



The Sustainable City: The Characteristic Public Urban Green Space for Enhancing Community Social Sustainability in Baghdad

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Abstract: United Nations propounded the key to sustainable development, including the Environmental health and social well-being of society. In the city planning and development, public urban green open spaces provide opportunities for social and physical activities among the communities, which can contribute to mental and physical health in improving the social well-being of the community. Iraq is currently suffering from poor social activities, as many open spaces and parks are neglected and deficient. Therefore, there is a need to enhance residents' social interaction in public urban green open spaces in order to improve the quality of social fabric in Baghdad City, through the perspective of the sustainable built environment approaches. The aim of this study is to determine the preferred characteristics of pocket parks for enhancing residents' social interaction based on their socio-demographic and investigate the relationship between the availability of quality pocket parks and residents' social interaction in Baghdad City. The study employed by executed the survey to the communities in Karkh district. Respondents (n=306) were selected in a single-random procedure to assess population attitudes towards a pocket park for social and physical activities. The results confirmed that a lack of outdoor daily social interaction in Baghdad City due to the inefficient nearby pocket parks. Thus, there is a need for efficient pocket parks designed to be provided. In this study, the characteristics of efficient pocket park design identified as providing suitable activities and elements, accessibility, well-design, proximity, safety and security, administration and maintenance in the pocket park design. This study contributes to the definitions of pocket parks and nearby open spaces by investigating these spaces' characteristics and benefits towards the social well-being of communities, in achieving the goal of a sustainable community in sustainable city development.

Keywords: Sustainable city, social sustainable, urban green spaces

1. Introduction

Public open space is an open piece of land, allowing people of different generations to seek coherent social relations and socialization (Lipton, 2002). Green open spaces and parks in urban areas can be defined as a piece of land covered by greenery, such as the sports field, park, and other green open spaces of any size (Lipton, 2002, Tzoulas et al., 2007). Public open spaces and parks provide different health, social, and environmental benefits to the cities and communities (Miller, 2007). However, modern life, urbanization, mobility, density, and communication developments

have caused the degradation of urban green space, which led to the demotion of social ties and interaction levels among urban communities (Nezlek et al., 2002, Miller, 2007). Social interaction refers to the bonds of relationship between two or more individuals in the community; it unites and coordinates the communities (Williams, 2006; Adegun, 2018). Although modern technologies are designed for people's interaction, some of these technologies have resulted in increased social isolation of communities (Nezlek et al., 2002; Rasidi et al., 2012). Furthermore, the obvious negligence in public open spaces and nearby parks also reduces the quality of communities and urban areas' lives in many ways, including social interactions (Currie, 2016, Do et al., 2019, Eissa et al., 2019).

Pocket parks and small scale open spaces that are of proximity to people's residence and work provide the settings for well-being, social and ecological interactions (Williams, 2006; Nordh et al., 2009). In recent years, pocket parks have become one of the most recognized small open spaces, designed primarily for people's interaction and well-being. They are small-scale parks of not more than 4000m² and are located within 500m walking distance, which provides social and recreational opportunities for different age groups (Peschardt et al., 2012; Currie, 2016; Abd El-Aziz, 2015). Pocket parks have become necessities and should not be looked upon as mere amenities as they provide the necessary greenery for a small group of people for outdoor activities and relaxation in a green environment (Baur and Tynon, 2010; Peschardt, 2014; Mahmoud and Omar, 2015). Their design approach is an essential characteristic of the strength of a community's social interaction. Design characteristics such as proximity, accessibility, elements, and location also greatly influence the patterns of socialization and use (Williams, 2006, Peschardt et al., 2012; Cohen et al., 2014). The frequency and increased use of these spaces are crucial to creating frequent interactions among different users (Rasidi et al., 2013, Abd El-Aziz, 2015; Gibson and Canfield, 2016). Such pocket spaces are vital to assist in public welfare, encourage social interactions and express modern societal behavioral patterns (Sinou and Kenton, 2013; Salih and Ismail, 2017a). Improving these pocket spaces also contributes to the communities' overall well-being, safety, and public health (Armato, 2017; Kim and Jin, 2018, Salih and Ismail, 2018b). However, location, climate, culture, and community needs have a critical effect on pocket parks' characteristics, which in turn affect users' interactions and activities (Sinou and Kenton, 2013; Salih and Ismail, 2018a). Sociodemographic of pocket parks' uses also play a critical role in their social experiences and preferences to pockets' characteristics (Salih and Ismail, 2018b).

2. Public Urban Green Space in Baghdad

Baghdad City has been a social, cultural and historical centre for different civilizations since its establishment by Abbasid al-Mansur in 766 AD. The city has been characterized by its unique types of green open spaces, such as gardens, small parks, orchards; Baghdad also characterized by cultural and social diversity (Al-Jubouri, 2017; Salih and Ismail, 2017b). From 566 to 1800 AD, Abbasid and Ottoman introduced new methods of recreation by constructing the oldest zoo in 797 during Harun al-Rashid's ruling, horsemanship, golf, ships races, promenade, and so on (Salih and Ismail, 2017a). The early 20th century was synonymous with many types of public parks that appeared as an essential component in Baghdad City, including small nearby parks for daily activities and large public parks and open spaces for festivals and weekend activities (Al-Jubouri, 2017). Consequently, these spaces have contributed to Baghdad's social development by enhancing social and community cohesion. Where the society of Baghdad consisted of people from different backgrounds, religious and ethnic sects. These different backgrounds of people had grown under great social awareness, where they used to utilize public spaces for various social and cultural activities (Al-Jubouri, 2017; Salih and Ismail, 2017b, 2018a).

In the 1950s, Baghdad City consisted of various types of public parks included five large multi-use parks, 21 neighborhood parks, 33 pocket parks, nine playgrounds, dozens of orchards, and a forest of several acres (Al-Jubouri, 2017). However, most of these open spaces and small parks have become dumping sites, water collection areas, are closed, or suffering from the lack of maintenance and management since 2003 (JAU et al., 2011). Many of these open spaces, parks, recreational and community spaces have also been converted into commercial buildings or have been reduced. Since 2003, Baghdad City has suffered from losing social capital (social relationships) and neglecting many vital-buildings and public spaces (Ihsanoglu, 2007). Crisis aggravated between different ethnicities in Iraq, resulting in a decline of interaction between residents (Rydgren and Sofi, 2011). Thus, local citizens of Baghdad tend to shop, work and socialize in their residential neighborhood, where interaction and recreational opportunities are limited (JAU et al., 2011). Moreover, data and studies regarding social life, public open spaces, and pocket parks are few, and there is also a lack of detailed statistics regarding the number and condition of pocket parks available in Baghdad City, which urges a need for further extensive examining (Rikabi and Ali, 2013; Al-Jubouri, 2017). Existing cross-section surveys and empirical studies confirmed that small and pocket parks in the City are limited, out of use, and do not meet people's needs for daily activities (Rikabi and Ali, 2013; Al-Jubouri, 2017; Salih and Ismail, 2017b). Therefore, there is a need to investigate the relationship between availability and design characteristics of pocket parks and the social interaction of Bagdad residents of different sociodemographic. The aim the current study is to determine the preferred characteristics of pocket parks for enhancing residents' social interaction based on their socio-demographic. The study also investigates the relationship between the availability of quality pocket parks and residents' social interaction in Baghdad City.

3. Research Methodology

3.1 Area and Samples of the Study

This study utilized a quantitative survey as basic tools to collect the data from the residents of Baghdad utilizing the recommendation of Creswell and Clark (2017). The questionnaire survey aimed to investigate the attitudes of the Baghdad community toward the availability and characteristics of the nearby pocket parks in enhancing their daily social interaction. Baghdad is the capital of Iraq and located along the Tigris River, which runs through the midpoint of the city, dividing it into two parts; Karkh, the western shore of Tigris, and Rusafa, the eastern coast of Tigris (Salih and Ismail, 2018b). Karkh is a historical district of Baghdad and Iraq. It has the primary resources, public, and educational facilities in the country (Al-Jubouri, 2017); thus, it was selected as the study area. It consists of ten basic sections; its total area is about 2,650 Km². Before 2003, Baghdad consisted of approximately 55 small public parks spread in both Karkh and Rusafa (Al-Jubouri, 2017); however, most of these small public parks were off-limit, closed, or neglected since 2003 (IAU et al., 2011; Salih and Ismail, 2017b).

Therefore, one site of the available pocket parks from each section of the Karkh district was included as a study area. Four of these pockets were the main assembly pocket areas in the Amiriyah, Mansur, Jihad, and Salhiah neighbourhoods. Besides, the Ghazaliya Park from Ghazaliya, Hindawi Park from Saydiya, Yarmouk Local Park from Yarmouk, Ilam Community Park from Dora, Bayaa Pocket Park from Bayaa, and Utaifiyya Community Park from Utaifiyya were also included as a study area representing small pocket parks in each section of Karkh (see Figure 1). Participants of the study were selected randomly from the ten sites and based on the simplified formula of Yamane (1967), as shown below in Equation 1. Where n is the sample size, N is the population size (N = 1,300,000), and e is the level of precision (e = ±5%). According to the Ministry of Planning, the population of Karkh district in 2009 was about 1,300,000 individuals (Ministry of Planning of Iraq, 2009; Salih et al., 2020). Therefore, 306 participants (aged 18 and over) were the final participants in this study after being selected in a single-stage randomly (Creswell and Clark, 2017) from the mentioned sites. About 60 pocket park users refused to participate in the survey, and four did not complete the questionnaire form correctly. The on-site survey was conducted between April and June 2017 during weekdays and weekends in the morning and evening.

$$n = \frac{N}{1 + N(e)^2} = \frac{1300000}{1 + 1300000(0.05)^2} = \pm 300$$

Equation 1. Simplified formula for Proportions (Source: Yamane, 1973)

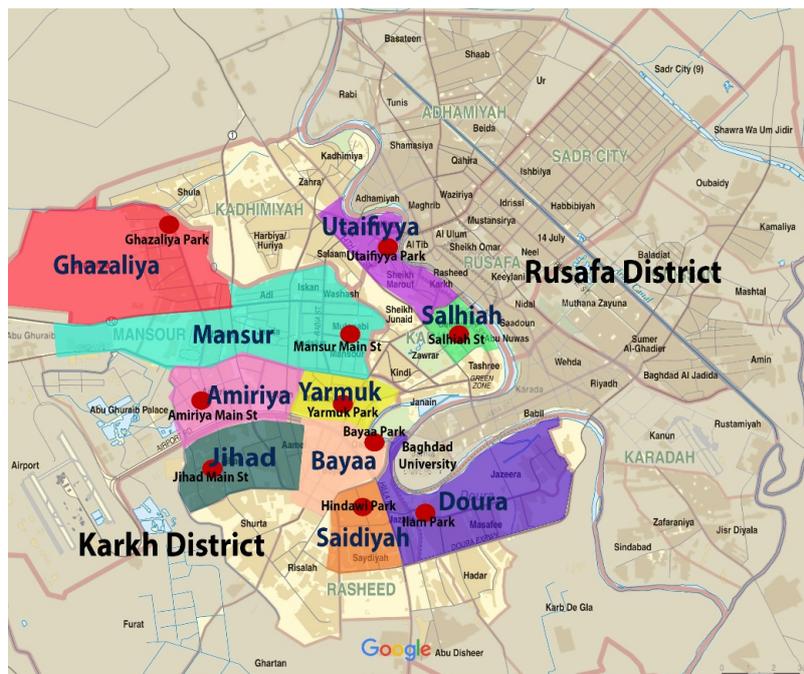


Fig. 1 - Map of the ten selected areas in Karkh, Baghdad (Source: Salih and Ismail, 2018b)

3.2 Design and Procedure of the Study

A questionnaire survey using closed-ended questions was operated in this study. It is a simple and efficient method of obtaining data from a widely scattered sample in a short period (Mathers et al., 2009). Mathers et al. (2009) and Creswell and Clark (2017) recommendations were used to design the closed-ended questions of the current study, which were prepared in both languages of Arabic and English and comprised three pages for each version. A brief definition of the pocket park and the goal of the study were described on the first page of the questionnaire. The questionnaire was then divided into three parts regarding the variables of the study; the first part covered the participants' sociodemographic characteristics (participants variable), encompassing their gender, age group, occupation, and income level. The gender included 1= males and 2= females. The age groups included age ranges 1= 18 to 24, 2= 25 to 31, 3= 32 to 38, 4= 39 to 46, and 5= 47 to 65 years old. The occupation included 1= unemployed, 2= students, and 3= employed. The income level included 1= low-income level ($\leq 1,000,000$ IQD per month), 2= middle-income level (1,000,000-3,000,000 IQD per month), and 3= high-income level ($\geq 3,000,000$ IQD per month). The age groups, occupation status, and income levels were selected according to the previous social studies (Hecke et al., 2018; Salih et al., 2020) and recommendations of Mathers et al. (2009).

The second part of the questionnaire included measuring respondents' social interaction in outdoor pocket spaces (dependent variable) using the statement "Do you practice daily outdoor social activity in nearby open spaces/pocket parks?" The third part of the questionnaire measured the availability of pocket parks in the selected sites (independent variable) using the statement "Is there an efficient pocket park in the neighborhoods where you (participant) live?" A three-point scale was used for first and second statements; value 1= Yes, value 2= No, value 3= don't know (Mathers et al., 2009; Salih and Ismail, 2018b). The last part of the questionnaire included measuring six design characteristics of pocket parks (independent variable). The pocket parks' characteristics were carefully selected from the existing studies (Peschardt and Stigsdotter, 2014; Cohen et al., 2014; Abd El-Aziz, 2015; Gibson and Canfield, 2016; Hecke et al., 2018). The six characteristics included design, elements and activities, accessibility, safety and security, proximity, and administration and maintenance. Accessibility referred to clear and direct access to and in these pockets (Abd El-Aziz, 2015), while proximity referred to providing nearby pockets where people live and socialize. These characteristics were measured using a five-point Likert scale from 1= strongly disagree to 5= strongly agree. Rating and Likert-scales are usually using to measure community attitudes and public approval in survey studies, which vary from two to ten points (Sheatsley, 1983; Joshi et al., 2015). All participants also gave informed consent before applying the survey and related procedure.

3.3 Data Analysis

The data were analysed using Statistical Package for the Social Sciences (SPSS) version 23, an absolute comprehensive statistical computer tool to analyze social studies data (Creswell and Clark, 2017). Descriptive and frequency statistics, including frequency, percentage, mean and standard deviation, were utilized to analyze the participant sociodemographic characteristics (participants' variable), outdoor social interaction (dependent variable), and pocket parks' availability and characteristics (independent variable). In addition, the inferential statistic of one-way ANOVA was used to test the relationship between the pocket parks' availability and characteristics and both outdoor social interaction and sociodemographic characteristics.

3.4 Respondents' Demographic Characteristics

In total, 306 participants were involved in the current survey study. Female participants made up 51.6% of the total sample, while male made up 47.7% of the total sample. Meanwhile, 39.9% of the participants were between 18 and 24 years, while 25.5% were between 25 and 31 years. 16.3% were between 32 and 38 years, 12.4% were between 39 and 46 years, and only 5.9% of them were between 47 and 60 years. For occupation distribution, most of the participants (49.3%) were students, 41.8% were employed, and only 8.8% were unemployed. For income level, most of the participants (78.4%) were middle-income class, 15.7% high-income class, and only 5.9% low-income class.

4. Finding

4.1 Availability of Pocket Parks and Social Interaction in the City of Baghdad

Frequency and multiple comparison analysis were used to measure the availability of people's social interaction and an efficient pocket park in neighborhoods where people lived. Table 1 shows that only 14.7% of the respondents are practicing daily social interaction outdoor in the nearby pocket parks of the Karkh district. In contrast, most of the respondents (81.7%) were not practicing daily social activities in the nearby pocket parks of Karkh district, while there were two missing answers for this statement. For 76.4% of the respondents, a small park in the neighborhood where they live was not available or inefficient. Only 19.3% of the respondents had an efficient small park in the neighborhood where they lived (see Table 1).

Table 1 - Multiple comparisons for the availability of pocket parks and respondents' social interaction

		<i>Availability of efficient small park in the neighborhoods</i>			Total N(%)	Sig.
		Yes N(%)	No N(%)	Don't know N(%)		
Practicing daily social interaction in the pocket parks and nearby open spaces	Yes (N)	41 (13.4%)	3 (0.9%)	1 (0.3%)	45 (14.7%)	0.000**
	No (N)	17 (5.5%)	226 (73.8%)	7 (2.2%)	250 (81.7%)	
	Don't know (N)	1 (0.3%)	5 (1.6%)	3 (0.9%)	9 (2.9%)	
Total		59 (19.3%)	234 (76.4%)	11 (3.6%)	304 (99.3%)	

*P < 0.05. **P < 0.01 using ANOVA Test

One-way ANOVA test used to test the association between respondents' daily social interaction outdoor (dependent variable) and the availability of efficient small (pocket) parks in the neighborhoods where respondents lived (independent variable). One-way ANOVA in Table 1 shows a statistically significant association between respondents' daily social interaction outdoor and the availability of efficient small parks in neighborhoods where they lived ($p=0.000$). The results of multiple comparisons in Table 1 also show that most respondents (73.8%) reported that they did not practice daily outdoor social interaction where they did not have an efficient small park in the neighborhood where they lived. This result indicated that the availability of nearby pocket park is essential to enhance outdoor social interaction.

4.2 Pocket Parks' Characteristics for Social Interaction in Baghdad City

Frequency and descriptive statistics were used to measure the nearby pocket park's preferred characteristics in the City of Baghdad (independent variable). The highest mean score has registered for the elements and activities characteristics (in term of availability of a good quality of softscape and hardscape elements and various types of activities; Mean= 4.01 \pm 0.976), which referred to the value "agree". The frequency in Table 2 shows that most of the respondents (45.1%) agree that elements and activities are an essential characteristic of pocket parks, while only 7.2% of them disagreed with this statement. Followed by mean scores of accessibility (Mean= 4.00 \pm 0.969), design (Mean= 3.94 \pm 0.992), proximity (Mean= 3.92 \pm 0.972), and safety and security (Mean= 3.87 \pm 0.995). Whereby most of the respondents agreed that accessibility (50.0%), design (48.4%), proximity (53.3%) and safety and security (45.4) were essential characteristics of pocket parks design. In contrast, few respondents disagreed that accessibility, design (6.9%), proximity (9.5%) and safety and security (8.8%) were important characteristics of pocket parks design. On the other hand, the mean value of administration and maintenance was 3.83 \pm 1.012, where 43.1% of the respondents agreed that administration and maintenance were an important characteristic, and 13.1% of them disagreed with this statement (Table 2). Overall, the small standard deviation (<1) referred to a low spread of respondents' responses out around the mean (a little amount of variation in the answers). At the same time, the larger standard deviation (≥ 1) referred to a higher amount of variation in the answers.

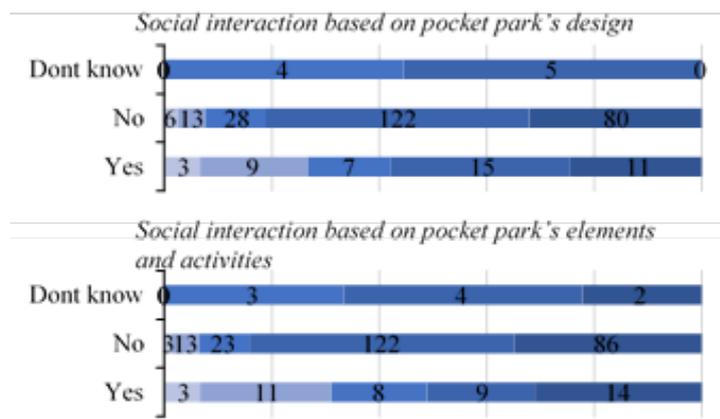
Table 2 - Descriptive statistics for the characteristics of pocket parks in Baghdad City

Characteristic			N (%)	Mean \pm SD	Outdoor SI
<i>Elements and Activities</i>	Valid values	1= strongly disagree	5 (1.6%)	4.01 \pm 0.976	.000**
		2= disagree	22 (7.2%)		
		3= undecided	32 (10.5%)		
		4= agree	138 (45.1%)		
		5= strongly agree	106 (34.6%)		
	Total	303 (99.0%)			
	Missing	3 (1.0%)			
<i>Design</i>	Valid values	1= strongly disagree	7 (2.3%)	3.94 \pm 0.992	.002**
		2= disagree	21 (6.9%)		
		3= undecided	35 (11.4%)		
		4= agree	148 (48.4%)		
		5= strongly agree	94 (30.7%)		
	Total	305 (99.7%)			
	Missing	1 (0.3%)			

<i>Accessibility</i>	Valid values	1= strongly disagree	5	(1.6%)	4.00 ± 0.969	.004**
		2= disagree	21	(6.9%)		
		3= undecided	26	(8.5%)		
		4= agree	153	(50.0%)		
		5= strongly agree	100	(32.7%)		
	Total	305	(99.7%)			
	Missing		1	(0.3%)		
<i>Safety and security</i>	Valid values	1= strongly disagree	4	(1.3%)	3.87 ± 0.995	.000**
		2= disagree	27	(8.8%)		
		3= undecided	47	(15.4%)		
		4= agree	139	(45.4%)		
		5= strongly agree	87	(28.4%)		
	Total	304	(99.3%)			
	Missing		2	(0.7%)		
<i>Proximity</i>	Valid values	1= strongly disagree	5	(1.6%)	3.92 ± 0.972	.000**
		2= disagree	29	(9.5%)		
		3= undecided	22	(7.2%)		
		4= agree	163	(53.3%)		
		5= strongly agree	85	(27.8%)		
	Total	304	(99.3%)			
	Missing		2	(0.7%)		
<i>Administration and Maintenance</i>	Valid values	1= strongly disagree	2	(0.7%)	3.83 ± 1.012	.001**
		2= disagree	40	(13.1%)		
		3= undecided	40	(13.1%)		
		4= agree	132	(43.1%)		
		5= strongly agree	89	(29.1%)		
	Total	303	(99.0%)			
	Missing		3	(1.0%)		

*P < 0.05. **P < 0.01. using ANOVA Test

One-way ANOVA analysis was then used to test the statistically significant differences between the six characteristics of pocket parks (independent variable) and respondents' daily social interaction outdoors (dependent variable). One-way ANOVA test in Table 2 shows that there was a statistically significant difference between the mean scores of the six characteristics of pocket parks and respondents' outdoor social interaction ($p < 0.01$). The results in Figure 2 show that most of the respondents who "strongly agreed" or "agreed" that all the six characteristics are essential for pocket parks design were not practicing daily social interaction outdoors. This result indicates that respondents who suffered from the lack of daily social interaction outdoor tended to strongly agree or agree that the six characteristics of pocket parks are essential for their daily activities.



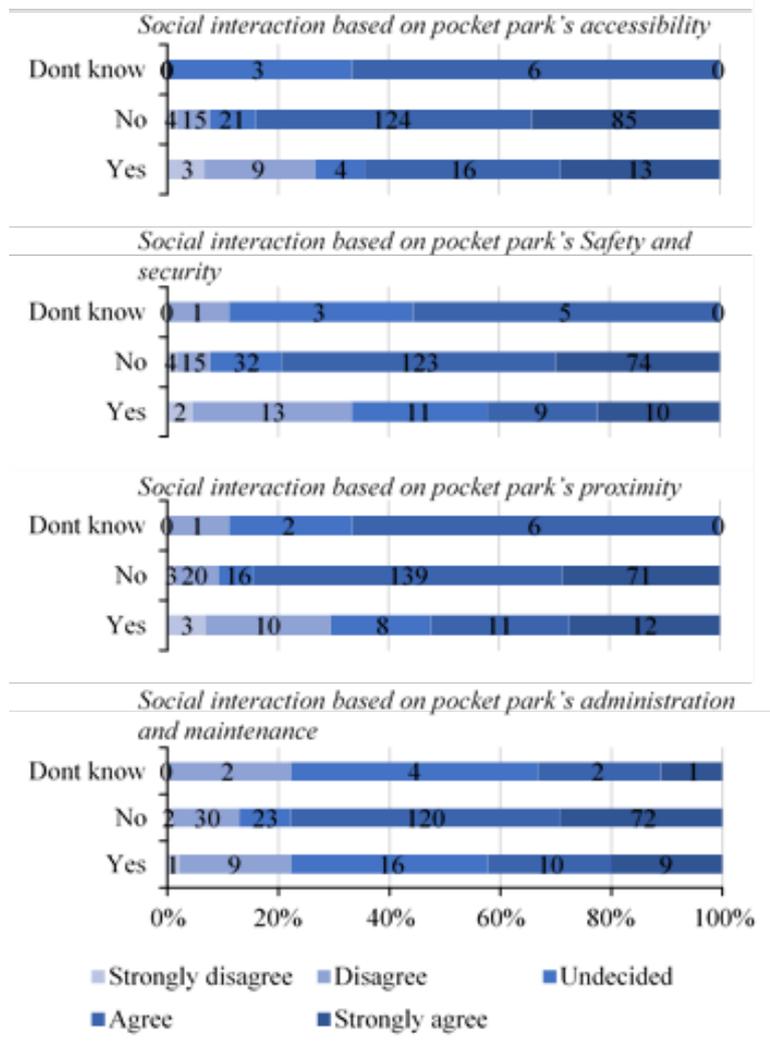


Fig. 2 - Outdoor social interaction based on pocket parks' characteristics

4.3 Pocket Parks' Characteristics based on Demographic Characteristics

One-way ANOVA also used to test the statistically significant differences between the six characteristics of pocket parks (independent variable) and respondents' demographics (participants variable) including, age groups, gender, occupation, and income level. ANOVA analysis showed a significant difference between the mean scores of respondents' gender and characteristics of elements and activities, accessibility, and proximity ($p < 0.05$, see Table 3). This result indicates that respondents of different gender have different opinions on elements and activities, accessibility, and proximity of nearby pocket parks. One-way ANOVA analysis also showed a significant difference between the mean score of respondents' age and design characteristics ($p = 0.003$) and respondents' income level and elements and activities ($p = 0.046$, see Table 3). The result in Figure 3 shows that female respondents have more concern about the pocket parks elements and activities, accessibility, and proximity. Figure 3 also shows that respondents of different age groups have different opinions on the importance of the design factor. In addition, respondents of higher incomes have agreed that elements and activities are essential in pocket parks design. However, there were no other statistically significant differences between the other characteristics of pocket parks and other demographics of respondents.

Table 3 - ANOVA test for significant characteristics of pocket parks based on demographic characteristics

Pocket Parks' Characteristics	Sig.			
	Gender	Age	Occupation	Income level
Design	0.051	0.003**	0.690	0.426
Elements and activities	0.040*	0.225	0.386	0.046*
Accessibility	0.040*	0.200	0.660	0.577
Safety and security	0.372	0.868	0.701	0.495
Proximity	0.028*	0.631	0.851	0.300
Administration and maintenance	0.373	0.056	0.511	0.240

*P < 0.05. **P < 0.01 using ANOVA Test

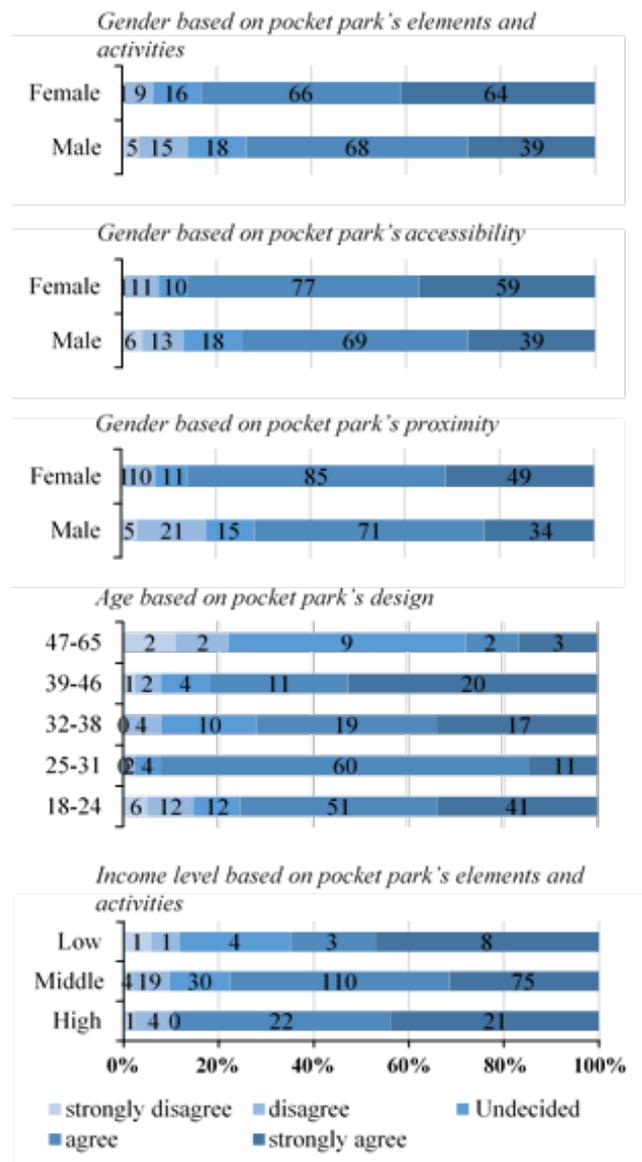


Fig. 3 - Pocket Parks' characteristics based on demographic characteristics

5. Discussion

The availability of pocket parks established with good characteristics is critical to promote daily social interaction (Gibson and Canfield, 2016; Salih and Ismail, 2018a; Tabassum, 2018; Salih et al., 2020). However, pocket park criteria could vary according to pocket location and climate, as the perception of users from these pockets differed from one city to another, from region to region and so on (Sinou and Kenton, 2013; Salih et al., 2020). The result of this study showed that outdoor daily social interaction in nearby pockets in Baghdad City was almost nonexistent. Most of the residents of Baghdad City were suffering from the lack of daily social interaction outdoors due to a lack of efficient nearby pocket parks in their neighborhoods. This result is consistent with the findings of JAU et al. (2011) and Salih and Ismail (2017a) who confirmed that there is a lack of social-recreational activities, public open spaces, and public parks in Baghdad. Salih and Ismail (2017a, 2017b) confirmed that provide quality public parks with legible elements and influential characteristics in Baghdad has become a complicated challenge nowadays. Yet, green open space can be a critical place that allows people to meet on a natural ground and interact with each other within the context of the community (Salih and Ismail, 2017b).

This study also found that the availability of various activities and good quality of softscape and hardscape elements was the most influential characteristic of the social interaction of Baghdad residents in nearby pocket parks. This result is similar to the findings of Nordh et al. (2009) and Kim and Jin (2018) who found that hardscape and softscape elements of the pocket park are critical characteristics to attract people to use these spaces. For instance, the percentage of grass and ground, and the number of trees and shrubs are important variables affecting users' restoration and well-being (Nordh et al., 2009; Mahmoud and Omar, 2015). Furthermore, pocket parks that house various activities and elements can attract more users for beneficial social interactions and physical activities (Cohen et al., 2014; Gibson and Canfield, 2016). However, a study conducted by Baur and Tynon (2010) confirmed that pocket parks are very small spaces that provide the necessary greenery for a specific activity for a small group of people. One possible explanation for these different results may be that pocket park size varies from a few square meters to about 4000m² and this could determine the type and number of activities (Salih and Ismail, 2017a).

The elements and activities were followed by accessibility as a critical characteristic to promote the social interaction of Baghdad residents in pocket parks. This result seemingly supported the results of the previous studies, which confirmed that accessibility is a key characteristic that contributes to the success of small nearby public open spaces (Baur and Tynon, 2010; Abd El-Aziz, 2015; Salih and Ismail, 2017b; Salih and Ismail, 2018a). Moreover, pocket parks must be easily accessible by walking and bike-riding and by providing clear entrance and paths (Abd El-Aziz, 2015).

Apart from that, in this study identified that the characteristics of well-design, proximity, safety and security, and administration and maintenance were also mentioned as important factors that contribute to promoting the socialization of Baghdad residents in the nearby pocket parks. This result is similar to the results of the previous literature, which found that green open spaces' characteristics can include design, safety, security, maintenance, and administration (Uslu and Gokce, 2010; Kara et al., 2011; Skip et al., 2014; Salih and Ismail, 2018a). Moreover, results of Peschardt et al. (2012) and Abd El-Aziz (2015) showed that pocket parks should be located within 400m walking distance from residences and should not require the use of a car to reach them. The previous studies also confirmed that various influential characteristics of pocket parks' can contribute to promoting social activity and park visitation (Cohen et al., 2014; Gibson and Canfield, 2016). Furthermore, providing successful management and maintenance of small natural parks in the low-income neighborhood may improve the quality of life for their residents (Baur and Tynon, 2010). The findings of the current study contribute to the existing literature, as these studies revealed that security, administration, and maintenance were key factors to be achieved in public open spaces to enhance a sound social interaction. Therefore, the existence of pocket parks with the aforementioned characteristics clearly contributed towards the social interaction among Baghdad residents.

On the other hand, the result showed that female respondents have more concern about the elements and activities, accessibility, and proximity of pocket parks in Baghdad City. The current study also found that people of different age groups and income levels have different opinions on the importance of the design, elements, and activities in the nearby pocket parks. This is similar to the results of existing studies which confirmed that parks' characteristics affect and depend on the users' characteristics, such as age and gender (Cohen et al., 2014; Salih and Ismail, 2017b). However, the study of Nordh et al. (2009) mentioned that responses across different groups of people (e.g. age and gender) with parks and nature were relatively homogenous. This different result may be due to the social-cultural diversity of different respondents from different studies.

6. Conclusion

In conclusion, nearby pocket parks contribute to efficient and low-cost green spaces to enhance daily activities. Well-designed pocket parks are essential to enhance the local community's needs and promote social, mental, and environmental benefits. However, Baghdad City lack well-designed small parks, which had a negative impact on the residents' outdoor socialization. Providing adequate pocket parks in Baghdad City is essential to promote their

residents' social interactions. The successful pocket parks in Baghdad should provide accessibility, good activities and elements, well-design, proximity, safety and security, administration and maintenance. The users' demographics, like age and gender, could also affect their preferences for pocket parks. The study results contribute to integrating social interaction in nearby open spaces and pocket parks, and this provides a useful reference for landscape and urban planners, architects, and Baghdad City policymakers.

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