



An Investigation of the Effective Factors on Yusef Abad Residents' Satisfaction in Shafagh Park

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ABSTRACT: Each society provides the suitable context for the development and progress by means of researching; because research shows strength and weakness, desirability and undesirability, effective and ineffective factors and so on. Nowadays, the design and maintenance of green spaces in urban areas is one of the fundamental strategies which is adopted by city planners in order to provide human's health by means of organized connection to nature. In a neighborhood full of multi-storey buildings, existence of public parks and green spaces provides the suitable solution to man's relationship with nature, in this way the physical and mental health of man will be provided. Architects, landscape designers and urban planners have reached some conclusions about the nature of human's thoughts and behaviors by studying speculative philosophy and behavioral science. On the other hand, architecture, landscape and urban design theories in recent years indicate that designers and people's beliefs about the ideal environment are different. Many environments where have been considered appropriate by designers, had been boring and dead and without respect to human from users' perspectives. Therefore, it is important to assess people's opinions about the quality of environment. The research was based on qualitative method using the approach of casual-comparative to investigate the factors which effect on residents' satisfaction in Shafagh Park. The sample size is consisted of 60 local residents who are frequent users of the park and most of them have lived near the park for many years. The influences of physical, natural, socio-psychological factors and utility service factor on satisfaction were asked of all respondents. Finally, the Likert scale was used to obtain residents' satisfaction level. According to findings, physical factor, natural factor and socio-psychological factor have been effective in increasing the satisfaction level, but utility service factor has little impact on the satisfaction.

Keywords: Satisfaction, Environmental Quality, Neighborhood Parks, Physical Specifications, Utility Service.

INTRODUCTION

Industry growth and the increase of the population of the cities lead to decrease the urban share of green space and gardens and weaken the relationship between the human and the nature due to the establishment of the urban new usages for city dwellers and rapid development

of the cities. But after the early of the twentieth century and because of some reasons, the city dweller human paid attention again to the nature, green space and design quality (Hamilton et al., 1991; Shakooei, 1979; Mohammadi et al., 2008; Soltani, 1992; Ghorbani & Teimouri, 2010).

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The design and the maintenance of the green spaces in urban spaces have been included in essential strategies of the urban planners in order to provide the human's physical and mental health through the urban ecology and systematic relation of the human and the nature (Louv, 2006). The general green space is a solution for the areas which the size of their residual buildings are not sufficient or the houses have been surrounded by the multi-storey buildings. However, some researches have shown that the green space has been rarely distributed in the city or the region uniformly (McConnachie et al., 2010; Barbosa et al., 2007; Iverson & Cook, 2000).

In many of the studies, the satisfaction from the district has been investigated in some fields such as sociology, psychology (Amérigo & Aragonés, 1997; Bonaiuto et al., 2003; Hur & Morrow-Jones, 2008) and the urban designing (Ellis et al., 2006; Lovejoy et al., 2010). Some researchers have focused on the sociodemographic factors such as age, race, gender or economical resources (Harris, 2001; Kahya et al., 2009; Lu, 1999; Parkes et al., 2002; Sirgy & Cornwell, 2002) while the other studies have focused on the district physical specifications which impact on the satisfaction from the place of the habitat. Among these physical specifications, the open space is an important issue which depends on the observable welfare facilities and aesthetical preferences (Kim & Kaplan, 2004; Youssoufi & Foltête, 2013).

In the case of the green space, its productivity should be looked for in the environmental, social, spiritual and mental fields. The quality of the human life and the human satisfaction are included in two fundamental fields. The first field is the observable life quality which is resulted from the satisfaction of the essential factors in the life. These factors include the satisfaction of the family life, friends, partner and the human by himself (Campbell, 1981; Warren, 1986). The second field relates to the life quality in more extensive environment of the society (environmental quality of the life) (Jeffres & Dobos, 1995). The fields of environmental quality of the life are the satisfaction of the house, school, health services, security, roads and transportation (Cutter, 1982; Diener, 1995; Westaway & Gumedde, 2001; Westaway, 2006).

Satisfaction from the parks and green spaces is in the field of the human's environmental quality of life. The builders of the environments of the parks and green spaces, in addition to the design and implementation of these spaces, should consider their final proficiency in sustainable urban development in their future programs. Therefore, it can be achieved through polling from the citizens for determination an acceptable level of the expectations (Kafi et al., 2007).

Background of the research: Oguz (2000) conducted a survey research in three parks of Ankara (Turkey) namely "Genclik Park, "Altinpark" and "Segmenler Park" in order to investigate the opinions of the people who use the urban parks. According to the results, the men go to the parks more than women. Leghaei and Asghari Tabari (2004) evaluated the safety management of the parks and green spaces in the 4 parks of Tehran namely Mellat, Shariati, Taleghani Forest Park and Seyed Khandan. Kafi and his colleagues (2007) investigated the principles of the safety survey in designing the parks. The results demonstrate the lack of security feeling in the parks due to the lack of safety programs along with the other management programs. Mousavi and his colleagues (2014) evaluated the satisfaction amount of citizens who are in the neighborhood unit in Yazd. According to the results, the distance is one of the important factor in using the open space. Some factors such as nature areas (Kearney, 2006), accessibility to the water and relaxing space were important in the satisfaction amount of the people (Faizi et al., 2011). Generally, the urban parks and the green spaces affect the environmental, economic and social effects on the cities and these effects lead to development of the life quality of the citizens and improvement in achievement the sustainable city (Chiesura, 2004).

RESEARCH QUESTIONS AND HYPOTHESES

In this research one of the Tehran's park, Shafagh park, has been investigated and the satisfaction of the users of 5 main parts of the park namely the central square, outdoor amphitheater, porches, benches and their surroundings and the park entrances have been evaluated. Meanwhile, the variables were considered for measuring the satisfaction amount of these parts. These variables were divided into the 4 groups: physical variables, natural variables, operational-psychological variables and service variables. The physical variables include the form, color, materials and texture and the natural variables include the day and night lighting, flowers, plants and water. Meanwhile, the operational-psychological variables consist of some factors such as vision and perspective, interesting places for sitting or walking, peace in the private spaces of the park and social security feeling for family in the park area and finally the amenities consist of some specifications such as sound system coverage, signpost, condition of the benches, public sport equipment and cultural facilities. The variables of age, gender, distance of the house to the Local Park and living



history in the house are the other variables which impact on the satisfaction level of the park. In order to facilitate the research process for achieving the result, there are some questions and hypotheses as follows:

Questions

1. What is the satisfaction level of the users of the physical, natural, sociological-psychological and service factors of the park spaces?
2. What is the relationship between the utility of the spaces with gender, age, education, distance of the park to the habitat place and living history?

Hypotheses

1. Existence of the beautiful plants, fountain, enough light and pleasant shadow in the space, increases the

satisfaction level from that space.

2. Architecture physical factors such as special form, color, materials are effective in attracting the users and their satisfactions.

3. Presentation of the appropriate sporting, artistic and cultural services affect considerably on the users' satisfaction and creation of the social security of the park.

The purpose of this study is to determine the relationship between the local park spaces and the satisfaction amount of the local residents through the study of the behavior of them regarding to the local park.

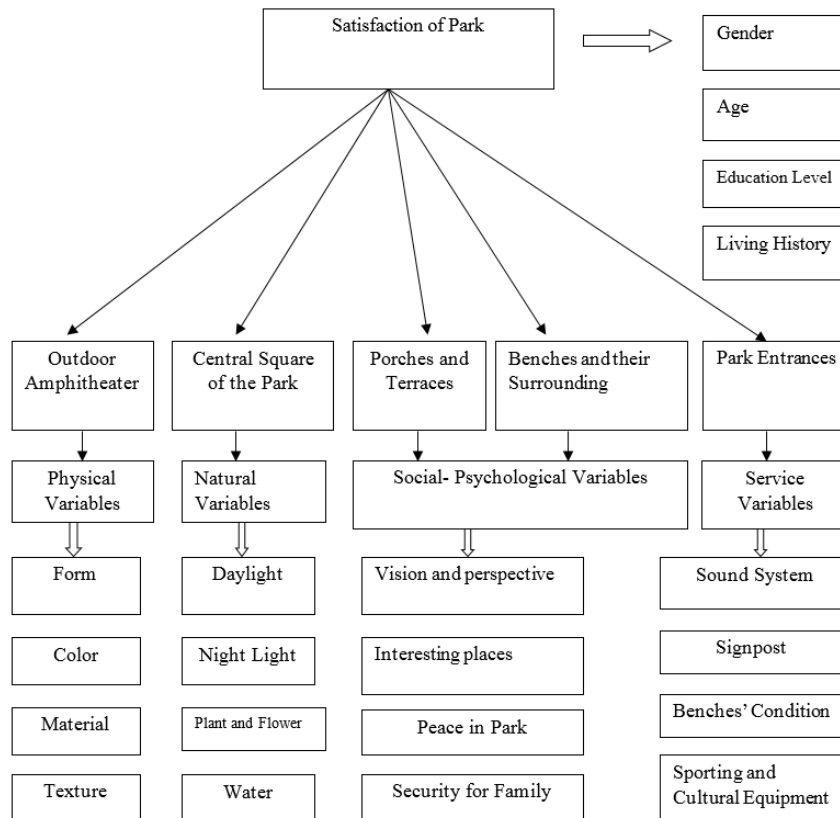


Fig. 1. Conceptual Model of Research Referring to the Literature Relating to Satisfaction of Park



Fig. 2. Porches and Terraces



Fig. 3. Central Square of the Park

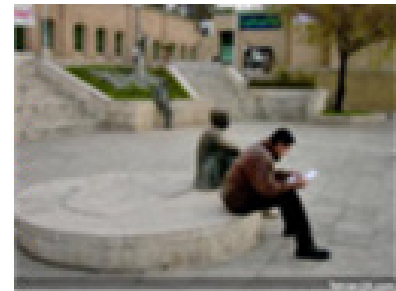


Fig. 4. Outdoor Amphitheater



Fig. 5. Park Entrances

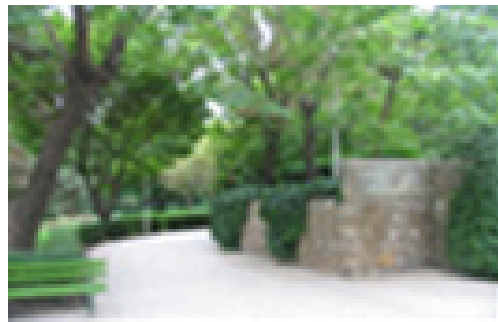


Fig. 6. Benches and Their Surroundings

METHODS

This research is performed based on the case study strategy which consists of the qualitative strategy with the interpretive approach and correlation strategy with comparative approach. In this research, the studied place is the Shafagh Park. Some parts of this research study the case sample through the qualitative strategy with the interpretive approach since in these parts, there is belief in interpretation, meanings of the place, social interaction and the quality of daily living space such as the spatial qualities of the park.

Some other parts of the research study the Shafagh Park through correlation strategy with comparative approach since such as another correlation research, this research looks for the patterns for determination the relationship between two or more variables such as the correlation between the social services and park psychology with satisfaction of the users (Groat & Wang, 2013).

This is a fieldwork study which its studying population is the Yusef Abad district and other places of the 6th region of the Tehran. According to the statistics of the year 2009, the population of this district is 247644 persons. The case sample consists of a group of users of the Shafagh Park which were selected from the youth, middle aged and old

persons through the cluster sampling.

In this research, the scaling questionnaire tools were used for gathering the data. The main advantage of the scaling questionnaires is the possibility of gathering the widespread data in specifications, behavioral habits, beliefs and visions of the extensive population toward the different subjects in the shortest time. This type of questionnaire is often used in the researches which are related to the socio-cultural interactions or the cognitive concepts of the environment. Therefore, performance of the research in different subjects of the architecture is possible through these techniques (Groat & Wang, 2013).

At the first, the questionnaires were distributed between 60 permanent users of the park and their ideas were specified through the interview. The questionnaire consisted of 12 questions. At the first the information of gender, marital status, education, house ownership status, education level of the spouse and number of children were gathered. Then, the amount of the presence in the park and the amount of utilization of its facilities were asked. Finally, the quality of 5 main spaces of the park were questioned.



Fig. 7. Shafagh Park of Yusef Abad

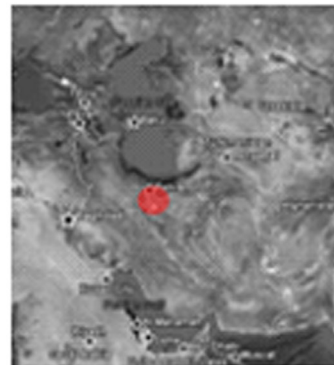


Fig. 8. City of Tehran



Fig. 9. A View of the Inside of the Park

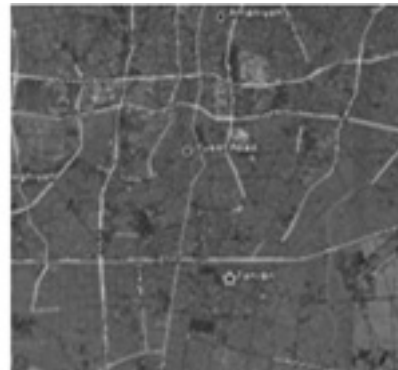


Fig. 10. Yusef Abad District

Moreover, the best safe time for the children and families, relationship between the distance of the house and the park, peace of local residents, relationship between the living history and park usage and satisfaction of the park services were asked.

of library and cultural center, usage of the nature, family and friendly meetings and free study in the open space and the opinions and preferences of the people have been mentioned.

RESULTS AND FINDINGS

In this research, 60 users of the Shafagh Park were interviewed. This group consisted of 20 women (33%) and 40 men (66%) which 6 persons were under 30, 29 persons between 30 and 50 and 25 persons over the 50 years old. Among this group, the education level of 16 persons was under diploma and 16 persons had diploma and associated degree and 28 persons had bachelor and higher certificates. In the work field research which was performed in the Shafagh Park, some of the users declared that the Shafagh Park was an unsafe place for the family in some hours. In the following part, the activities which are performed in the Shafagh Park have been categorized into 8 parts of adults sport, children playground, usage



Table 1. Preference of the Users in Utilization of the Inside Facilities of the Park

	1 st Preference		2 nd Preference		3 rd Preference		4 th Preference		5 th Preference		6 th Preference		7 th Preference		8 th Preference	
	n	%	n	%	N	%	n	%	n	%	n	%	n	%	n	%
Sport	32	53	12	20	8	13	4	6	4	6	0	0	0	0	0	0
Children Play	20	33	8	13	8	13	8	13	12	20	4	6	0	0	0	0
Library and Cultural Center	20	33	16	26	8	13	4	6	8	12	4	6	0	0	0	0
Nature	48	80	12	20	0	0	0	0	0	0	0	0	0	0	0	0
Meetings	20	33	16	26	16	26	4	6	4	6	0	0	0	0	0	0
Family	4	6	20	33	24	40	12	20	0	0	0	0	0	0	0	0
Friendly	4	6	12	20	12	20	12	20	12	20	4	6	4	6	0	0
Study in Open Space	8	13	28	46	16	26	4	6	4	6	0	0	0	0	0	0

Table 2. Users' Satisfaction Preferences at Different Times of the Day in the Park.

	1 st Preference		2 nd Preference		3 rd Preference		4 th Preference	
	N	%	N	%	N	%	N	%
Morning	32	53	28	46	0	0	0	0
Noon	8	13	20	33	16	26	16	26
Evening	36	60	16	26	8	13	0	0
Night	8	13	12	20	28	46	12	20

In order to analyze the amount of influence of the physical, natural, social-psychological and service specifications on the satisfaction level of the users, after interview with them, the weighting number 1 to 4 were allocated to the quad factors of each specification. For more important factors, the more weight was allocated (maximum 4). Then the product of the frequency percentage in weighting of each quad factors were added together in order to calculate the final result. The users' satisfaction of each space was measured by the Likert

Scale. The satisfaction ranges were divided into 5 ranges namely very low, low, moderate, much and very much and the weights of -2, -1, 0, 1 and 2 were allocated to each range respectively. Finally, the product of the frequency percentage in weighting of the ranges were added together. If this amount be more than average of the weights, the users' satisfaction of the space is high but if it be less than average of the weights, the satisfaction is low.

Table 3. Utility Factors of the Outdoor Amphitheater

Physical Specifications	Form (4)	Color (3)	Materials (2)	Texture (1)	Total	Final Weight
n	28	12	8	12	60	209
n (%)	46	20	13	20	100	
Natural Specifications	Daylight (4)	Night Lighting (3)	Plant & Flower (2)	Water (1)	Total	Total Weight
n	0	8	28	24	60	1.71
n (%)	0	13	46	40	100	
Social- Psychological Specifications	Vision and Perspective (4)	Interesting Places for Sitting or Walking (3)	Relaxing Space (2)	Social Safety for the Family (1)	Total	Total Weight
n	24	12	12	12	60	2.8
n (%)	40	20	20	20	100	
Service Specifications	Sound System (4)	Signpost (3)	Condition of the Benches (2)	Sporting and Cultural Equipment (1)	Total	Total Weight
n	12	28	8	12	60	2.64
n (%)	20	46	13	20	100	



According to the opinions of the users, in the part of the physical specifications, the most satisfaction of the outdoor amphitheater was allocated to the form (46%), texture and color (20%) and the materials (13%). In the part of the natural specifications, the most satisfaction was allocated to the flower and plants (46%), water (40%) and night light (13%). In the part of the social-psychological specifications, the most satisfaction was allocated to the

vision and perspective (40%), interesting places for sitting and walking (20%) and social safety (20%). Moreover, in the part of the services specifications, the most satisfaction was allocated to the signpost (46%), sporting and cultural equipment (20%), sound system (20%) and benches' condition of the outdoor amphitheater (13%). Therefore, according to the evaluation of the Likert Scale, the users' total satisfaction of the outdoor amphitheater was low.

Table 4. Utility Factors of the Central Square of the Park

Physical Specifications	Form (4)	Color (3)	Materials (2)	Texture (1)	Total	Final Weight
n	24	16	8	12	60	2.84
n (%)	40	26	13	20	100	
Natural Specifications	Daylight (4)	Night Lighting (3)	Plant & Flower (2)	Water (1)	Total	Total Weight
n	12	24	16	8	60	2.65
n (%)	20	40	26	13	100	
Social- Psychological Specifications	Vision and Perspective (4)	Interesting Places for Sitting or Walking (3)	Relaxing Space (2)	Social Safety for the Family (1)	Total	Total Weight
n	8	12	24	16	60	2.58
n (%)	13	20	40	26	100	
Service Specifications	Sound System (4)	Signpost (3)	condition of the Sitting Places (2)	Sporting and Cultural Equipment (1)	Total	Total Weight
n	12	28	8	12	60	2.64
n (%)	20	46	13	20	100	

According to the opinions of the users, in the part of the physical specifications, the most satisfaction of the central square of the park was allocated to the form (40%), color (26%), texture (20%) and the materials (13%). In the part of the natural specifications, the most satisfaction was allocated to night light (40%), the flower and plants (26%), daylight (20%) and water (13%). In the part of the social-psychological specifications, the most satisfaction was allocated to the relaxing space

(40%), social safety of the family (26%), interesting places for sitting and walking (20%) and vision and perspective (13%). Moreover, in the part of the services specifications, the most satisfaction was allocated to the signpost (46%), sporting and cultural equipment (20%), sound system (20%) and the condition of the sitting places of the central square of the park (13%). Therefore, the users' total satisfaction of the central square of the park was high.

Table 5. Utility Factors of the Porches and Terraces Beside the Pergola

Physical Specifications	Form (4)	Color (3)	Materials (2)	Texture (1)	Total	Final Weight
n	32	20	0	8	60	3.24
n (%)	53	33	0	13	100	
Natural Specifications	Daylight (4)	Night lighting (3)	Plant & Flower (2)	Water (1)	Total	Total Weight
n	0	28	24	8	60	2.31
n (%)	0	46	40	13	100	
Social- Psychological Specifications	Vision and Perspective (4)	Interesting Places for Sitting or Walking (3)	Relaxing Space (2)	Social Safety for the Family (1)	Total	Total Weight
n	12	8	12	28	60	2.05
n (%)	20	13	20	46	100	
Service Specifications	Sound System (4)	Signpost (3)	Condition of the Sitting Places (2)	Sporting and Cultural Equipment (1)	Total	Total Weight
n	12	8	24	16	60	2.25
n (%)	20	13	40	26	100	



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According to the opinions of the users, in the part of the physical specifications, the most satisfaction of the porches and terraces beside the pergola was allocated to the form (53%), color (33%) and texture (13%). In the part of the natural specifications, the most satisfaction was allocated to night light (46%), the flower and plants (40%), and water (13%). In the part of the social-psychological specifications, the most satisfaction was allocated to the

social safety of the family (46%), relaxing space (20%), vision and perspective (20%) and interesting places for sitting and walking (13%). Moreover, in the part of the services specifications, the most satisfaction was allocated to the conditions of the sitting places (40%), sporting and cultural equipment (26%), sound system (20%) and the signpost (13%). Therefore, the users' total satisfaction of the porches and terraces beside the pergola was low.

Table 6. Utility Factors of the Under Tree Benches and their Surroundings

Physical Specifications	Form (4)	Color (3)	Materials (2)	Texture (1)	Total	Final Weight
n	0	50	10	0	60	2.81
n (%)	0	83	16	0		100
Natural Specifications	Daylight (4)	Night Lighting (3)	Plant & Flower (2)	Water (1)	Total	Total Weight
n	40	0	20	0	60	3.3
n (%)	66	0	33	0	100	
Social- Psychological Specifications	Vision and Perspective (4)	Interesting Places for Sitting or Walking (3)	Relaxing Space (2)	Social Safety for the Family (1)	Total	Total Weight
n	24	24	8	4	60	3.66
n (%)	40	40	13	6	100	
Service Specifications	Sound System (4)	Signpost (3)	Condition of the Sitting Places (2)	Sporting and Cultural Equipment (1)	Total	Total Weight
n	0	16	28	8	60	1.83
n (%)	0	26	46	13	100	

According to the opinions of the users, in the part of the physical specifications, the most satisfaction of the benches and their surroundings was allocated to the color (83%) and materials (16%). In the part of the natural specifications, the most satisfaction was allocated to daylight (66%) and the flower and plants (33%). In the part of the social-psychological specifications, the most satisfaction was allocated to the vision and perspective

(40%), interesting places for sitting and walking (40%), relaxing space (13%) and the social safety of the family (6%). Moreover, in the part of the services specifications, the most satisfaction was allocated to the conditions of the sitting places (46%), signpost (26%) and sporting and cultural equipment (13%). Therefore, the users' total satisfaction of the benches and their surroundings was high.

Table 7. Utility Factors of the Park Entrances

Physical specifications	Form (4)	Color (3)	Materials (2)	Texture (1)	Total	Final Weight
n	28	16	16	0	60	3.14
n (%)	46	26	26	0		100
Natural specifications	Daylight (4)	Night lighting (3)	Plant & flower (2)	Water (1)	Total	Total weight
n	16	10	34	0	60	2.66
n (%)	26	16	57	0	100	
Social- psychological specifications	Vision and perspective (4)	Interesting places for sitting or walking (3)	Relaxing space (2)	Social safety for the family (1)	Total	Total weight
n	31	20	9	0	60	3.33
n (%)	51	33	15	0	100	
Service specifications	Sound system (4)	Signpost (3)	condition of the sitting places (2)	Sporting and cultural equipment (1)	Total	Total weight
n	0	60	0	0	60	3
n (%)	0	100	0	0	100	



According to the opinions of the users, in the part of the physical specifications, the most satisfaction of the park entrances was allocated to the form (46%) and color and materials (26%). In the part of the natural specifications, the most satisfaction was allocated to the flower and plants (57%), daylight (26%) and night light (16%). In the part of the social-psychological specifications, the most satisfaction was allocated to the vision and perspective (51%), interesting places for sitting and walking (33%) and relaxing space (15%). Moreover, in the part of the services specifications, the most satisfaction was allocated to the signpost (100%). Therefore, according to the evaluation of the Likert Scale, the users' total satisfaction of the park entrances was high. According to this research, those people who have lived in this district for more than 10 years like the park more than those persons who have lived there for less than 10 years. Moreover, 50 respondents (83%) have lived more than 10 years, 6 respondents (10%) have lived between 1 and 10 years and 4 respondents (6%) have lived less than one year in the district. It seems that the factor of education has not affected on the interest rate to the park since 80% of those people whose educational level were under diploma liked the park but this percentage was lower among the persons who had the academic educations.

DISCUSSION AND CONCLUSION

The evaluation patterns of the open spaces especially regarding to the people's satisfaction can be effective on determination of the current situation, familiarization with the strength and weak points and probable deficiencies and lead to quality promotion of the open spaces which are near to the residential buildings. Therefore, one of the best evaluation methods is the usage of the inhabitants' views toward the open spaces which can be achieved through the questionnaire. In the present study, some factors were considered in the questionnaire for understanding the effective specifications on the spatial utility. Most of the park users were men and the relationship between the satisfaction and gender was such that the men and women were satisfied of the park more and less respectively. Meanwhile, the distance was an important factor in using the Shafagh Park and most of the users lived in less than 1 kilometer distance to the park.

According to the results, all the respondents have considered the physical specifications as the effective factors in belonging to the park. In the other words, the physical beauty have attracted their interest. In addition, the service elements have considered as the affectless factors in spatial utility and the social-psychological

elements are effective in belonging the persons to the park. Therefore, it can be concluded that service rendering does not have the important role in satisfaction of the users and the architectural and spatial qualities are more important.

Near the one third of users were upset from the noise of the children in the park. The few shadow places was another dissatisfaction factor of the half of the respondents. In the part of critics and suggestions, about the one third of respondents were dissatisfied of the music shortage, inappropriateness of the plays and discomfort of the benches while all the respondents were satisfied of the cultural environment, park nature and accessibilities. The old users of the park asserted that there was lack of security feeling in the Shafagh park in years ago due to the lack of security programs and lack of unified accomplishment of the safety activities along with the other management plans but now these problems have been removed through the planning of the authorities and supervision of the officials. One of the most effective factors in increasing the safety is the existence of the kindergarten and children classes in the park since the presence of the children increase the caution considerations and morality in the environment. Moreover, the existence of the cultural center, amphitheater and other cultural spaces have changed this park to the safe and dynamic complex.

ENDNOTES

1. The cluster sampling is a probable sample in which every measurement unit includes a complex or a group of members. If the expense of preparation a frame which can include all the members of the community be high or if the expense of preparing the observations be enhanced through the increase of distance between the members, the cluster sampling can be less costly than simple random or stratified samplings.

2. In this method, some items which demonstrate the attitude toward the special phenomenon are prepared. Then, the respondents are asked to declare their agreements or disagreements by each item based on the scale. This scale usually includes 5 parts.

The respondents investigate the items based on this scale which is not specified with the number in order to prevent the effect of numbers on the respondents. Therefore, after returning the questionnaires by the respondents, they will be numerated. The numeration can be optional. It means that in 5 part scale, it is possible to allocate the score 5 to the "completely agreed" and score 1 to the "completely disagreed". Finally, the total scores of the respondents show their tendency.



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