

USES AND PREFERENCE OF RECREATIONAL GREENSPACE BY WOMEN IN KUALA LUMPUR

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ABSTRACT

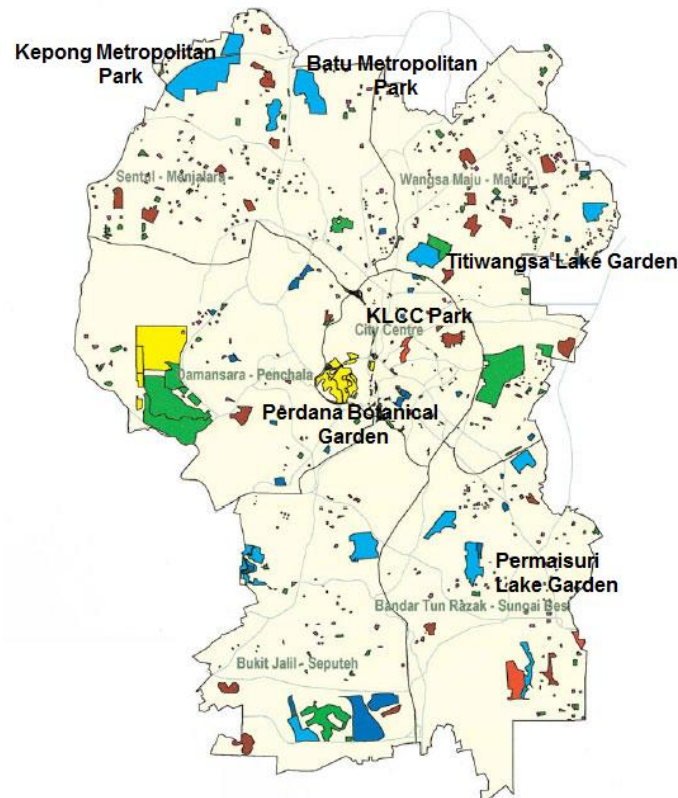
Recreational greenspace benefits many aspects of human health. A large number of studies has found that participation in recreational greenspace brings various benefits such as lowering stress level, encourages more physical activity, opportunities for social interaction, and helps relieve stress and mental fatigue. Surprisingly, recent evidence shows that the effects are particularly significant for women. It infers that women need urban recreational greenspace in their daily lives. Although there are notably significant benefits of recreational greenspace for women, we postulate that women in Malaysia have lack access to greenspace and there are factors that hinder them from frequenting the greenspace in Kuala Lumpur city. To study this, we took a sample of the population of women in several zones in Kuala Lumpur (n=1139). We explore whether how they feel about the greenspace, are they frequenting various greenspace within their neighbourhood and their concern regarding the recreational greenspace. The responses were statistically analysed using the SPSS software. The findings suggest that female respondents in the study zones are deprived of the experience of greenspace due to their limited contact with it, even though they prefer to be in the greenspace. Various concerns about the use of greenspace were highlighted namely on facilities and perceptions related to maintenance, safety and security. These factors may be the hindrances for them to be in contact with the spaces. The effects could lead them to be lack of exercise, poor social relationships and stress, which are known to lead to health problems. The findings found to be useful for evaluating future needs on the city's recreational greenspace that cater activities specifically for female users. Improving recreational greenspace is essential for women that will give many benefits to them.

Keywords: Recreational greenspace; women; uses; preference

INTRODUCTION

Kuala Lumpur is the largest metropolitan areas that become the role model for other small cities in Malaysia. The city can offer a healthy environment to the citizens (Baharuddin, 2010). For example, a recreational greenspace in the city is a green lung, which is priceless that contributes to citizens' health and wellbeing. Recreational greenspace in the study means any green and open space allocated in a city centre and neighbourhood areas. They can be large public parks, gardens, playfield and street landscape. In Kuala Lumpur city, these green spaces can be a city, district, neighbourhood and local parks, and other open spaces such as plazas and pocket spaces. They are situated in various zones such as Kuala Lumpur City Center, Wangsa Maju-Maluri, Sentul-Manjalara, Damansara-Penchala, Bukit Jalil-Seputeh, Bandar Tun Razak-Sungai Besi and Putrajaya, and they come in varying sizes (Refer Figure 1). Large recreational greenspace that is significant in Kuala Lumpur are Perdana Botanical Garden (a city park) and Titiwangsa Lake Garden, Permaisuri Lake Garden, Kepong Metropolitan Park (district parks). These parks are the common grounds and a convenient setting for recreational and leisure activities to various spectra of users. Most importantly, the green areas promote a healthy society by providing spaces for physical, social and leisure activities.

Figure 1: Main recreational greenspace in Kuala Lumpur
(Adapted from: KL Structure Plan 2020, <http://www.dbkl.gov.my/>)



Recreational greenspace is important for women in this country. With this, research reported in the British Medical Journal, The Lancet reported that diabetes in Malaysia is expected to continue to increase at an augmented rate due to the unhealthy lifestyle of Malaysians. As obesity is a major contributing factor to diabetes, the high incidence of diabetics in the country is not a surprising statistic. It is indicated that Malaysia is the most obese country in Asia (43.5%), with an overweight and obesity rate of women is 5% higher compared to 44 percent of men in this country (Mohamed Idris, 2016). Therefore, the recreational greenspace has significant roles in the leisure time of women in a city especially in the metropolitan city of Kuala Lumpur. Since women contributed to the development and socioeconomic of the country regarding workforce and nurturing new generations, their well-being is considered as a prime concern.

According to Health Facts 2017 (Ministry of Health, 2017), the life expectancy at birth for women has only minutely increased over the past three years, from the age of 77 in 2014, 77.1 in 2015 and 77.2 in 2016. The UN Women Annual Report 2016-2017 (UN Women, 2017), emphasises on the need for countries to provide high-quality health services for women that include investing in the necessary infrastructure to support livelihood opportunities. A plethora of studies has made known that recreational greenspace can benefit women. A large number of studies has found that participation in recreational greenspace brings various benefits such as lowering stress level and relief negative emotion. In a study conducted on the effect of green space versus non-green space towards stress levels, researchers have found that view towards the green space can significantly decrease the heart rates of people walking (South et al., 2015).

Recreational greenspace encourages more physical activity, opportunities for social interaction, and help relieve stress and mental fatigue. Surprisingly, recent evidence shows that the effects are particularly significant for women. It infers that women need urban recreational greenspace in their daily lives. Women are the group that needs more exposure to greenspace, based on recent statistics on the increase of non-communicable disease such as people with diabetes among them. Among the activities that they can do to practice a healthy lifestyle in the greenspace are such as being physically active (walking, jogging) and maintain good psychological health (leisure activity and recreation). Furthermore, greenspace facilities for urban residents in Kuala Lumpur are adequately provided by the city council. Sadly, there are limitations for women to use the urban greenspace. For example, there is a lack of activity or types of experience that specifically allocated for women, and this condition induces lack of interest to be in the greenspace. Other barriers are the perception of unsafe environment, which include fear of personal safety and crime, poor design facilities and inadequate maintenance e.g. poorly lit areas and dirty places (Pretty et al., 2007; McCormack, 2010).

The paper presents findings on the use of greenspace and women's preference about the recreational spaces. The frequency of contact and participation of women in a city was analysed. It also identifies factors that hinder them from frequenting the greenspace in Kuala Lumpur city.

LITERATURE REVIEW

Activities in greenspace bring many benefits to users, and these include female users. It is suggested that activities in greenspace by women, usually involve passive activities and nature appreciation (Maruthaveeran, 2017; Maruthaveeran & van den Bosh, 2015). These include activities such as walking, enjoying the scenery with family and children, birdwatching and taking photographs. In the aspect of longevity, a study of Harvard School of Public Health posited that the percentage of women who live in the greenest areas of their neighbourhood is 12% less likely to have died as compared to other women. In addition, they are 34% less likely to die of the respiratory disease. 13% are less likely to die of cancer, 35% lower respiratory disease-related mortality, and 41% lower rate for kidney disease mortality (Horowitz, 2016).

Concerning managing emotional well-being, research also suggests that recreational greenspace should be improved for women because it is a promising intervention, primarily to lower the risk of depression among disadvantaged groups. These groups are such as pregnant women and mothers (McEachan et al., 2016). The study reported that pregnant women who live in within a within 100 metres of green space buffer zone are 18% – 23% less likely to report depressive symptoms than those people who live in the least green area. Hence, the study concluded that higher residential greenness was associated with a reduced likelihood of depressive symptoms. A study by OPENspace research centre at the Universities of Edinburgh and Heriot-Watt found that women who live in the residency with lower greenspace areas show higher overall levels of stress (MedicalXpress, 2013). The result suggests that it may be due partly because of the ability and opportunities to exercise and to socialise are lessened due to lack of parks and other areas with greenery. Hence, the accumulated research emphasises the importance of incorporating trees and other greenery into city planning.

On the other hand, women have many hindrances to frequent green spaces, even though it is located near their homes. It may be due to workload and household chores, particularly women with their own family. Therefore, they have less time to spend on outdoor leisure activities. If there is time, it usually related to family activities such as bringing children to the playground. Thus, this condition lowers their chance to be in recreational green spaces especial for active participation. Other factors for the limitations include fear of crime and not comfortable being in secluded places in the greenspace (Maruthaveeran 2015). In a study on the use of recreational facilities among youth in the Malaysian urban areas, researchers have found that the highest rank facility is the jogging track (Omar et al., 2017). However, the study found that the jogging track is less accessible, less maintained, and less sufficient compared to other recreational facilities such as futsal court and badminton court. Although this particular study was conducted among youth aged 15 to 24 who reside in the People's Housing Programme (*Program Perumahan Rakyat*), their need for a simple recreational infrastructure such as the jogging track that can give them the opportunity to walk and jog reflect the common need for adults like women and families.

METHODS

The study area consists of several zones located in Kuala Lumpur city. They are Kuala Lumpur City Center, Wangsa Maju-Maluri, Sentul-Manjalara, Damansara-Penchala, Bukit Jalil-Seputeh and Bandar Tun Razak-Sungai Besi. There are several major recreational green spaces such as Perdana Botanical Garden, Titiwangsa Lake Garden, Permaisuri Lake Garden, Kepong Metropolitan Park and Batu Metropolitan Park in the respective zone (Refer Figure 1).

The study identifies women's use of greenspace within their neighbourhood and the city, with regards to their preference and barrier of use of the spaces. The respondents consist of women (n=1139) who live in the zones. A convenient sampling method was used to collect the data. It means the respondents were selected based upon a judgment of the researchers about some of their appropriate characteristics as samples for the study. They were surveyed because they are residents who live in Kuala Lumpur city. Self-administered face-to-face survey questionnaire was used to obtain ether response. The respondents were approached in their residential areas and selected recreational parks in the city. The residential areas selected for the survey were areas that are within one to three kilometres to the nearest recreational greenspace. In other words, they are the residents who would most probably visit the recreational greenspace. Respondents who live in Putrajaya and city fringes such as Petaling Jaya who visit parks were also included because they are close to Kuala Lumpur.

The analysis of the data focused on the aspects of the use, the reasons that women like recreational greenspace, the frequency of visits and respondents' concerns on issues pertaining to its usage. Using SPSS as analysing tool, descriptive statistics such as percentage and cross tabulation describe the results of the study.

FINDINGS

RESPONDENTS' CHARACTERISTICS

The respondents in this study consisted of women who live in five areas in Kuala Lumpur, in Putrajaya and visitors of recreational parks who live in the fringe areas of Kuala Lumpur (such as Petaling Jaya, etc.).

Table 1: Characteristics of the respondents

Dimension		Frequency (n=1139)	Percent (%)
Living in	Kuala Lumpur City Center	27	2.4
	Wangsa Maju-Maluri	523	46.0
	Sentul-Manjalara	198	17.4

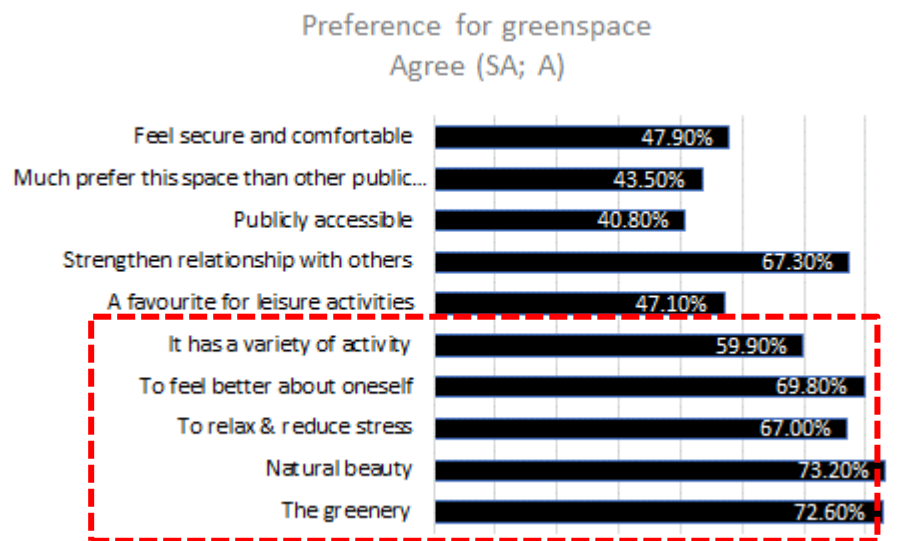
	Damansara-Penchala	116	10.2
	Bukit Jalil-Seputeh	34	3.0
	Bandar Tun Razak-Sungai Besi	100	8.8
	Putrajaya	13	1.1
	Others	126	11.1
Age group	15 - 21 years old	433	38
	22 - 40 years old	650	57.1
	41 - 59 years old	54	4.7
	60 & over years old	2	.2
Educational level	PhD/master	71	6.2
	Degree/diploma/cert	827	72.7
	Secondary education	228	20.1
	Primary education	11	1.0
Occupation	self-employed	39	3.4
	government worker	71	6.2
	private	237	20.8
	student	749	65.8
	homemaker	40	3.5
	retiree	2	.2

The main groups of respondents are women of the age of 15-40 years old (95. %). 65.8% are students, and another large percentage are working in the private sector (20.8%). Cross-tabulation analysis (not shown in the Table) suggests that women of the age of 15-21 years old are most students (n=419), and of the age, 22-40 years old are working in the private sectors (n=212).

PREFERENCE OF GREENSPACE FOR OUTDOOR ACTIVITIES

Figure 2 shows the results of reasons that women like recreational greenspace. The responses were obtained from questionnaire item that asked: 'I would like to go to a public recreational park and greenspace because..'. The question is in Likert-scale format (SA=strongly agree; A=Agree, N=Neutral; D=Disagree, and SD=Strongly disagree). The items that were asked consistS of ten parameters, which include the aspects of physical features of the greenspace and the perception of the quality of the environment. The results show that women wish they could visit greenspace more because of the naturalness of the areas. It can be seen from the agreement that they like the greenery (72.6%), and natural beauty of the place (73.2%). Furthermore, it gives benefits to them emotionally, regarding relax and to reduce stress (67%) and to feel better (69.8%). Other than that, parks and green spaces offer various activities (59.9%). The places also strengthen their relationships with friends and family.

Figure 2: Preference for greenspace



However, other measures such as the feeling of safe, secure and comfortable, preference to be in the space other than other public spaces (e.g. shopping complexes), accessibility/reachability and a favourite place for activities received half of the agreements. The other half of the results indicate that they are unsure or disagree with the statements. It infers that there are specific areas that female users are not satisfied or want improvements.

FREQUENCY OF VISITS TO RECREATIONAL PARKS IN KUALA LUMPUR

Five parks in Kuala Lumpur were analysed in terms of visitation by women. They are Taman Botani Perdana, Taman Tasik Titiwangsa, Taman KLCC, Taman Metropolitan Kepong and Taman Tasik Permaisuri. These parks are the main and well-known parks to users. Some parks are located near to the areas that respondents live, such as residents who live in Kuala Lumpur City Centre get easy access to Taman Botani Perdana, Taman KLCC and Taman Tasik Titiwangsa. Residents from Wangsa-Maju-Maluri and Sentul-Damansara zones are near to Taman Metropolitan Kepong. Residents in Bandar Tun Razak-Sungai Besi zone has easy access to Taman Tasik Permaisuri.

Table 2: Frequenting main recreational parks in Kuala Lumpur

Residency zones		Greenspace in Kuala Lumpur					
	Measure	Taman Botani Perdana	Taman KLCC	Taman Tasik Titiwangsa	Taman Tasik Permaisuri	Taman Metropolitan Kepong	Taman Metropolitan Batu
Kuala Lumpur City Center	often	7.4%	7.4%	3.7%	3.7%	3.7%	3.7%
	sometimes	11.1%	7.4%	22.2%	11.1%	7.4%	3.7%
	seldom	51.9%	77.8%	59.3%	29.6%	48.1%	22.2%
	never	29.6%	7.4%	14.8%	55.6%	40.7%	70.4%
		100%	100%	100%	100%	100%	100%
Wangsa Maju-Maluri	often	1.3%	4.2%	8%	1.5%	5.2%	1.3%
	sometimes	5.6%	18.6%	13.8%	6%	9.8%	4.2%
	seldom	42%	65.3%	60%	24.4%	38.1%	15.5%
	never	51.1%	11.9%	18.2%	68.1%	4.9%	78.9%
		100%	100%	100%	100%	100%	100%
Sentul-Manjalara	often	3%	4%	13.1%	0.5%	10.1%	6.1%
	sometimes	7.1%	12.1%	18.7%	4.5%	14.1%	2.5%
	seldom	36.5%	62.1%	49.5%	26.8%	41.9%	22.2%
	never	53.3%	21.7%	18.7%	68.2%	33.8%	69.2%
		100%	100%	100%	100%	100%	100%
Damansara-Penchala	often	3.4%	3.4%	1.7%	0%	1.7%	0.9%
	sometimes	6%	10.3%	8.6%	1.7%	5.2%	1.7%
	seldom	25%	56.9%	44%	17.2%	16.4%	12.1%
	never	65.5%	29.3%	45.7%	81%	76.7%	85.3%
		100%	100%	100%	100%	100%	100%
Bukit Jalil-Setuteh	often	8.8%	11.8%	17.6%	5.9%	2.9%	2.9%
	sometimes	8.8%	20.6%	8.8%	8.8%	5.9%	2.9%
	seldom	29.4%	50%	44.1%	35.3%	14.7%	8.8%
	never	52.9%	17.6%	45.7%	50%	76.5%	85.3%
		100%	100%	100%	100%	100%	100%
Bandar Tun Razak-Sungai Besi	often	4%	6%	14.1%	33%	4%	2%
	sometimes	8%	10%	11.1%	21%	6%	3%
	seldom	46%	63%	58.6%	29%	17%	12%
	never	42%	21%	16.2%	17%	73%	83%
		100%	100%	100%	100%	100%	100%

The terms ‘often’, ‘sometimes’, ‘seldom’ and ‘never’ were used to identify the frequency of visits by women. ‘Often’ means a visit to the recreational parks one or more time/week. ‘Sometimes’ means frequenting the parks at least one time/month. ‘Seldom’ means at least one time in a three-month period.

Based on the zones that respondents live and frequency of visit to the nearest recreational park, Table 2 shows that in general, women seldom or even never visited the recreational parks near their homes and other parks further from it. We take Taman Botani Perdana as an example –it is one of the oldest and most well-known parks in Kuala Lumpur. However, results suggest that female residents from the five zones of residency seldom or never visited the recreational park. Similarly, a large percentage of female users are either seldom or never visited KLCC park, which is considered easily reachable by transportation network in Kuala Lumpur because it is located in the area of tourist attraction. Residents who live in Sentul-Manjalara zone, which is near to Taman Metropolitan Kepong have also seldom (41.9%) and never (33.8%) visit the park.

The analysis was also carried out to other types of greenspace that are known or reachable to residents such as a park with forest, neighbourhood park and smaller greenspace. Again, the inclination of women to visit the places is low by looking at the percentage of ‘seldom’ and ‘never’ response rates in Table 3.

The findings for both tabulations of the result, when compared to the previous response in Figure 2 (preference) imply that women wish that they could visit greenspace more due to several characteristics that they like. However, the reality is the seldom visited it due to personal constraints and preference.

Table 3: Frequenting different types of greenspace

Types of public space	Measure			
	Often	Sometimes	Seldom	Never
Park with forest	4.1%	10%	45.8%	40.1%
Neighborhood park	16.4%	18.5%	43.1%	22%
Open playfield	14.4%	18.2%	44.7%	22.6%
Children playground	17%	17.8%	45.4%	19.8%
Sidewalks	24.5%	18.6%	37.6%	19.4%

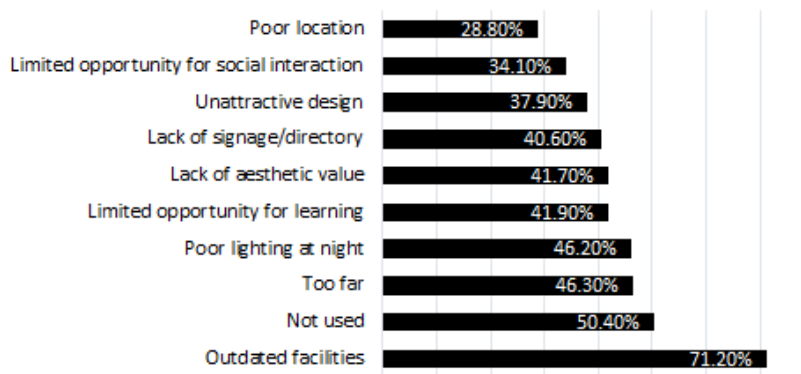
Pocket parks	13.5%	17.4%	43%	26.3%
Plaza	17.8%	27.8%	44.7%	9.8%
Outdoor sport complex	5.3%	11.4%	14.4%	38.8%

WOMEN’S CONCERN ON GREENSPACE

The results in this section are divided into two categories: park facilities and design, and other concerns. Figure 3 shows agreement on several aspects regarding recreational greenspace facilities. Overall, women agree that parks have outdated facilities (71.2%). On the other hand, they mostly disagree that recreational parks are among other not used, too far, lack of aesthetic, unattractive and located in unsuitable areas. It means that recreational greenspace has several right qualities to be frequently visited by them.

Figure 3: Issues on recreational greenspace

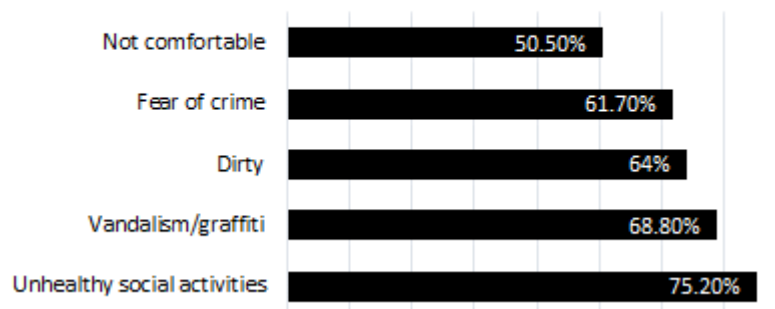
**Greenspace issues - park facilities & design
Agree (SA;A)**



Nonetheless, results in Figure 4 shows negative aspects of the recreational greenspace. It concerns with unhealthy social activities especially by youngsters (75.2%), vandalism/graffiti (68.8%), dirty (64%), fear of crime (61.7%), and not comfortable (50.5%). The negative results are similar to the parameters asked in the previous findings-Figure 2 (on reasons to visit greenspace). The same factors become the concern of the women that hinder them to visit recreational greenspace.

Figure 4: Issues on recreational greenspace

**Greenspace issues-others
Agree (SA;A)**



CONCLUSION

Three types of finding were revealed in the study, i.e. reasons that women like to visit recreational greenspace, their frequency of visitation/use of the recreational greenspace, and concerns pertaining to its usage. Overall, the study implies that women in Kuala Lumpur wish that they could visit the recreational greenspace more because they have many functional characteristics, such as consist nature, have an aesthetic quality and reachable by them. They perceived the recreational greenspace as where they can have contact with nature and fulfil their interaction needs with others.

However, when asked about frequency of visit to the greenspace, the results were the opposite of what they prefer. Most of the responses on visitation to parks such as city and district parks, or even neighbourhood park near the respondents’ homes and other city’s public spaces were not visited as much as expected. A majority of women seldom or even never visited the recreational greenspace, even though many research has proven that it benefits them physically and psychologically. It is partly

due to many constraints that they are facing, such as juggling with work and family commitments that need priority in terms of time management. These constraints have been discussed in many works of literature regarding women use of outdoor spaces and their outdoor recreational behaviour. For example, many researches suggest that women's participation in recreational greenspace are limited due to domestic responsibilities, family and career commitment, physical capability, fear of crime and distance (Minhat, 2014; Abdullah, Nor & Wok, 2008; Aziz, 2008; Lee, 2005; Gunthorpe and Lyons, 2004; Zainun & Zoraini, 1996).

There are some limitations to the results of the study. It only focuses on three aspects of finding hence, a comprehensive information about women's use of greenspace in Kuala Lumpur is limited. The response from residents in the city is depended by their willingness to participate in the survey, and the majority of the respondents were found to incline towards the Malay respondents. Hence, there is lack of information about use of the recreational facilities by women from different ethnicities.

The effects of lack of engagement and contact with the recreational greenspace could lead women in a city to be lack of exercise, developing stress, which is known to lead to health problems. The findings found to be useful for evaluating future needs on the city's recreational greenspace that cater activities specifically for female users. Policy makers and city council need to address the findings that include this greenspace users' needs. For instance, to overcome the constraint of time availability for women to visit parks, sidewalks that connect the housing areas and to the nearby shops, schools and community facilities such as religious facilities and community halls can be better planned and designed as shaded, comfortable, safe and well-connected paths. In this way, recreational activities can be combined with necessary activities. Likewise, the provision of green spaces and comfortable sidewalks at places where women work are crucial in creating opportunities for recreation and leisure to support women to adopt a balanced and healthy lifestyle. With pressures from a fast-paced life and rapid urban development, recreational green spaces need to be better integrated into all types of the built environment, whether for residential, commercial or institutional, to ensure that people of all age, gender and capabilities have equal access to recreation. Improving planning and specific design criteria to provide women in recreational greenspace are crucial, which will offer many benefits to them physically and psychologically.

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