

**Public Attitudes Towards Naturalistic and Designed Landscapes  
in the City of Tehran, Iran**

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**Abstract**

*In the environmental literature there is an increasing body of research on urban nature suggesting that nature has beneficial effects on human beings. However, limited research has been conducted about people's attitudes regarding different forms of nature, especially in and around cities and urban areas. This study examined attitudes of Tehran citizens' toward areas of naturalistic landscapes in the city of Tehran, Iran, in contrast to the designed ones. A comparative strategy was employed using a questionnaire. The population for the study included 1,100 park visitors who were selected from Jamshideya, a typical naturalistic park, and Niavaran, a typical designed park. A panel of experts established face and content validity of the questionnaire. A pilot test was conducted to estimate reliability which ranged from a low of 0.83 to 0.92, indicating acceptable reliability. As perceived by respondents, most attractive features of Jamshideya Park were "trees' arrangements", "paved natural paths", "grounds' covers", "trees' diversity", and "shrubs' diversity," while most attractive features of Niavaran Park were "lights", "grounds' covers", "trees' decoration" trees' arrangements", and "water fountains." Because both naturalistic and designed parks have some favored features for urban public; therefore, it is suggested that both styles should be allowed in the city where appropriate.*

**Key words:** Attitudes, Naturalistic Landscape, Designed Landscape, Feature Characteristics

### **Introduction /Conceptual Framework**

The last few decades of the 20<sup>th</sup> century have seen a rapid change in attitudes towards nature in the urban environment reflecting greater awareness of nature amongst the general public and landscape professionals. There are many reasons for this change but the most important one is that as the countryside becomes more understood and industrialized, people begin to look to gardens and parks to provide the green spaces that is otherwise lacking in cities and urban areas. The case in Tehran, capital city of Iran, is not different. Industrialization and urbanization have affected the life environment of city dwellers. As a result, they tend to visit natural places such as gardens and parks. Many landscape professionals are focusing on naturalistic landscapes, in contrast to more formal designed landscapes. This situation has encouraged many city authorities to find solutions to make the city life more pleasurable and more appealing to the public. Involvement in urban agriculture and many other activities have created a need for extension educators to develop programs in naturalistic and designed landscapes. As a first step, it is important to investigate the public attitudes towards naturalistic and designed landscapes and determine what characteristics are important to the general public. Such an investigation would provide insights and guidelines for landscape professionals, extension educators and others responsible for planning city gardens, parks, and green spaces.

Review of environmental literature often suggests that people prefer natural over built landscapes (Kaplan et al., 1972; Kaplan, 1978; Ulrich, 1981; Herzog et al, 1982; Purcell and Lamb, 1984; Herzog, 1987). Natural elements such as trees and water, forested areas, and good maintenance were among the most preferred features in several studies (e.g. Kaplan, 1984; Schroeder and Anderson, 1984; Shroeder, 1985; Anderson and Stokes, 1989; Kaplan and Austin, 2003). Features that detract from the attractiveness of a park include buildings, fences, parking lots, poor condition of vegetation, urban surroundings adjoining the park, litter, graffiti, crowding, and large monotonous fields (Schoroeder and Anderson, 1984). While some studies of landscape preferences demonstrate that natural areas are highly valued and preferred, there is also evidence that people recognize that natural areas are scary, disgusting and uncomfortable (Bixler and Floyed, 1997), often associated with fears of physical danger (Talbot and Kaplan, 1984) and sometimes frightening places to visit (Hayward and Weitzer, 1984; Burgess et al., 1988; Harrison and Burgess, 1988). Talbot and Kaplan (1984) suggested that some urban public housing residents might prefer more formal settings with built features and well maintained vegetation over more natural and densely wooded areas. Kaplan and Talbot (1988) found in their research that disorderliness in a scene was the most frequently mentioned point of concern among the participants. Rohde and Kendle (1997) discuss that formal and more ornamental parts of the city have also an important role, and they may give great pleasure to many people. People how value formal ornamental landscapes will often see wild areas as untidy or unmaintained. Ozguner and Kendle (2006) found in their research that the public prefer both types of natural areas (naturalistic and designed landscapes) in an urban setting for different reasons and design styles seem to have an influence on preferences. Natural features of naturalistic park, such as “trees,” “woods and woodlands,” “water stream and ponds,” and “natural paths” were among most preferred landscape features. However, formal features of designed park such as “flowers and flower beds,” “green-house,” and “neat lawns” were also among most preferred landscape features.

Tomas, Crompton, and Scott (2003) assessed the service quality and benefits sought by visitors of a zoological park in Fort Worth, Texas. They used a convenience sample of park visitors who responded to a one-page survey containing 28 service quality attributes measured on

a five-point scale. Visitors of the park identified wildlife and wildlife information as most important service quality provided by the park. Regarding benefits, park visitors viewed family togetherness and wildlife enjoyment as very important benefits. The authors recommended that park and zoo authorities should emphasize the importance of the role education plays in entertaining, captivating visitors and facilitating socialization.

Leberman and Holland (2005) used a mixed-method approach to determine visitor preferences of Kruger National Park in South Africa. Five attributes of visitor preferences were measured: facilities, accommodation, activities, animal viewing, and accommodation cost. A total of 447 visitors completed the survey. Of the five attributes measured, only accommodation cost was seen most important than other attributes. Open-ended comments provided by respondents revealed that service in terms of staff, maintenance, and information flow was poor. The authors felt that the study undertaken by them will help Kruger National Park management with a well informed sense of who the visitors are, what they want and what they prefer to pay for accommodation. The authors stated further that the use of mixed-method approach aided park management to make informed decisions about allocating resources to provide quality services and opportunities to park visitors.

### **Purpose and Objectives**

The major purpose of this study was to investigate Tehran citizens' attitude towards naturalistic and designed landscapes. The objectives of this study were to:

1. Describe demographic characteristics of citizens who use naturalistic and designed landscapes;
2. Determine values and benefits for which citizens prefer Jamshideya (naturalistic landscape), and Niavaran (designed landscape), and
3. Determine the attractiveness of several landscape features in Jamshideya (naturalistic landscape), and Niavaran (designed landscape).

### **Methods and Procedures**

*Research design and section of sample.* This study used a comparative research strategy based on the idea that eliminating other factors except landscape style would allow the identification of the influence of landscape styles on public perception and therefore preferences for urban green spaces. In order to measure the influence of landscape styles, it was crucial that the selected sites should represent the landscape styles adequately. It was also important that the survey sites should be in the same area in order to eliminate possible effect of population differences and distance on perception and preferences. Therefore, Niavaran Park, as an example of typical formal landscape, and, a nearby public park (Jamshideya Park) that was typically a naturalistic park, were selected as sites. Niavaran Park has an acreage of 62,000 m<sup>2</sup> and was established in 1969. Jamshideya Park has an acreage of 69,000 m<sup>2</sup> and was established in 1977.

Non-probability sampling procedures were used to select the respondents for this study. Specifically, the sampling procedures used in this study reflect purposive-convenience sample suggested by Merriam (1998) and Patton (2002). "Purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (Merriam, 1998, p. 61). Respondents were selected at entrances or main routes of the two sites and who were familiar with both sites and able to make comparisons, during the day in weekdays and weekends. A total of 1,100 park

users, based on the park sizes, 515 people from Niavaran and 585 people from Jamshideya were selected.

*Instrumentation.* A questionnaire suitable for a face-to-face interview was developed to collect data. The questionnaire had three sections: 1) 18 characteristics' that measured attractiveness of the two parks using a Likert scale that ranged from 1 (very less) to 5 (very much), 2) citizens' reasons of choosing each one of the parks, and 3) personal and economic characteristics of citizens. A cover page describing the purpose of the study to the respondents and motivating them to answer the survey questions were also included.

*Validity and reliability.* Content and face validity of the questionnaire were established by using a panel of experts and landscape professionals at University of Tehran. A pilot test was conducted with 20 citizens at one of Tehran's parks. The Cronbach's alpha coefficients for the 18 items ranged from 0.83 to 0.92, indicating acceptable reliability.

*Data collection and analysis.* Data were summarized using descriptive statistics.

### **Findings**

*Objective 1: Describe demographic characteristics of citizens who use naturalistic and designed landscapes.* More than one half of the park users were male (54.5%) and younger (below 30 years old – 61.5%). Mean age of the respondents was 29.8 years. Approximately 59% of the respondents completed a college education (these include respondents who finished a bachelors degree, and some graduate studies), 35.9% had completed high school diploma, while 5.5 % had completed less than high school diploma (Table 1).

*Objective 2: Determine values and benefits experienced by respondents.* The main reasons for choosing Jamshideya Park by respondents were: "being next to mountain" (67.4%), "having natural spaces" (66.1%), and "calmness and comfort ability" (65.8%). Citizens indicated that their main reasons for choosing Niavaran Park were: "suitable for walking" (51.6%), "children play grounds" (44.4%), and "sport facilities" (37.6%). The findings revealed that some values and benefits are better associated with one of the sites. As a natural park, Jamshideya Park was more favored because of its natural spaces and Niavaran Park was found more favored because of children play grounds and sport facilities. The other benefit of Jamshideya Park was its natural place which was located near the mountain. In fact, many respondents prefer this park for climbing the mountain. On the other hand, since Niavaran has more facilities for users, some respondents use this site more than Jamshideya even though they like the latter for its nature. The majority of Jamshideya users (65.3%) and Niavaran users (67.3%) go to the parks for amusement. Other activities that park users like in parks were "talking with friends," "exercise" and "study," respectively, in both sites.

Table 1

*Frequency and Percentage for Demographic Characteristics, Visitors to Two Parks, Tehran, Iran (N=1,100)*

Characteristics	Jamshideyah (natural park)		Niyavaran (formal park)		Total	
	f	%	f	%	F	%
<b>Gender</b>						
Male	294	51.9	<u>286</u>	57.4	580	54.5
Female	<u>272</u>	<u>48.1</u>	<u>212</u>	<u>42.6</u>	<u>484</u>	<u>45.5</u>
Total	566	100.0	498	100.0	100.0	100.0
<b>Age*</b>						
< 20 years	57	9.7	45	8.7	102	9.3
20 – 30 years	376	62.7	272	52.8	639	58.1
31 – 40 years	93	15.9	89	17.3	182	16.5
41 – 50 years	37	6.3	41	8.0	78	7.1
> 50 years	<u>31</u>	<u>5.3</u>	<u>68</u>	<u>13.2</u>	<u>99</u>	<u>9.0</u>
Total	585	100.0	515	100.0	100.0	100.0
<b>Education</b>						
Less than high school diploma	25	4.3	34	6.7	599	5.5
High school diploma	223	38.7	165	32.7	388	35.9
Bachelor of science	254	44.1	258	51.2	512	47.4
Master of science and more	<u>74</u>	<u>12.8</u>	<u>47</u>	<u>9.3</u>	<u>121</u>	<u>11.2</u>
Total	576	100.0	504	100.0	100.0	100.0
<b>Income per month</b>						
< 150,000 Tomans **	103	21.3	57	13.9	160	17.9
150,000 – 300,000 Tomans	177	36.6	165	40.1	342	38.2
300,000 – 500,000 Tomans	126	26.0	93	22.6	219	24.5
> 500,000 Tomans	<u>78</u>	<u>16.1</u>	<u>96</u>	<u>23.4</u>	<u>174</u>	<u>19.4</u>
Total	484	100.0	411	100.0	100.0	100.0

Note. \* Mean age = 29.8 years and standard deviation 12 years. \*\* \$1.00 = 920 Tomans

Table 2

*Reasons for Which Citizens Prefer Jamshideyah and Niavaran Parks, Tehran, Iran (N=1,100)*

Characteristics	Jamshideyah (natural park)			Niyavaran (formal park)		
	F	%	Rank	F	%	Rank
- Being next to mountain	742	67.4	1	-	-	-
- Natural spaces	727	66.1	2	200	18.2	7
- Calmness and comfort ability	724	65.8	3	377	34.3	4
- Security	380	34.5	4	346	31.4	5
- Suitable for walking	365	33.2	5	568	51.6	1
- Availability of restaurants/supermarkets	207	18.8	6	256	23.3	6
- Children play grounds	204	18.4	7	488	44.4	2
- Sport facilities	174	15.8	8	414	37.6	3

*Objective 3: Determine the attractiveness of several landscape features in Jamshideya (naturalistic landscape), and Niavaran (designed landscape).* As perceived by respondents, most attractive features of Jamshideya Park were “trees’ arrangements” (Mean=3.86), “paved natural paths” (Mean=3.82), “grounds’ covers” (Mean=3.81), “trees’ diversity” (Mean=3.79), and “shrubs’ diversity” (Mean=3.54) (Table 3). Trees and natural paths were among most preferred landscape features, which is consistent with previous studies (Schroeder, 1985; Anderson and Stokes, 1989; Yang and Brown, 1992). Citizens believed that most attractive features of Niavaran Park were “lights” (Mean=3.36), grounds’ covers” (Mean=3.27), “trees’ decoration” (Mean=3.19), “trees’ arrangements” (Mean=3.18), and “water fountains” (Mean=3.17). Findings showed that some features were associated with sites’ styles. According to the results, trees’ natural-arrangements, paved natural paths, and grounds’ natural-covers were among most preferred features of natural landscape, and on the other hand, lights’ forms, grounds’ designed-covers, trees’ decoration and water designed-fountains were among most preferred features of designed landscape.

Table 3

*Means, Standard Deviations, and Rank for Landscape Features' Attractiveness, Jamshideyah and Niavaran Parks, Tehran, Iran*

Landscape features (Characteristics)	Jamshideya (natural park)				Niyavaran (formal park)			
	<i>n</i>	Mean*	<i>SD</i>	Rank	<i>n</i>	Mean*	<i>SD</i>	Rank
Trees' arrangements	1088	3.86	0.86	<b>1</b>	1073	3.18	0.90	<b>4</b>
Paved natural paths	1053	3.82	1.00	<b>2</b>	1054	3.00	0.93	11
Grounds' covers	1061	3.81	1.05	<b>3</b>	1062	3.27	1.00	<b>2</b>
Trees' diversity	1082	3.79	0.85	<b>4</b>	1054	3.11	0.87	8
Shrubs' diversity	1028	3.54	0.95	<b>5</b>	1037	3.02	0.89	10
Water fountains, ponds	1055	3.50	1.04	6	1043	3.17	1.01	<b>5</b>
Shrubs' arrangements	1058	3.40	0.95	7	1048	3.14	0.95	7
Natural fences (shrubs)	1058	3.34	0.94	8	1064	2.85	0.94	15
Formal fences (walls)	1056	3.24	1.01	9	1057	2.83	0.98	16
Park lights	1037	3.23	1.02	10	1054	3.36	0.95	<b>1</b>
Flowers' diversity	1067	3.21	1.08	11	1053	3.16	0.98	6
Shrubs' decoration	1052	3.18	0.99	12	1053	3.08	0.96	9
Trees' decoration	1062	3.16	1.03	13	1055	3.19	0.96	<b>3</b>
Benches' style	1059	3.10	1.07	14	1043	2.87	0.93	14
Birds	1044	3.06	1.18	15	1034	2.28	1.01	18
Wastebaskets' style	1057	3.01	0.98	16	1050	2.74	0.91	17
Lights' style	1032	3.00	0.93	17	1038	2.99	0.92	12
Coloring form	1065	2.97	0.98	18	1055	2.95	0.92	13
<b>Overall Mean*</b>	<b>1085</b>	<b>58.62</b>	<b>10.12</b>		<b>1070</b>	<b>53.12</b>	<b>9.51</b>	

*Note.* \* Mean computed on a scale 1 = very less to 5 = very much and could range from a low of 18 to high of 90 with theoretical mid point of 54.

### Conclusions and Recommendations

This study examined public perceptions about urban naturalistic landscapes in contrast to a more formal design of green open spaces in the context of two urban green spaces in the city of Tehran, Iran. Results of the study identified some benefits of nature that may actually come from a naturalistic or wild nature better than a formal nature in cities and suggested that naturalistic landscape styles can have greater benefits for some people than formal styles. For example, Tehran's citizens found a naturalistic landscape (Jamshideya Park) a place in which they could better experience the sense of naturalness, because it has more natural spaces. However, the research also showed that formal nature or a designed landscape (Niavaran Park), too, has its own distinct benefits. Facilities and designed play grounds were among benefits which made respondents to prefer a designed landscape. Lights' styles and trees' decorations were also among most favored features as perceived by respondents. This study supported previous research (Dunnet, 1999; Hitchmough and Woodstra, 1999; Ozguner and Kendle, 2006) that both natural areas and formal landscapes have their own value and benefit for citizens. With constant pre-occupation and contact with green spaces, landscape professionals often tend to appreciate the richness of the small intimate pictures that nature creates compared to the simpler structures and lines of man-made designs (Ozguner and Kendle, 2006). However, a move to naturalistic

styles should not mean turning our back on other styles that are valued by the public and this point should be taken into account by the decision makers in the planning and management of urban green spaces. Citizens have different tastes and interests. Both types of naturalistic and designed landscapes should, therefore, be allowed in cities wherever appropriate and feasible.

### **Implications/Educational Importance**

The results of this study could help extension specialists and landscape professionals involved in activities related to landscape design and those citizens' concerned with the environment and health matters.

Identification of citizens' preferences and attitudes towards landscapes will go a long way in planning and developing parks, gardens, and green spaces in and around the city of Tehran.

Park management in these two parks can use the findings of this study to implement appropriate strategies to enhance park visitor preferences and to undertake additional work to maintain and beautify the parks.

Stakeholders such as city council, city planners, and mayor's office could also use the results to make informed decisions on improving the landscape in and around the city of Tehran. Especially important is allocating funds for improving the services and benefits of park visitors

Need exists to undertake a coordinated effort of all stakeholders, especially landscape professionals, horticulture departments, Extension specialists, environmental agencies and other units of government to develop a long-term development plan for the two parks.

Finally, the results of this study offers guidance for managerial actions to strengthen the various activities and improvement undertaken by the management. The use of study results is of immense value considering the limited resources and/or funds available for these two parks.

### **References**

- Anderson, L. M., Stokes, G. S., 1989. Planting in parking lots to improve perceived attractiveness and security. *J. Arboric.* 15(1), 7-10.
- Bixler, R. D., Floyd, M. F., 1997. Nature is scary, disgusting and uncomfortable. *Environ. Behav.* 29, 443-467.
- Burgess, J., Limb, M., Harrison, C. M., 1988. Exploring environmental values through the medium of small groups. *Environ. Plann.* A20, 309-326.
- Harrison, C., Burgess, J., 1988. Qualitative research and open space policy. *The Planner*, 16-18.
- Hayward, D. G., Weitzer, W. H., 1984. The public image of urban parks: past amenity, present ambivalence, uncertain future, *Urban Ecol.* 8, 243-268.
- Herzog, T. R., 1987. A cognitive analyses of preference for natural environments: mountains, canyons and deserts. *Landsc. J.* 6(2), 140-152.
- Herzog, T. R., Kaplan, S., Kaplan, R., 1982. The prediction of preference for unfamiliar urban. *Popul. Environ.* 5, 43-59.
- Kaplan, R., 1978. *The green experience*. In: Kaplan, S., Kaplan, R. (Eds.), *Humanscape: Environments for People*. Duxbury press, North Sitate, MA, pp. 186-193.
- Kaplan, R., 1984. Impact of urban nature: a theoretical analysis. *Urban Ecol.* 8, 189-197.
- Kaplan, R., Talbot, J. F., 1988. Ethnicity and preference for natural settings: a review and recent findings. *Landsc. Urban Plann.* 15, 107-117.
- Kaplan, R., Austin, M. E., 2003. Out in the country: sprawl and the quest for nature nearby. *Landsc. Urban Plann.* 69. 235-243.

- Kaplan, S., Kaplan, R., Wendt, J. S., 1972. Rated preference and complexity for natural and urban visual material. *Percept. Psychophys.* 12(4), 354-356.
- Leberman, S. I., & Holland, J. D. (2005). Visitor preferences in Kruger National Park, South Africa: The value of mixed-method approach. *Journal of Park and Recreation Administration*, 23(2), 21-36.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.
- Ozguner, H., Kendle, A. D., 2006. Public attitudes towards naturalistic versus designed landscapes in the city of Sheffield (UK). *Landsc. And Urban Plann.* 74, 139-157.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage.
- Purcell, A. T., Lamb, R. J., 1984. Landscape perception: an examination and empirical investigation of two central issues in the area. *J. Environ. Manage.* 19, 31-63.
- Rohde, C. L. E., Kendle, A. L. D., 1997. *Nature for people*. In: Kendle, A. D., Forbes, S. J. (Eds.), *Urban Nature Conservation: Landscape Management in the Urban Countryside*. E & FN Spon, London.
- Schroeder, H. W., 1985. *Preference and meaning of arboretum landscapes: combining quantitative and qualitative data*. In: Sinha, A. (Ed.), *Landscape perception, Readings in Environmental Psychology*. Academic Press, New York.
- Schroeder, H. W., Anderson, L. M., 1984. Perception of personal safety in urban recreation sites. *J. Leisure Res.* 16(2), 178-194.
- Talbot, J. F., Kaplan, R., 1984. Needs and fears: the response to trees and nature in the inner city. *J. Arboric.* 10(8), 222-228.
- Tomas, S. R., Crompton, J. L., & Scott, D. (2003). Assessing service quality and benefits sought among zoological park visitors. *Journal of Park and Recreational Administration*, 21(2), 105-124.
- Ulrich, R. S., 1981. Natural versus urban scenes: some psychological effects. *Environ. Behav.* 13(5), 523-556.
- Yang, B. E., Brown, T. J., 1992. A cross-cultural comparison of preferences for landscape styles and landscape elements. *Environ. Behav.* 24 (4), 471-507.