Satisfaction and Happiness as a Function of Parks Planning

Siavash Talepasand[1]*, Somaeih Haddadi[2], Ali Taghinezhad[3]

Abstract

Aim: The aim of this study was to investigate the rate of satisfaction and happiness of citizens with parks and urban green space.

Methods: This is a survey study. Six parks were randomly selected among 18 Mashhad large parks. Participants were 360 clients, who were selected by stratified random sampling method. All individuals completed the questionnaires of the satisfaction with park and Oxford happiness version of the park. Data were analyzed using Analysis of Variance (ANOVA).

Findings: The results showed that the level of satisfaction with welfare installations and buildings, green space design, sport facilities, security, furnishings of park, parking and the feeling of happiness is a function of the park type. In addition, the level of satisfaction with green space design is a function of gender.

Conclusion: Satisfaction and happiness as components of health are related with the design of the parks and green space.

Keywords: Park, Green space, Satisfaction, Happiness

1. Associate Professor, Department of Education and Psychology, School of Education and Psychology, Semnan University, Semnan, Iran
Email: stalepasand@semnan.ac.ir
2. M.Sc. Student, Department of Psychology, School of Education and Psychology, Semnan University, Semnan, Iran
Email: somika.haddadi@gmail.com
3. Assistant Professor, Department of English Language, Fasa University of Medical Sciences, Fasa, Iran
Email: a.taghinezhad@shirazu.ac.ir

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Introduction

One of the new issues, which have recently opened a new horizon before psychologists and researchers, is positive psychology. Positive psychology has focused its attention on positivity in dealing with life pressure, overcoming pain and suffering, reducing depression, and increasing positive feelings such as happiness [1]. Evidence shows that there is a relationship between nature and mental wellness. In fact, a positive relationship has been reported between happiness and being in a green environment [2, 3]. Vrom showed that the relationship between green space and the reduction of stress, especially for the residents of a metropolitan is outstanding [4]. Creating an atmosphere where there is a dense population, traffic and noise leads to the exposure of residents to stressors. Thus, the features of a difficult lifestyle and being exposed to environmental pollution have forced individuals to request more access to green space in urban environments. The request for more green space must first of all be evaluated with regard to the number, size and quality of green space in towns and small cities [4].

Park visitors describe their enjoyment of the parks mainly for the visual features of the parks, the amount of green space, the presence of water, good landscape, and the maintenance of the park [5]. All people, regardless of their age, always utilize nature for its benefits to the improvement of their psychological, social, and even economic conditions. Most people enjoy being in nature and feel remarkably happy when they are in a park as a haven for refreshment and for improving their well-being. This indicates that parks enhance an individual's quality of life directly or indirectly. When people feel downhearted by living in apartments, lack of facilities, or poor weather conditions, they prefer to spend their time in nature to solve some of their personal problems [6]. Physical activities in green environments have been observed to act increasingly as an invaluable treatment for mental problems and as shield against the development of depression and anxiety disorders [7]. It has been found that visiting parks increases the activity of natural killer (NK) cells, an anti-cancer protein, and reduces stress [8]. Phytoncides are released from trees, and the reduction of stress hormones can, to some extent, help increase the activity of NK cells. Since NK cells can destroy tumor cells through releasing anti-cancer protein, visiting forest parks can have a preventive effect on the generation and progression of cancer. Thus, the time spent in nature and green forest parks can promote health [9]. Also doing exercise in nature, especially soaking in green space can enhance mental health [10].

A strong positive correlation has been

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observed between green space and physical health, and between physical health and having enough energy to get things done on a daily basis [11]. Evidence shows that there is a similar improvement in middle-aged people and a lower risk of mental disorders in participants who have more physical activities in greener environments [12]. In another study, it was shown that the quality of urban green space and the distance between parks and houses are significant predictors of satisfaction with the quality of life. Moreover, there is a significant relationship between the quality of urban green space and many health variables. Although it cannot be interpreted as a causal relationship, there is a strong relationship, especially with regard to community health. Public parks are considered as the best urban green space resources [13]. Reducing the distance in order to use the green space and increasing the ratio of green space in a neighborhood lead to the reduction of anxiety disorder in urban areas. The relationship between green space and mental health might be related to the active participation of usable green space near houses and the visible green space in their surroundings [14]. Of course, a recent finding shows that distance to green space is not a limiting factor for people [15]. Human being's need for green space is necessary as an important and vital factor in creating the social, physical and mental balance. In Iran, most cities have been located in the world's dry belt and need green space to deal with acoustic and air pollution as well as reduction of environmental stress more than anywhere else [16].

Anyhow, mental health is a psychological state in which an individual acts on the satisfaction level of personal and emotional adjustment. From the perspective of positive psychology, mental health is possibly an individual's ability to enjoy life, create a balance in life activities, and to make efforts to achieve psychological resilience. According to the definition proposed by the World Health Organization (WHO), mental health is not merely the absence of symptoms of mental illness, but it is the mental well-being, perceived self-efficacy, automaticity, self-competence, inter-generational dependency, and the self-actualization of an individual's emotional and intellectual potentials [17]. Since the absence of psychological symptoms and the existence of satisfaction and happiness are more reliable indicators of mental health, this study aims to investigate the role of parks' landscape in increasing the individuals' satisfaction and happiness. However, the psychological aspects and mental health, in particular, have not received enough attention in various studies. Therefore, this study will further investigate the effect of the type of park and gender on the level of satisfaction and happiness of the

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visitors in the City of Mashhad, Iran.

Method

The population of this survey study includes large parks of Mashhad City. Characteristics of the studied parks are shown in Table 1. The sample size was calculated using the formula of Krejcie and Morgan. To infinite the population with a confidence level of 5%, the level of accuracy is 0.20, and the sample size is 360 [18]. A sample with the size of 360 individuals of clients to the six parks (Ghadir, Koohsangi, Mellat, Vahdat, Sheshsad Dastgah, and Paradise Ghaem) from Mashhad large parks were selected by stratified random sampling method. Numbers of 12 questionnaires were excluded because of defect. Finally, 348 questionnaires (179 males, 169 females) were included in the analysis (Table 1). Inclusion criteria included consent to participate in the study, and ability to read and write. Exclusion criteria included inability to read and write, and withdrawing from the study.

Table 1: Parks' specifications and sample number for each park

Park Name	Established	Area (sq.m.)	Park (type)	Sample (n)
Torogh*	1961	971087	Large	120
Koohsangi	1951	705149	Large	88
Mellat	1968	688000	Large	86
Paradise Ghaem	1996	164000	Zonular	19
Vahdat	2001	156549	Zonular	20
Sheshsad Dastgah	1972	115000	Zonular	15

* Baba Ghodrat, Ghadir &Torogh were divided into three large parks, and Ghadir Park in the sample was selected.

Tools

The questionnaire of satisfaction with park

This questionnaire measures the satisfaction with park regarding six aspects. They were welfare installation facilities and buildings (e.g., store, location and price), green space design (situation of the lawn-planting, the planting level, and dispersal), sport facilities (situation of the playground for children, extent, area, cleaning, and safety), security (feeling of comfort and social security for families in the enclosure of park), furnishings of the park (canopy, number, location and shading) and parking (area and cleaning) (See Table 2). This questionnaire contains 30 items that the participants have to select each item on a five-point Likert scale (too high, too low).

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Table 2: Dimensions of satisfaction of the park

Dimension	Items	Alpha	Corrected item–total correlation
Welfare installations and buildings	Exhibition, Dining, Shop, Library, Health Services, Audio coverage, The statue	.83	.39 – .69
Green space design	State flower, Status Lawns, Landscape Designer, The Paving, Cleaning park, Waterfront pool	.81	.43 – .63
Sporty facilities	General, The playground for children, Total playground	.78	.59 – .64
Security	Comfort, Park regulations, Taking into account the needs of persons with disabilities and veterans	.68	.46 – .49
Furnishings of park	Canopy, Lounge, Lighting condition	.67	.44 – .55
Parking	Parking lot, Sign, Access to the park	.60	.38 – .41

Validity and reliability

Recognizing the aspects of questionnaire and designing of items in each aspect were carried out by reviewing the previous studies. Preliminary study was conducted to investigate the questionnaire items on 25 persons. Items that were vague from the clients' view were rewritten or deleted. The final form of the questionnaire was administered on 348 individuals. Exploratory factor analysis revealed six aspects of park welfare installation facilities and buildings, green space design, sport facilities, security, furnishings of the park, and parking. The reliability of each questionnaire's aspects was calculated using Cronbach's alpha. All aspects enjoyed the acceptable reliability (Table 2).

The questionnaire of Oxford happiness - version of the park

The questionnaire of happiness was designed based on the questionnaire of Oxford happiness. Oxford happiness questionnaire is one of the most common scales. The initial version of this questionnaire was designed as a tool for measuring personal happiness [19]. It contains 29 questions that have been constructed based on reversing Beck depression questionnaire. Hills and Argyle presented a 29-question version entitled "Oxford happiness questionnaire" in 2002 [20]. Its modified version to measure happiness caused by the presence in the park has been used in this study. The modified version of this questionnaire includes items that correlate the individuals' happiness to presence in the park (for example, when I come to this park ... I do not feel happy, I become too happy). Park version of the Oxford happiness questionnaire contains 28 questions in which question 20 (There is a distance between what I liked and what I have conducted) was removed from the main form because of the mismatch. These instruments were first translated into Persian. The translation was again translated into English, and unclear statements were revised. After the instrument's grading for measuring level of

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happiness caused by visiting the park was done, two preliminary stages were passed, and the items, which had low coefficients, were revised. Finally, the psychometric properties of the questionnaire were evaluated.

Validity and reliability

Validity and reliability of this questionnaire have been investigated in several studies. Argyle et al. [21] examined the reliability of the questionnaire by using Cronbach's alpha method and obtained the alpha coefficient of 0.9. Hill and Argyle [20] reported the reliability of this questionnaire as 0.9, and inter-item correlations between 0.04 – 0.65. Cronbach's alpha coefficient was calculated as 0.95 for the modified version of the Oxford happiness questionnaire in this study.

Procedure

The questionnaires were individually performed by the researchers in the different days and hours of week. The days and hours were randomly selected according to a plan. Five 2-hour time blocks were considered for each day. 8 am was considered as the start time. In this way, there were 6 days a week, and each day about 5 blocks. The blocks were randomly selected from among them. The questionnaires were individually completed. Before completing the questionnaire, the written consent form was taken from each person. The average of time to complete the questionnaires was 3 minutes and 30 seconds. Data were collected in the interval of May to June 2014. Type of park and gender were considered as independent variables, happiness and satisfaction with the park in six aspects as dependent variables. A model of multivariate variance analysis was used for data analysis [22]. SPSS 19 was used to analyze the data.

Results

The results showed that 51% and 49% of the clients of the parks constituted men and women, respectively. Furthermore, 47% and 53% of the respondents were single and married, respectively. 21.5% of the participants were less than 20 years of age, 61.5% were between 20 to 40 years old, and 17% were over 40 years of age. Furthermore, 80% of the clients were native. 56% of them were employees. Furthermore, 17%, 32% and 51% of the clients were below the diploma, diploma and with an academic education in terms of the education level, respectively. The frequency with which people went to park was as follows: 16% of people went daily, 33% weekly, and 31.5% monthly; 19.5% of them were passers-by.

That the level of satisfaction from different aspects of parks was higher in women compared to men (Table 3). Similarly, the level of happiness in women was higher than in men.

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Table 3: The mean and standard deviation of park elements of satisfaction and happiness by sex

Variable	Women		Men	
	M	SD	M	SD
1. Welfare installations and buildings	2.29	0.83	2.14	0.90
2. Green space design	3.66	0.71	3.39	0.82
3. Sporty facilities	2.94	0.99	2.80	1.01
4. Security	2.92	0.85	2.84	0.97
5. Parking	3.17	0.94	3.10	0.93
6. Furnishings of park	2.96	0.93	2.93	0.86
7. Happiness	3.68	0.59	3.51	0.55

The difference of averages was tested by the variance analysis model. The type of park and gender were considered as independent variables, and welfare installations and buildings, green space design, sporty facilities, security, parking, furnishings of park, and feeling of happiness as dependent variables in a multivariate variance analysis model in this study.

The assumptions of covariance were tested first to use this model. Test results of the Box's test showed that the assumption of the observed covariance matrices of the dependent variables was equal across the groups (Box's M = 358.12, $F_{252,\ 920.6} = 1.17$, $p > 0.05$). Furthermore, Bartlett's test results showed that the correlation among the dependent variables was significant ($X^2_{27} = 677$, $p < 0.001$). Kolmogoroff-Smirnoff's test results revealed that the variables follow normal distribution; therefore, this model can be used safely.

First, the multivariate tests results were investigated about the interactive effect and the simple effect of factors. The results showed that the effect of park factor is significant (Pillai's trace = 0.664, $F_{35,1670} = 7.308$, $p < 0/001$, $\eta^2 = 0.13$). The multivariate tests indicated that the gender factor effect was significant (Pillais' trace = 0.044, $F_{7.330} = 2.187$, $p < .05$, $\eta^2 = 0.04$). The multivariate tests results were not significant about the interactive effect of gender × park type (Pillais' trace = 0.095, $F_{35,1670} = 0.922$, $p > 0.001$, $\eta^2 = 0.019$). Univariate follow-up tests were used to track the multivariate effects (Table 4).

The findings suggest that the effect of park factor was significant on the satisfaction of the park facilities and buildings ($F_{5,336} = 5.74$, $p < .01$, $\eta^2 = 0.079$), satisfaction of green space design ($F_{5,\ 336} = 11.41$, $p < .01$, $\eta^2 = 0.145$), satisfaction of the sport facilities ($F_{5,336} = 5.92$, $p < .01$, $\eta^2 = 0.081$), satisfaction of security ($F_{5,\ 336} = 5.49$, $p < 0.01$, $\eta^2 = 0.076$), satisfaction of park furniture ($F_{5,\ 336} = 16.36$, $p < .01$, $\eta^2 = 0.196$), satisfaction of parking ($F_{5,\ 336} = 10.28$, $p < .01$, $\eta^2 = 0.133$) and happiness ($F_{5,\ 336} = 4.56$, $p < .01$, $\eta^2 = 0.64$). The type of park had the highest effect size with regard to satisfaction with park equipment ($\eta^2 = 0.196$). Moreover, the type of park had a relatively large effect size regarding happiness ($\eta^2 = 0.64$). In addition, the satisfaction level

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regarding green space design was a function of gender ($F_{5, 336} = 6.95, p < .01, \eta^2 = 0.02$). Women had a higher level of satisfaction with the green space of the parks compared to men (Mean = 0.27).

The post-hoc comparisons were used with Benferroni's adjustment to track the univariate effects in terms of park type (Table 5). For example, the findings suggest that the difference of average satisfaction with the sport aspect is significant between Sheshsad Dastgah and Vahdat parks (D = 1.48, p <.01). This difference is in favor of Sheshsad Dastgah park. Other differences are reported in Table 5.

Table 4: Test results of multivariate variance analysis of the effect of park type and sex on satisfaction and happiness

Effect		SS	df	MS	F	P	η2
Park	WNB	20.43	5	4.087	5.74	0.001	0.079
	GSD	28.59	5	5.71	11.41	0.001	0.145
	SFA	27.08	5	5.41	5.92	0.001	0.081
	SEC	20.82	5	4.16	5.49	0.001	0.076
	FPK	58.28	5	11.65	16.36	0.001	0.196
	PAK	35.87	5	7.17	10.28	0.001	0.133
	HAP	7.20	5	1.44	4.56	0.001	0.640
Sex	WNB	0.928	1	0.93	1.30	0.254	-
	GSD	3.48	1	3.48	6.95	0.001	0.020
	SFA	3.05	1	3.05	3.34	0.068	-
	SEC	1.12	1	1.12	1.48	0.223	-
	FPK	0.021	1	0.02	0.03	0.863	-
	PAK	0.022	1	0.02	0.03	0.858	-
	HAP	0.763	1	0.76	2.41	0.210	-

Note: WNB: welfare installations and buildings, GSD: green space design, SFA: sporty facilities, SEC: Security, PAK: Parking, FPK: furnishings of park, HAP: happiness

Table 5: Paired comparison of the components of satisfaction with park and happiness in different parks

	Vahdat		Koohsangi		Mellat		Ghaem Paradise		Ghadir	
Sheshsad Dastgah	0.65^{2}	0.86^{1}	-0.21^{2}	0.14^{1}	0.14^{2}	0.05^{1}	1.41^{2**}	0.86^{1}	0.36^{2}	0.006^{1}
	0.80^{4}	1.48^{3**}	0.27^{4}	0.77^{3}	0.24^{4}	0.38^{2}	1.30^{4**}	1.32^{3**}	0.44^{4}	0.68^{3}
	0.84^{6}	0.50^{5}	0.45^{6}	-0.20^{5}	0.59^{6}	0.28^{5}	1.06^{6}	1.09^{5**}	$-.005^{6}$	-0.45^{5}
	0.37^{7}	-	-0.22^{7}	-	-0.17^{7}	-	-0.12^{7}	-	-0.23^{7}	-
Vahdat	-	-	-0.66^{2**}	-0.71^{1*}	-0.49^{2}	-0.8^{1**}	0.76^{2*}	0.003^{1}	-0.28^{2}	-0.85^{1**}
	-	-	-0.53^{4}	-0.71^{3}	-0.56^{4}	-1.10^{3**}	0.58^{4}	-0.16^{3}	-0.36^{4}	-0.8^{3*}
	-	-	-0.39^{6}	-0.7^{5}	-0.25^{6}	-0.22^{5}	0.22^{6}	0.58^{5}	-0.85^{6**}	-0.95^{5**}
	-	-	-0.6^{7**}	-	-0.55^{7**}	-	-0.57^{7*}	-	-0.60^{7**}	-
Koohsangi	-	-	-	-	0.17^{2}	-0.08^{1}	1.43^{2}	0.72^{1*}	0.38^{2**}	-0.13^{1}
	-	-	-	-	-0.02^{4}	0.38^{3}	1.11^{4**}	0.55^{3}	0.17^{4}	-0.08^{3}
	-	-	-	-	0.14^{6}	0.48^{5**}	0.61^{6}	1.29^{5**}	-0.45^{6**}	-0.25^{5}
	-	-	-	-	0.04^{7}	-	0.02^{7}	-	-0.09^{7}	-
Mellat	-	-	-	-	-	-	1.26^{2**}	0.81^{1**}	0.21^{2}	-0.04^{1}
	-	-	-	-	-	-	1.14^{4**}	0.93^{3**}	0.20^{4}	0.29^{3}
	-	-	-	-	-	-	0.47^{6}	0.8^{5**}	-0.59^{6**}	-0.73^{5**}
	-	-	-	-	-	-	-0.02^{7}	-	-0.05^{7}	-
Ghaem Paradise	-	-	-	-	-	-	-	-	-1.04^{2**}	-0.85^{1**}
	-	-	-	-	-	-	-	-	-0.94^{4*}	-0.64^{3}
	-	-	-	-	-	-	-	-	-1.07^{6**}	-1.54^{5**}
	-	-	-	-	-	-	-	-	-0.03^{7}	-

1-Welfare installations and buildings, 2-Green space design, 3-Sporty facilities, 4-Security, 5-Furnishings of park, 6- Parking 7- Happiness; **p < .01*p < .05

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Discussion

The present research was conducted to investigate the level of satisfaction and happiness of citizens with the park and urban green space. The results showed that different components can be considered in parks that may affect the citizens' satisfaction level. These components include the park welfare installations and buildings, green space design, sport facilities, security, furnishings, and parking. The satisfaction level of citizens showed a significant difference in these aspects in various parks. While it seems that Ghadir park has superiority in most of the components, Vahdat park has a reverse situation. The happiness level, especially arising from the presence in Vahdat Park is significantly less than in other parks. Considering the satisfaction level of citizens with green space design, we noticed that it is significantly higher in Sheshsad Dastgah, Koohsangi and Ghaem Paradise parks compared to Vahdat Park; it can be concluded that green space of park can be positively associated with the happiness level of citizens. These results are consistent with the research literature of this area. It has been reported that the natural and green environments have a positive impact on the visitors' physical and mental health and well-being [2, 3, 6, 8, 14]. Furthermore, Gilchrist [7] found that physical activity is increasingly considered as a valuable treatment for eliminating mental health problems in green environments, and plays a mediatory role against the development of anxiety and depression disorders.

Another finding of this study was that the satisfaction with green space design is a function of citizens' gender. In other words, regardless of the park type, women constantly have a higher satisfaction with the green space design of the parks. However, this result as the unique contribution of this study is not unexpected due to subtler spirit and more delicate nature of women. One of the possible applications of this result is the use of women's views in the green space design of the parks, especially in designing special parks for ladies. It seems that women pay more attention to the delicate points of the green space of the parks compared to men. This result is confirmed due to the lack of difference in satisfaction between men and women with the components of park welfare installations and buildings, sport facilities, security, furnishings and parking availability.

There was also no significant interactive relationship between gender and type of park. This finding shows that a significant difference does not exist between men and women in the components of satisfaction with park welfare installations and buildings, green space design, sport facilities, security, furnishings, and access to parking at various parks. A possible

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explanation for this finding is that the designers of these parks have acted consciously or unconsciously as impartial in the design and construction of the park's various components, and have not had any bias from various aspects (e.g., sport facilities) in favor of a particular gender in designing and implementing them. This result is consistent with the findings of Schipperijn et al. [15] who reported no significant interaction between gender and any of the predictor variables. Another point is paying due attention to Vahdat Park's situation. Contrary to the security component that showed no significant difference between this park and the other parks, the feeling of happiness due to the presence in this park was a component that was significantly lower than in other parks. Comparison of this park with Paradise Ghaem Park showed that the only significant difference between these two parks is in terms of green space design. This is a sign that the happiness level derived from presence in the park may be uniquely due to the green space design.

Conclusion

In general, the results showed that satisfaction and happiness are considered as mental health components associated with the design of parks and green spaces. Green space design is more attractive to women. Satisfaction with park is a multi-dimensional construct. It is recommended that in the parks specially designed for women, their views should be asked on the design of green space.

Limitation

The first limitation of the present study is related to its project. Although the obtained relationships indicate that happiness and satisfaction components are a function of the park type, these relationships are not causal. There is the possibility that individuals who answered the questions relating to a particular park (in this study, Vahdat Park) have been individuals with a lower level of satisfaction compared to the participants in the other parks. A second limitation of this study is associated with the measurement tools. Using the self-reporting measurement tools is associated with several defects (such as measurement error, lack of self-insight, etc.). Another limitation of this study is that it has been conducted on the large parks of Mashhad. Therefore, the findings are not generalizable to other parks of Mashhad. Accordingly, it is recommended to vrepeat the study with experimental projects. Proposing a study with virtual simulation characteristics of parks' space and systematic change of its components can determine its impact on people's satisfaction; and it is not too far-fetched for mind. Furthermore, it is better to use the other measurement tools such

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as the observation and direct evaluation techniques of behavior for a satisfaction survey. We further recommend that researchers provide evidence of expanding the results of this study by repeating this study in other cities of the country. Totally, the obtained results show that satisfaction with park is a multi-dimensional construct whose aspect of green space design is more considered by ladies. Hence, a special attention must be paid to ladies' views in the green space design component when designing a special park for them.

Conflict of Interest

No conflict of interest was declared by the authors.

References

1. Duckworth AL, Steen TA, Seligma MEP. Positive Psychology in Clinical Practice. Annu Rev Clin Psychol 2005; 1(1): 629-51.
2. MacKerron G, Mourato S. Happiness is greater in natural environments. Glob Environ Change 2013; 23(5): 992-1000.
3. Nisbet EK, Zelenski JM, Murphy SA. Happiness is in our nature: Exploring nature relatedness as a contributor to subjective well-being. J Happiness Stud 2011; 12(2): 303-22.
4. Caspersen OH, Konijnendijk CC, Olafsson AS. Green space planning and land use: An assessment of urban regional and green structure planning in Greater Copenhagen. Geogr Tidsskr-Den 2006; 106(2): 7-20.
5. Wong KK, Domroes M. The Visual Quality of Urban Park Scenes of Kowloon Park, Hong Kong: Likeability, Affective Appraisal, and Cross-Cultural Perspectives. Environ Plann B Plann Des 2005; 32(4): 617-32.
6. Amirsheakri S, Amirsheakri S, Ataei O. Studying the Significance and Effect of Parks and Green areas on Improving the Citizens' Life and Embellishing Urban Spaces Based on the Seeking-Escaping Theory (Case Study: Shiraz Parks). J Civil Eng Urban 2014; 4(2): 143-50.
7. Gilchrist K. Promoting wellbeing through environment: the role of urban forestry. In ICF Urban Trees Research Conference 2011 Apr, p: 84-93.
8. Grahn P, Stigsdotter UK. The relation between perceived sensory dimensions of urban green space and stress restoration. Landsc Urban Plan 2010; 94(3): 264-75.
9. Healthy forest parks make healthy people: Forest environments enhance human immune function [Internet]. Nippon Medical School. 2010. Available from: www.hphpcentral.com.
10. Kaplan R, Kaplan S. The Experience of Nature: A Psychological Perspective. NY: Cambridge University Press; 1989; p: 198-

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200.

11. Larson LR, Jennings V, Cloutier SA. Public Parks and Wellbeing in Urban Areas of the United States. PLoS ONE 2016; 11(4): 1-19.
12. Astell-Burt T, Feng X, Kolt GS. Mental health benefits of neighbourhood green space are stronger among physically active adults in middle-to-older age: Evidence from 260,061 Australians. Prev Med 2013; 57(5): 601-6.
13. Ward Thompson C, Roe J, Zuin A, Aspinall P. Understanding the impact of quality of urban green space on people's wellbeing in deprived communities. 2010. Retrieved from https://scholar.google.com, p: 11-2.
14. Nutsford D, Pearson AL, Kingham S. An ecological study investigating the association between access to urban green space and mental health. Public Health 2013; 127(11): 1005-11.
15. Schipperijn J, Ekholm O, Stigsdotter UK, Toftager M, Bentsen P, Kamper-Jørgensen F, Randrup TB. Factors influencing the use of green space: Results from a Danish national representative survey. Landsc Urban Plan 2010; 95(3): 130-7.
16. Saeednia A. Introduction to civil service management tasks. Employer the organization of municipal and state Dhyary of the country. Vol. 9, Tehran: Green Book of the Municipalities. 2007; p: 4. [In Persian]
17. World Health Organization. The World Health Report 2001: Mental health: new understanding, new hope. World Health Organization; 2001. Retrived from www.scholar.google.com
18. Krejcie RV, Morgan DW. Determining sample size for research activities. Edu and Psychol Meas 1970; 30(3): 607-10.
19. Argyle M, Martin M, Lu L. Testing for stress and happiness: the role of social and cognitive factors. In: Testing for Stress and Happiness. the role of social factors. Edited by Spielberger CD, Brebner J. New York: Taylor and Francis, 1995; p: 173-87.
20. Hills P, Argyle M. The Oxford Happiness Questionnaire: a compact scale for the measurement of psychological well-being. Pers Individ Dif 2002; 33(7): 1073-82.
21. Argyle M, Martin M, Crossland J. Happiness as a function of personality and social encounters. In: Recent Advances in Social Psychology. an international perspective. Edited by Forgas JP, Innes JM. North Holland: Elsevier Science, 1989; p: 189-203.
22. French A, Macedo M, Poulsen J, Waterson T, and Yu A. Multivariate analysis of variance (MANOVA). San Francisco State University, 2008. Available from: http://userwww.sfsu.edu/efc/classes/biol710/manova/manovanewest.htm. Accessed 9 Mar 2015

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