

Demographic analysis of the visitors of Sisangan forest park

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Abstract: In the modern world, tourism and its management is considered as an economic power. Since Iran has a significant potential in relation to having natural areas, studying and researching on the factors affecting the tourism industry is recognized as a necessity of studies. This study evaluates the visitors of Sisangan forest park in Mazandaran province with a social approach. Methodology of this study is a descriptive analysis. The first step was visiting the study area and then the sample size was estimated by using statistical methods that the number of questionnaires was 140. The questionnaire and its questions were designed according to the experts' opinions and peer reviews. The questions include the visitors' demographic characteristics, destination and park accessibility, travel companions, visit history of the forest park, duration of stay in the park, seasons and days of visit and finally visitors' effects on the environment. The results of this study show that the majority of the visitors belong to the age group of 25 to 44 years old and most visitors drive to the park. The spring is the best season to visit the park from the visitors' point of view and most of the visitors come to the park with their family. Finally, the most important impact of the visitors on the environment of park is littering in the park.

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1. Introduction

Nowadays, tourism is becoming an important lucrative activity in the world and a strong tool for successful economic development both in local and national scales (Stubelj Ars and Bohanec, 2010). Tourism is now recognized, as an inevitable priority of humans' life. The need for tourism is rooted in functions including process of tourism; Functions in various aspects of economic, sociological and psychological that not only change tourism into the world's largest and most diverse industry but also is introduced as a process to create peace in the world in terms of social and mental services (Mohseni, 2011). Since Iran is the world's first outing in rows of five countries in terms of natural attractions, paving the way for the growth of natural tourism in the country is very essential (Papli Yazdi and Saghaee, 2006).

Forests are important sources of outdoor recreation. Natural forest parks that are remarkable examples of natural areas and also important to ensure the sustainability of biodiversity, can provide protective, educational and research services as well as great opportunities for people's leisure time. However, as parks and recreational centers allocate much of the national budget to themselves, they should be able to meet the people's recreational needs (Majnonian, 1979). Forest parks and recreational areas in the current situation are of the requirements of life

and it is necessary to determine the level of their demand (Maygooni et al., 2009). Nowadays, there is an increasing demand for use of recreational areas. Therefore, analysis of demographic characteristics and opinions of tourists visiting such areas is essential. The study of the opinions and attitudes of visitors towards recreational areas and facilities is one of the main management tools of recreation areas in upgrading their quality and maintaining visitors' demands in an optimum level (Barzehkar, 2005). Thus, in this study, it is intended to achieve Sisangan forest park's visitors' demanding activities with the help of questionnaires spreading through the visitors. This causes a suitable management planning for recreational areas so that the relationship between visitors' demands and recreational areas' elements can be made in a way that everything is in their place according to the visitors' demands and recreational areas' capacity.

Methods and Materials

The study area

Sisangan forest park is one of the most unique Caspian coastal plain especially with the mix of *Buxus hyrcana* as an indicator species, located in southern parts of Caspian Sea in Nowshahr. This forest park is situated between Rooyan and Nowshahr and it has an area of 591.65 Ha located between latitudes 36° 33'-

30'' 35'N and longitudes 51° 47' - 30'' 49'E (Fig. 1). Approximately 90% of this forest park is *Buxus Hyrcana*. The general slope of the region is less than 5% and its elevation is from -26 meters in costal parts to 125 meters towards the northern sloping side of

central Alorz (Roodi et al., 2012). The average annual rain of the region is 1293.5 millimeters and its average annual temperature is 16.13 °C. According to Aridity Index of Emberger, its climate is considered as extremely humid with mild winter.

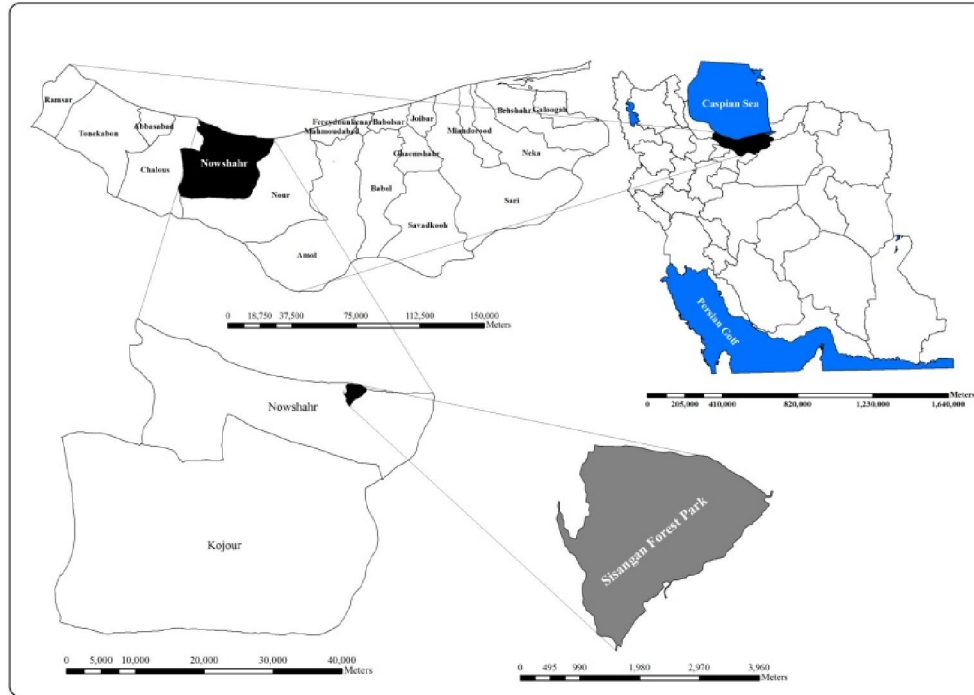


Figure1. The study area

Planning for regions in which there is no demand for recreation is futile. Therefore, people’s willingness to use an area as a recreational area is a critical factor that can alter an area to a recreational resource. If parks and recreational areas are established according to socio-economic rules and regulations, users’ opinions will be one of the most important factors that determine the recreation value of parks (Barzehkar, 2005). In this study in order to analyze Sisangan forest park’s visitors’ opinions, questionnaires were distributed among people who were visiting the park. Considering the fact that this survey concentrates on Sisangan tourists’ insights and opinions and their demands, the statistical population includes the tourists of Sisangan forest park. After designing the questionnaire, in pretest stage 30 questionnaires were given out in outdoor recreational zones and completed with the help of interview. The collected data were analyzed in SPSS ver. 17 software. The sample size was calculated through Cochran formula (1) (Cochran, 1977).

$$N = \frac{t^2 \cdot cv^2}{e^2} \quad (1)$$

Where N is the sample size, t is student’s t-test (degree of freedom: 2n-1), d is the acceptable margin

of error for mean and cv is coefficient of variations which is calculated through formula (2).

$$cv = \frac{S}{X} \quad (2)$$

Where S is standard deviation and X is data mean.

Finally, 107 questionnaires were needed but to be more precise, 140 questionnaires were distributed. The purpose of this questionnaire is to find out the attitude of visitors to the park as a place for recreation and tourism. To investigate the relationship between the variables, correlation coefficients between them were calculated. In order to explore the relationships between the variables of the questionnaire, the dependent and independent variables enter statistical relationship according to their scale type. Pearson correlation coefficient was used for variables with ratio scale.

Results

• Demographic characteristics

Out of 140 people that completed the questionnaire, 55% was male and 45% was female. In terms of age, 17.1% of the studied population was in the age group of 15 to 24 years old, 61.4% was in the age group of 25 to 44 years old, 18.6% was in the age group of 45 to 64 years old, and 2.9% was in the age

group of older than 64 years old. The mean age was 35.27 years old and the standard deviation was 12.07. In terms of marital status, 28.6% of the study population was single and 71.4% was married. In terms of education, 9.3% of respondents were lower than diploma, 37.1% was diploma and advanced diploma, 40.7% was bachelor, 11.4% was master and 1.4% was PhD. In terms of occupation, 25.7% of the study population was homemaker, 27.1% was self-employed, 25% was employee, 15% had cultural-educational occupations, 3.6% were medical and paramedical professions and 3.6% was unemployed. In other words, 20.7% of visitors to the park had government jobs, 39.3% had non-state jobs, and 40% was homemaker, student and unemployed. In terms of visitors' location, 33.6% of the tourists lived in the northern provinces (Mazandaran and Gilan), 50.7% lived in the provinces neighboring northern region of the country (Tehran, Alborz, North Khorasan, Zanjan) and 15.7% lived in other provinces (Esfahan, East Azarbaijan, Razavi Khorasan, Qom, Markazi, Khuzestan, Hamedan) (table 1).

Table 1. Demographic characteristics of Sisangan forest park's visitors

Demographic characteristics	Frequency
Gender	
female	45
male	55
Age	
younger than 15	0
15-24	17.1
25-44	61.4
45-64	18.6
older than 65	3.9
Marital status	
single	28.6
married	71.4
Education	
lower than diploma	9.3
diploma and advanced diploma	37.1
bachelor	40.7
master	11.4
PhD	1.4
Occupation	
employee	25
self-employed	27.1
medical and paramedical	3.6
cultural-educational	15
homemaker	25.7
unemployed	3.6
Location	
northern provinces	33.6
provinces neighboring northern region	50.7
other provinces	15.7

- Destination and park accessibility**

According to the results, 96.4% of the tourists drive their own vehicles and 3.6% used public transport. The results show that 41.4% of interviewees chose this forest park for outdoor recreation and 58.6% of them were passing travelers.

- Travel companions**

Figure 2 shows that 68.6% of the population under study came to the park with their family, 28.6% with friends, 2.1% with travel companions like tours and 0.7% with training and educational groups.

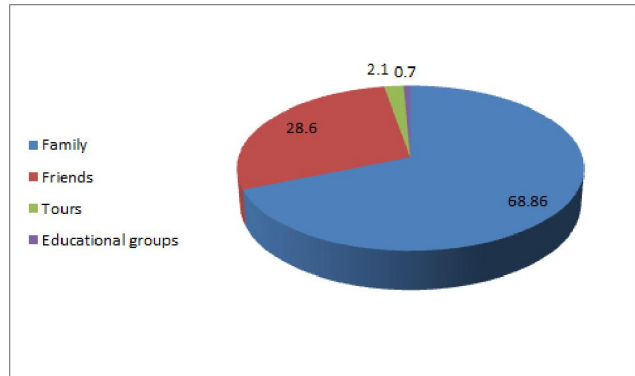


Figure 2. Travel companions

- Visit history of the forest park**

Studies indicate that 17.1% of the interviewees were those who had come to the park for the first time, 16.4% for the second time, 12.9 for the third time and 53.6% for more than three times.

- Duration of stay in the park and willingness to stay overnight**

According to the results, 12.9% of the interviewees stayed less than 2 hours, 26.4% stayed between 2 to 4 hours, 34.3% stayed half day, 15% stayed whole day and 11.4% stayed more than a day. In addition, the percentage of people tended to stay overnight in the park was 66.4 and 33.6% of them had no desire to stay overnight in the park.

- Seasons and days tourists visit the park**

According to the results, 74.3% of the population under study visited this park in spring, 22.9% in summer and 9.2% in fall. Also in connection with the days of visit, 2.1% tended to come to this park on Sunday, 10% on Wednesday, 47.1% on Thursday and 40.7% on Friday.

- Visitors' effects on the environment**

Figure 3 shows the problems caused by the presence of tourists in the park from their own perspective. 53.6% of the interviewees believed that spreading wastes is the worst problem that is caused due to the presence of visitors, 20.7% makes noise,

12.1% damages to trees and plants and 13.6% does not observe any problems in the park.

• **The reasons for choosing the park**

Important factors in choosing this park by tourists are shading of trees, sights and environmental attractions, easy access to the main road, parking and safety. While, the possibility of doing recreational activities and access to services such as shops and restaurants are visitors' last priorities (table 2).

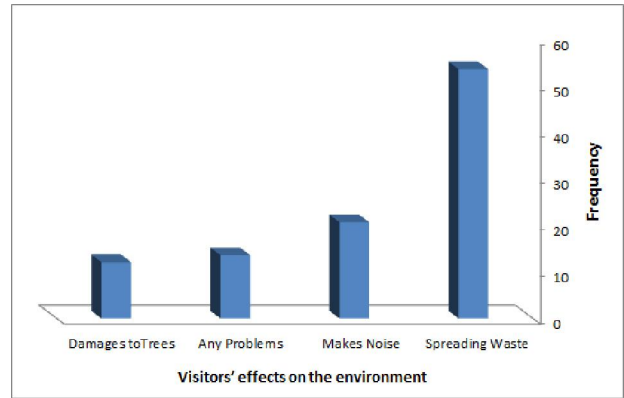


Figure 3. Problems caused by the visitors

Table 2. The importance of each of the following factors in choosing Sisangan forest park

Variable	Value		Mean	Standard deviation	Rank
	High	Average			
shading of trees	76.4	20	3.72	0.55	1
sights and environmental attractions	62.9	29.3	3.52	0.7	2
easy access to the main road	56.4	32.9	3.43	0.74	3
parking	50.7	31.4	3.26	0.9	4
safety	45.7	36.4	3.23	0.84	5
Social security	42.1	37.9	3.17	0.86	6
Calm and quiet	32.9	44.3	3.07	0.8	7
Available drinking water	37.1	36.4	3.02	0.93	8
restroom	32.9	38.6	3	0.86	9
possibility of doing recreational activities	32.9	38.6	2.69	0.92	10
access to shops and restaurants	16.4	35.7	2.53	0.93	11

• **Satisfaction of welfare services**

According to table 3, shading of trees, access roads, the number or location of parking, seating for

picnics and safety are in first to fifth places respectively in terms of suitability of welfare services. However, the restrooms are in the last place.

Table 3. Prioritizing welfare services in the Sisangan forest park

Variable	Quite unsuitable	Unsuitable	Suitable	Quite suitable	Mean	Standard deviation	Rank
shading of trees	3.6	10	50	36.4	3.19	0.75	1
access roads	8.6	15	58.6	17.9	2.85	0.8	2
the number or location of parking	8.6	15.7	60	15.7	2.82	0.79	3
seating for picnics	10.7	22.1	51.4	15.7	2.72	0.85	4
safety	12.1	24.3	46.4	17.1	2.68	0.89	5
social security	12.1	25.7	50	12.1	2.62	0.85	6
available stoves	9.3	31.4	49.3	10	2.6	0.79	7
drinking water taps	15	33.6	41.4	10	2.46	0.86	8
clean river water	10	40	45	5	2.45	0.74	9
quantity or quality of playgrounds	17.9	30	45	7.1	2.41	0.86	10
cleanliness of the place (especially garbage collection)	19.3	33.6	35.7	11.4	2.39	0.92	11
Garbage's containers	25	32.1	37.9	5	2.22	0.88	12
restrooms	26.4	32.9	35	5.7	2.2	0.89	13

• **Satisfaction of responsible departments and organizations**

According to table 4, Department of Environment (DOE) and the municipality are in the first and last places respectively.

Table 4. Prioritizing services of responsible departments and organizations in Sisangan forest park

Variable	Quite unsuitable	Unsuitable	Suitable	Quite suitable	Mean	Standard deviation	Rank
Department of Environment	12.1	25.7	51.4	10.7	2.6	0.83	1
The traffic police	14.3	23.6	54.3	7.9	2.55	0.83	2
Roads and Transport	13.6	25.7	53.6	7.1	2.54	0.81	3
The police	16.4	23.6	50	10	2.53	0.88	4
Cultural Heritage and Tourism Organization	15	28.6	47.9	8.6	2.5	0.85	5
The municipality	23.6	28.6	40	7.9	2.32	0.92	6

• **Effective factors contributing to a suitable recreational area**

Social security, clean drinking water, clean restrooms are in the first three priority for a suitable recreational area from the interviewees' point of view.

While the supply of convenience food and taxi services are the least important factors in creating a suitable recreational area (Table 5).

Table 5. Prioritizing effective factors contributing to a suitable recreational area

Variable	Value				Mean	Standard deviation	Rank
	High	Average	Low	Unimportant			
social security	0	1.4	10	88.6	3.87	0.37	1
clean drinking water	0.7	1.4	9.3	88.6	3.85	0.44	2
clean restrooms	0.7	2.9	7.9	88.6	3.84	0.48	3
Suitable land for settlement	0	1.4	15.7	82.9	3.81	0.42	4
scenic beauty and diverse landscapes	0	2.1	15	82.9	3.8	0.44	5
clean environment without garbage	0.7	6.4	10	82.9	3.75	0.6	6
Shading of trees	0	0.7	36.6	75.7	3.75	0.45	7
parking availability	0	3.6	20	76.6	3.72	0.52	8
Safety against risks	1.4	5	15	78.6	3.7	0.62	9
proper system of garbage collection	1.4	6.4	19.3	72.9	3.63	0.67	10
calm and quiet	2.1	3.6	25.7	68.6	3.6	0.66	11
proximity to road and convenient access	1.4	5.7	26.4	66.4	3.57	0.66	12
tourists' population	2.1	4.3	35	58.6	3.5	0.68	13
presence of birds	3.6	10	26.4	60	3.42	0.81	14
playgrounds for kids	3.6	9.3	30	57.1	3.4	0.8	15
presence of vermin	5	15.7	15.7	63.6	3.37	0.92	16
overnight stay	5.7	9.3	30	55	3.34	0.87	17
exercise facilities	2.1	15	29.3	52.6	3.34	0.81	18
grocery and hygiene stores	4.3	12.1	30	53.6	3.32	0.85	19
Possibility of seeing wildlife	6.4	15.7	26.4	51.4	3.22	0.93	20
proximity to river	3.6	18.6	36.4	41.4	3.15	0.85	21
supply of convenience food	6.4	14.3	36.4	42.9	3.15	0.89	22
taxi services	9.3	21.4	30	39.3	2.99	0.99	23

• **Activities done in recreational areas**

Figure 4 shows on-site recreational activities that most tourists do. 36.4% of visitors enjoy relaxation, 27.9% of them have a meal and rest, 24.3% of visitors

come to spend a few hours with family and friends, 9.3% for a walk and sightseeing and 2.1% for exercising come to this forest park.

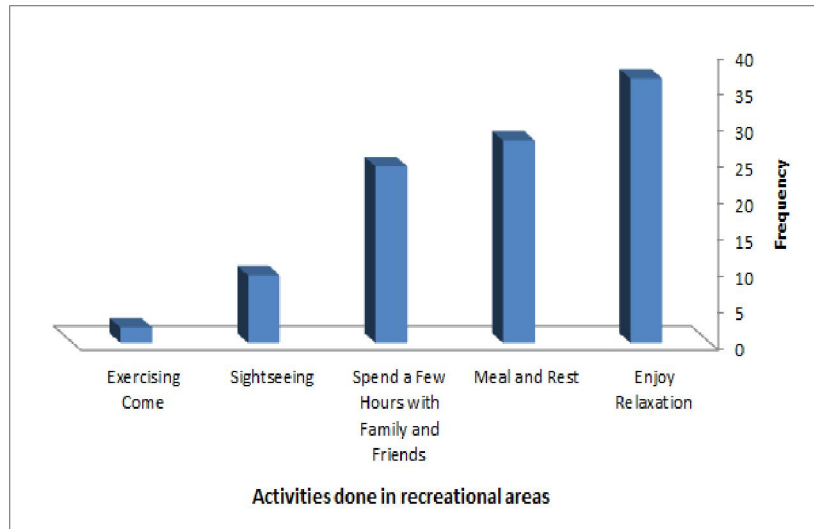


Figure 4. Activities done in recreational areas

Pearson correlation coefficient was used for variables with ratio scale (age, visitors' locations to the park, number of companions, visit history the park) but there were no significant relationships

between them except for the "age" variable that has a negative significant relationship with "the reasons for choosing the park" variable (Table 6).

Table 6. The relationship between the selected variables (Pearson)

Random variable	Second random variable	Correlation type	r	Sig
Age	The reasons for choosing the park	Pearson	0.026	0.76
	Satisfaction of welfare services		-0.187*	0.036
	Satisfaction of responsible departments and organizations		-0.094	0.267
	Effective factors contributing to a suitable recreational area		0.52/0-	541/0

Conclusion:

Natural forest parks are one of the main centers of the strength and promotion of tourism that are evolving in terms of quality and quantity in parallel with their growth (Maygooni et al., 2009). Tourism activity does not only motivate people to spend their time in nature but also is an opportunity for people to directly conserve and maintain the nature. Since tourism is considered as a tool to manage people, so number of people, pattern of visit, time of visit, distance and minimum information in this area should be collected (Asadolahi, 2010). Such information is essential for sustainability of tourism and management of recreational areas. Identifying the age groups of visitors and their education are the most important parts in social studies of recreational areas. This information is necessary to predict and provide

recreational plans and facilities for visitors' leisure time. Results show that the highest number of visitors (61.4%) is in the age group of 25 to 44 years old that this could be due to the lack of facilities in the park for the age groups younger than 25 and older than 44 years old. According to the visitors' education, the psychological needs and demands of diplomas, bachelors and masters (77.8%) should be in the centre of attention. Knowing the number of visits to recreational areas plays an important role in planning and allocation of existing recreational facilities. More visits are observed in the recreational areas having more attractions (Joan et al., 2004). According to this study, 53.6% of the visitors came to the park for more than 3 times and 74.3% of them came to the park in spring for outdoor recreation that this shows high power of Sisangan forest park in attracting tourists and

the need to create more facilities to develop tourism, especially during Nowruz. According to the results, family groups (68.6%) were the main visitors to the park, so amenities and recreational facilities in the park should meet the needs of families.

Studying the reasons for choosing this park for outdoor recreation shows that shading of trees, sights and environmental attractions, easy access to the main road, parking are the most important factors for choosing this park. While, the possibility of doing recreational activities and access to services such as shops and restaurants are visitors' last priorities. The "shading of trees" factor shows the visitors' willingness for picnic and camping. The "easy access to the main road" and "parking" factors are in connection with 96.4% of visitors who drive to the park by their own vehicle. Therefore, there is no need to develop taxi services in this park. The "access to services such as shops and restaurants" factor is unimportant for visitors so budget allocation to develop this factor in order to attract tourist is futile.

The results of the questionnaire vividly show the ineffectiveness of most state organizations in connection with the service in the forest park; the municipality and DOE were the worst and best departments respectively in doing their responsibilities and tasks. However, one of the main factors for a suitable recreation area is a clean environment without waste. Therefore, the municipality services are important factors in attracting tourists to visit the park. As most people come to this park in order to relax and rest so, it is a good idea to stop drivers from making noise with the car stereo.

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