.4 Relationship between Public Users and Use Pattern of Urban Parks

There is a continuous growth in the frequency of people doing outdoor recreational activities. In 1994-1995, most of the U.S population were reported to have participated more activities over the year. 68% of the respondents were reported to do trail or street activities such as cycling, while 22% of the population participated in individual sports. As observed, the park users come in many forms such as alone, family or groups. There were 7% to 21% who came in groups were active leisure devoted. Other studies also stated that walking was the most frequent activity followed by more inactive activity such as sightseeing, family gatherings, appreciation of green natures and others. A study done in San Diego found that 15% of the respondents resulted using parks where 21% were active users which have more sessions of energetic activity per week. In addition, 11% of the respondents in inactive groups with either once or no sessions activity per week. Urban parks by adolescent boys were important towards positive correlate of physical activity (Hoefler et al., 2001; Sallis et al., 1990).

3.0 METHODOLOGY

For this research, the researcher has used one type of primary data which is quantitative method. For the quantitative method, the questionnaire was used as an instrument in this research. The advantage of using questionnaire was it is an entirely standardized measuring instrument because the questions constantly revealed exactly in the same way to all respondents. For the questionnaire, question in the form is distributed to the public users of urban parks. 200 respondents were chosen randomly to answer the questionnaire. The respondents were among those who came to the parks while the questionnaires were distributed. The distribution of the questionnaires began in February 2018 to March 2018. Three case study were chosen in Klang Valley. They are Taman Tasik Perdana, Taman Tasik Shah Alam and Taman Bukit Kiara. In order to achieve the objectives of the study, the questionnaire must be designed and prepared effectively in order to achieve the desired objectives set up earlier.

4.0 ANALYSIS AND FINDINGS

4.1 Analysis of Elements of Urban Parks

Table 1 indicates the percentage for elements of urban parks that catered users in each park.

Table 1 Elements of Urban Parks

Elements	Taman Tasik Perdana		Taman Tasik Shah Alam		Taman Bukit Kiara	
	Yes	No	Yes	No	Yes	No
Accessibility of parks	46.0%	0	28.1%	0	25.9%	0
Located within neighbouring areas	33.7% ⁰	5.8%	26.0%	0	34.6%	0
Good pathway	50.7%	0	22.1%	0	26.5%	2.7%
Man-made features; benches	44.6%	0	26.4%	0	26.4%	2.5%
Shaded areas	41.2%	0.8%	30.5%	0	26.0%	1.5%
Open areas	45.9%	0	27.1%	0	26.3%	0.8%
Activity zones	45.5%	0.7%	27.3%	0	26.6%	0

Table 1 indicates the percentage for elements of urban parks in each park. Based on the study, the respondents have identified that Taman Tasik Perdana is the most accessible compared to Taman Bukit Kiara. It is because the location of Taman Tasik Perdana is near to the city center of Kuala Lumpur. It has many roads that are attached to the parks which allows easy access among the users. In addition, Taman Bukit Kiara is the nearest park that is located among the neighbourhood. That is the reason why it is not easy for the users to go there. Taman Bukit Kiara is normally catered for the neighbourhood around them such as Taman Tun Dr Ismail, Taman Bukit Kiara, Taman Bukit Damansara and Taman Sri Hartamas neighbourhood. However, there were some people who were not from those neighbourhoods travel several minutes to the parks. Furthermore, half of Taman Tasik Perdana respondents agreed that the park provides good pathways for the users. However, respondents from Taman Tasik Shah Alam responded that Taman Tasik Shah Alam has lousy pathway which not meet their requirements. So, Taman Tasik Shah Alam needs to improve more in replacing or renovating their pathways. Widening or refurbishing the pathways would give satisfaction towards their users. Based on the respondents' observations, Taman Tasik Perdana has provided more man-made features such as benches, playground, lake and others. For Taman Tasik Shah Alam and Taman Bukit Kiara, they need to improve the man-made features since those elements would affect the satisfaction of users. They may be able to increase the number of features to cater all users at any ages. Besides, shaded area and open areas are also one of the requirements for users' satisfaction. Respondents from Taman Tasik Perdana responded that these elements would give them satisfaction. As people know, the shaded area and open area is crucial for the parks. The areas would be used by the users for resting while doing their activities. Some of the parks do not provide activity zones such as courts, wushu and others. According to the respondents, Taman Tasik Perdana has the highest percentage among these three parks for activity zones. This feature would attract more people to come and do their activities.

4.2 Analysis of Users' Acceptance towards Urban Park in Malaysia

Table 2 Satisfaction of User towards Parks in Malaysia.

Elements	Taman Tasik Perdana	Taman Tasik Shah Alam	Taman Bukit Kiara
Strongly Agree	11.7%	8.6%	12.8%
Agree	30.9%	45.7%	59.0%
Neutral	47.9%	32.9%	25.6%
Disagree	8.5%	11.4%	2.6%
Strongly Disagree	1.1%	1.4%	0%

Table 2 indicates the percentage of users' acceptance towards the overall appearance of each park in Malaysia. Based on the finding, 47.9% of Taman Tasik Perdana respondents chose neutral in representing their satisfaction towards overall appearance in that park. However, Taman Tasik Perdana should be improved by adding more elements to increase the users' satisfactions towards the park. Yet, most of Taman Tasik Shah Alam and Taman Bukit Kiara respondents were satisfied with the overall appearance. The satisfaction includes the features and elements of the parks such as providing enough facilities, good pathways width and designs, many shaded and open areas and other elements. Hence, the park management also needs to consider the minority respondents who were not satisfied with the facilities in the parks. So, the parks management should take actions in improving the parks facilities to ensure all of the parks users are satisfied and comfortable.

4.3 Analysis of Relationship between Users' Satisfaction and Use Pattern

Table 3 indicates that the relationship between users' satisfactions would affect the use pattern of the users. Results from the correlation analysis identified several significant relationships among the factors. There is a significant relationship between the satisfaction of the urban park element aspect towards the

public use pattern in the park. The result of the study also indicated that the strength of the relationship urban park elements towards the public use pattern in the park has a low correlation between each item. Hence, it could be summarised that other factors may contribute on the public use pattern in the park such as hobbies, health and others.

Table 3 Relationship between User’s Satisfactions and Use Pattern

		SOA	SM	SOS	SF	SSA	SFM	SS
OL	Pearson	.229**	.203**	.175*	.242**	.261**	.132	.251**
	Correlation	.001	.004	.012	.000	.000	.059	.000
	Sig. (2-tailed)	203	203	204	204	203	204	204
ORA	Pearson	.311**	.303**	.313**	.278**	.298**	.157*	.328**
	Correlation	.000	.000	.000	.000	.000	.025	.000
	Sig. (2-tailed)	203	203	204	204	203	204	204
OC	Pearson	.159*	.232**	.132	.196**	.119	-.012	.199**
	Correlation	.024	.001	.061	.005	.092	.868	.004
	Sig. (2-tailed)	202	202	203	203	202	203	203
OF	Pearson	.117*	.229**	.076	.180*	.188**	.155*	.261**
	Correlation	.098	.001	.283	.010	.008	.028	.000
	Sig. (2-tailed)	200	200	201	201	200	201	201
OP	Pearson	.164*	.195**	.020	.154*	.172*	.037	.260**
	Correlation	.019	.005	.781	.028	.014	.597	.000
	Sig. (2-tailed)	203	203	204	204	203	204	204
OW	Pearson	.294	.149*	.238**	.163*	.318**	.138*	.211**
	Correlation	.000	.034	.001	.020	.000	.050	.002
	Sig. (2-tailed)	203	203	204	204	203	204	204

5.0 CONCLUSION

As a conclusion, it is observed that the elements of parks would affect on the satisfactions of the users. It is crucial to ensure the users of parks are satisfied with the parks. Each attribution of the elements was tested based on the percentage of users’ satisfactions. The users’ use pattern also could be affected by the parks satisfaction. It is crucial to prove that correlations analysis, elements of urban parks explaining in achieving positive to reach user’s satisfactions. Each of the parks element that was observed by the respondents has genuinely positive relationship with the users’ satisfaction. However, each park that was observed needs to improve their features in order to improve the users’ satisfaction towards the parks. In order to develop better parks, majority of the respondents recommended each park to improve their main features to attract more people to do activities in there. Lastly, the elements of urban parks such as playgrounds, basketball courts, walking and jogging path, bicycle lanes, swimming areas, lighting, shade and drinking fountains are important in encouraging users to have their physical activity in the parks (Cohen et al., 2012). Thus, improving them can increase the users’ satisfaction.

REFERENCES

- Cohen, D. A., Han, B., Derose, K. P., Williamson, S., Marsh, T., Rudick, J., & McKenzie, T. L. (2012). Neighborhood poverty, park use, and park-based physical activity in a Southern California city. *Social Science and Medicine*, 75(12), 2317–2325. <https://doi.org/10.1016/j.socscimed.2012.08.036>
- Cordell, H. K., Mcdonald, B. L., Teasley, R. J., Bergstrom, J. C., Martin, J., Bason, J., & Leeworthy, V. R. (1999). Outdoor recreation participation trends. *American Life: A National Assessment of Demand and Supply Trends*, pp. 219–322.
- Edwards, N., Hooper, P., Knuiman, M., Foster, S., & Giles-Corti, B. (2015). Associations between park

- features and adolescent park use for physical activity. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1), 1–10. <https://doi.org/10.1186/s12966-015-0178-4>
- Hoefler, W. R., McKenzie, T. L., Sallis, J. F., Marshall, S. J., & Conway, T. L. (2001). Parental provision of transportation for adolescent physical activity. *American Journal of Preventive Medicine*, 21(1), pp. 48–51.
- Kaczynski, A. T., Besenyi, G. M., Stanis, S. W. A., Koohsari, M. J., Oestman, K. B., Bergstrom, R., Reis, R. S. (2014). Are park proximity and park features related to park use and park-based physical activity among adults? Variations by multiple socio-demographic characteristics. *International Journal of Behavioral Nutrition and Physical Activity*, 11(146), pp.1-12
- Kaczynski, A. T., Potwarka, L. R., & Saelens P, B. E. (2008). Association of park size, distance, and features with physical activity in neighborhood parks. *American Journal of Public Health*, 98(8), pp. 1451–1456.
- Lindberg, M., & Schipperijn, J. (2015). Active use of urban park facilities - Expectations versus reality. *Urban Forestry and Urban Greening*, 14(4), pp. 909-918
- McCormack, G. R., Rock, M., Toohey, A. M., & Hignell, D. (2010). Characteristics of urban parks associated with park use and physical activity: A review of qualitative research. *Health and Place*, 16(4), pp. 712-726
- Owen, N., Humpel, N., Leslie, E., Bauman, A., & Sallis, J. F. (2004). Understanding environmental influences on walking: Review and research agenda. *American Journal of Preventive Medicine*, 27(1), 67–76.
- Sallis, J. F., Hovell, M. F., Hofstetter, C. R., Elder, J. P., Hackley, M., Caspersen, C. J., & Powell, K. E. (1990). Distance between homes and exercise facilities related to frequency of exercise among San Diego residents. *Public Health Reports (Washington, D.C.: 1974)*, 105(2), 179–185. Retrieved from <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1580056&tool=pmcentrez&rendertype=abstract>
- Yang, A. S., Juan, Y. H., Wen, C. Y., & Chang, C. J. (2017). Numerical simulation of cooling effect of vegetation enhancement in a subtropical urban park. *Applied Energy*. *Applied energy*, 192, pp. 178-200