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Original Article

Expectations of the People Living in Metropolises from Recreation Areas: Case Study—Istanbul

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ABSTRACT

The adverse effects of metropolis life have caused physical, mental, and spiritual wear on people. Recreational activities have become necessary to eliminate these wears or reduce their impact, mainly in natural areas. This study aimed to reveal the demands and expectations of people in Istanbul, a population of 15 million and one of the few metropolises globally from recreation areas. Within this study, 404 subjects were interviewed, and a survey study was carried out according to the random sampling method. The data were evaluated with various statistical techniques. Nature-based sports, botanical gardens, multi-purpose sports areas, and nature education activities have been determined to be the most desired functions in recreation areas in Istanbul. In terms of nature-based sports activities, it can be said that walking, cycling, and camping activities are the most preferred activities. The natural environment is the most crucial resource in meeting recreational needs. Also, unique personal features, characteristics of recreational areas, social value judgments, the population density of cities, and the amount of green space per person, etc., significantly affect recreational demands and expectations. Both were increasing the quality of existing recreation areas. The ability to carry out recreational activities that cannot be done due to the lack of space by improving the quality of current recreation areas and opening and evaluating potential recreation areas will ensure that the city people's recreational expectations and demands are met.

Keywords: Citizen participation, open-green spaces, recreational activity, recreational area characteristics, recreational demand

Introduction

Migration from rural to urban areas, developments in industry and technology, unplanned and unhealthy urbanization, population growth, air pollution, traffic problems, rapid destruction of the natural regions, intense work pressure, monotonous daily life, pandemic restrictions, etc., have led to adverse effects on the physical and mental health of people living in metropolitan areas. This situation causes people to need green spaces where they can spend their free time and benefit from various social, cultural, and physiological purposes.

Recreation is one of the essential elements for people to recover from their physical and spiritual burnout and start each new day more alive mentally and physically. Recreation is the whole of physical and intellectual activities that individuals do with their free will in their leisure time to revive themselves physically and intellectually as per the nature of the society in which they live and with their cultural and economic status (Boman et al., 2013). More clearly, recreation can be defined as various activities that people do in their free time to recover from the dull, prescriptive, and monotonous daily work life and relax and have a good time (Bozkurt, 2016). Nowadays, recreation is considered a necessity for maintaining a healthy life and an important factor affecting the quality of life (Kuş Şahin & Güneş, 2019; Nalbantoğlu, 1997).

Regarding one's health and attitude toward the environment and laws, there are specific differences between a person deprived of recreational opportunities and a person who has access to good options in this respect. Thus, people worldwide need recreation for physical, mental, and social purposes (Çoruh, 2013).

According to Büyükyeğen (2008), various criteria must be established for individuals or society to participate in recreational activities or perform their actions under better conditions. The most important criteria are time, sufficient financial strength, and areas to perform recreational activities.

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Urban recreation areas offer many ecological, psychological, social, and economic benefits (Kuo et al., 1998; Uy & Nakagoshi, 2008). In a unique sense, it offers urban people opportunities for physical and psychological rejuvenation and well-being and provides social space (Kuo et al., 1998; Shackleton & Blair, 2013; Stigsdotter & Grahn, 2003). In addition to allowing urban people to relieve stress (Van den Berg et al., 2010), urban recreation areas also play a social role in terms of restorative and preventive health benefits (Hartig, 2008; Velarde et al., 2007; Ward Thompson, 2011), new lifestyles (Ward Thompson, 2002), the life satisfaction of older people (Sugiyama et al., 2009), human needs and sustainability of society (Chiesura, 2004), and it strengthens the sense of community (Kuo et al., 1998; Maas et al., 2006, 2009). Furthermore, green spaces in urban areas provide a relatively low-cost contribution to improving and maintaining people's physical and psychological health and well-being (Zhanga et al., 2013).

Recreational activities vary depending on recreational area characteristics and people's characteristics. Recreational demands and expectations can create differences according to the location of recreation areas, the natural, social, and cultural structure of cities, and personal factors such as occupation, income, education level, age, and gender. The participation of individuals in recreational activities is also influenced by social value judgments (Kılbaş, 2001). Thus, people decide to participate in recreational activities according to their perceptions, wishes, and possibilities, and recreational behaviors may differ from city to city and person to person.

Identifying these differences is important for meeting the recreational expectations and demands of almost all urban people. It is also necessary for urban planning studies and, as a part of that, recreational planning and the planning of open-green spaces that provide resources for recreation. Ensuring the participation of urban people in planning and managing recreational areas and open-green spaces, and identifying their expectations will help reveal the best solutions.

The results obtained from some of the studies conducted have revealed people's desire to participate in decisions that affect them, especially in numerous nature-related issues. Given the importance of such areas, engaging local groups early in the planning process is precious. Participation can also be an important process for generating results that respect local culture, religion, or local communities' recent and distant past. In addition to universal standards and rules, sensitivity to local conditions is also important in planning and design processes (Matsuoka & Kaplan, 2018). For this reason, gaining broad public support through public participation in these processes is a significant step for the sustainability of areas.

The present study aimed to reveal urban people's demands and expectations about recreation areas and identify differences in opinion among various socio-economic variable groups (gender, age, education level, occupation, and monthly average income) as identified through a questionnaire study in İstanbul. As Turkey's most urbanized province with the highest population density, Istanbul is also the city with the highest demand for recreation areas. Therefore, this city was chosen as the sample area in this study. The study was conducted in almost all the districts of Istanbul on seasides, wooded areas, lakesides, riversides, picnic areas, parks, historical areas, resorts, urban groves, natural forests with no protection status, thematic parks and gardens, and urban forests, all of which can be considered as recreation areas. A significant part of the existing recreation areas is in forest areas. That forest areas are a valuable resource for potential recreation areas is important for the planning and managing forests. In this sense, it is thought that the results obtained from this study will provide a perspective for the planning and management of recreation areas, especially in Istanbul. It is also hoped that the results will allow maximum utilization of the subject matter areas by society and contribute to the literature regarding sustainable planning and management of these areas.

Methods

Study Area and Data

Istanbul has been one of the most attractive centers of the world for over 1000 years due to its economic, commercial, and political characteristics. It has always been among the most populated cities in the world (Kara et al., 2008). While most of the forests of the province of Istanbul are on the Black Sea coast in the northern part of the city, the total forest area is 258,767 hectares, including those in interior and peripheral parts, and approximately 48% of Istanbul is covered with forests (Köse, 2017). With a surface area of 5313 km^2, Istanbul has a population of 15,462,452 (2910 inhabitants per square kilometer) and is the province with the highest population density in Turkey (TUIK, 2020). In this respect, Istanbul is the most urbanized city in Turkey. It is observed that the population has been increasing remarkably, especially since the 1980s, according to the area it covers. Its population was 4,471,890 in 1980 (Kara et al., 2008), which soared to 13,255,685 in 2010 and reached 15,462,452 in 2020 with an increase of 2,206,767 in the last decade (TUIK, 2020). Thus, Istanbul's population has increased approximately 3.5 times in the last four decades.

The study was conducted on seasides, wooded areas, lakesides, riversides, picnic areas, parks, historical areas, resorts, urban groves, natural forests with no protection status, thematic parks and gardens, and urban forests in Istanbul. Within the specified sample and on a completely randomized basis, interviews and questionnaires were conducted with the people of Istanbul in almost all its districts to find out their thoughts and expectations about recreation areas. To this end, questionnaire forms were developed. These forms included the following main topics: (1) nature-based sports activities, (2) functions desired in recreation areas, (3) how wetlands are desired to be utilized, (4) water-based recreational activities, and (5) the opportunity and type of accommodation in recreation areas, (6) the features needed to improve the quality of recreation areas, and (7) recreation activities that cannot be done due to lack of area. All kinds of qualitative and quantitative data obtained from the questionnaires and interviews, those obtained from relevant institutions, and a thorough literature review were used in the study.

Data Collection Method

The minimum number of people to be interviewed in Istanbul within the scope of the research was calculated with the help of the following formula regarding the sample size is limited societies (Daşdemir, 2016; Orhunbilge, 2000);

$$n = \frac{NxZ^2xpxq}{NxD^2 + Z^2xpxq} \quad (1)$$

where n is the sample size, Z is the confidence coefficient ($Z = 1.96$ for a 95% confidence level), N is the population size ($N = 14{,}804{,}116$), p is the probability of the presence of the property desired to be measured in the population, q is the probability of absence of the property expected to be measured in the population (p and q each taken as .5), and D is the acceptable sampling error (taken as 0.05).

Taking the population of Istanbul for 2017 as 14,804,116 (TUIK, 2017), the sample size according to the formula is:

$$n = \frac{14,804,116x1,96^2 x0,5x0,5}{14,804,116x0,05^2 + 1.96^2 x0,5x0,5} \Rightarrow n \cong 384$$

According to these data, the *n* value was calculated as 384, the minimum number of subjects to be interviewed. Exceeding this number, however, 404 subjects were interviewed in the study. The questionnaire was carried out between July 2016 and March 2017. The people interviewed for the questionnaire were determined according to the *random sampling method* in different parts of Istanbul.

Data Evaluation Method

The primarily qualitative data obtained from the questionnaires applied to the subjects were defined as variables and digitized as in Table 1 to serve the purpose of the study.

The obtained data were evaluated with the help of descriptive statistics, and the results were shown in tables. Kruskal–Wallis (K–W) H-test was used to determine whether there was a statistically significant difference between different socio-economic variable groups (gender, age, education level, employment, and monthly average income) defined within the scope of the questionnaire study. In contrast, differing group(s) were analyzed with the Duncan test. Excel-2013 and Statistical Package for Social Sciences (version 23.0) software programs were used to evaluate the data.

Results

General Findings and Evaluations on Various Socio-Economic Conditions of the Subjects

The questionnaire was conducted on 404 subjects, of which approximately 53% were female and 47% were male. Regarding age groups, about 33% of the participants ranged between the ages of 26 and 40, 28% between 19 and 25, 28% between 41 and 60, 6% were under 18, and 5% were above 61. Again, 47% of the participants were married and 53% were single. Approximately 40% of the participants were bachelor's graduates, 28% high school graduates, 22% primary education graduates, and 10% master's/doctoral graduates. About 18% of the participants were students in occupational groups, 17% were civil servants, 13% were self-employed, 10% were housewives, 10% were workers, 8% were retired, 6% were tradespeople, 5% were unemployed, and 12% were in other occupational groups. Regarding the average monthly income status of the subjects, approximately 23% earned less than 1300 TL, 39% earned 1301–3000 TL, 25% earned 3001–5000 TL, 9% earned 5001–10 000 TL, 4% earned more than 10 001 TL, 10% did not respond or had no income. The average monthly income status figures belong to the second half of 2016 because the questionnaires were carried out between July 2016 and March 2017. The minimum wage was 1300 TL in the second half of 2016. How long the participants had been living in Istanbul was also evaluated. Accordingly, this period was above 20 years for approximately 48% of the participants, 16–20 years for 16%, 11–15 years for 13%, 0–5 years for 11%, and 6–10 years for 11%. In terms of housing types, approximately 76% of the subjects were living in an apartment, 9% in a house with a garden, 8% in a mass housing apartment, 4% in a shanty house, 2% in a villa within a housing complex, 1% in other types of housing (Table 2).

It was determined that the subjects resided in various districts of Istanbul on its European and Asian sides. To make the analysis more manageable and the subject matter more understandable, three different age groups were formed based on the determination that 34% of the subjects were aged 0–25 years, 61% were 26–60 years, and 5% were 61 or over. Regarding educational status, two groups were formed:

Table 1.
Definition of Research Variables

No.	Name	Explanation	Digitization or Unit	Scale
1	Nature-based sports activities	a) Mountaineering, b) rock climbing, c) birdwatching, d) wildlife observation, e) hiking, f) scout camping, f) paintball, g) horseback riding, h) paragliding, i) camping, j) cycling, k) orienteering, l) other	Preference percentage (%) (2–68)	0–1
2	Functions desired in recreation areas	a) Outdoor performance or exhibition area, b) wildlife observation and birdwatching, c) nature education activities, c) nature-based sports, d) multi-purpose sports fields, e) camping/caravan spaces, f) cafeterias and restaurants, g) amusement parks and children's playgrounds, h) water sports (canoeing, sailing, etc.), i) bungalow houses, j) botanical gardens	1 = I strongly disagree, 2 = I disagree, 3 = I slightly agree, 4= I agree, 5 = I totally agree	1–5
3	How wetlands in recreation areas are desired to be utilized	a) Picnic areas, b) water sports, c) scenic observation areas, d) mariculture		1–5
4	Water-based recreational activities	a) Canoeing, b) windsurfing, c) water skiing, d) sailing, e) jet-skiing, f) diving, g) spearfishing, h) angling, i) rowing, j) paddle boating, k) boat and motorboat excursions, l) radio-controlled model yachting		1–5
5	The opportunity of accommodation in recreation areas	1= Yes, 2= No	Preference percentage (%) (21–78)	1–2
6	Type of accommodation in recreation areas	a) Bungalow house, b) tent camp, c) caravan, d) scout camp, e) hotel-motel, f) other	Preference percentage (%) (1–48)	0–1
7	Features needed to improve the quality of recreation areas	a) It must contain sufficient green areas, b) it must contain natural areas, c) it must contain indoor spaces, d) it must have accommodation, e) it must have eating and drinking facilities, f) it must be easily accessible, g) other	Preference percentage (%) (4–77)	0–1
8	Recreational activities that cannot be done due to lack of area	a) Paragliding, b) hand gliding, c) ballooning, d) mountain biking, e) motorcycling, f) golf course, g) angling, h) camping, i) paintball, j) canoeing, k) mountain/rock climbing, l) life in nature, m) water skiing, n) rowing, o) sailing, p) youth camps, r) boat and motorboat excursions, s) radio-controlled model yachting	1 = I strongly disagree, 2 = I disagree, 3 = I slightly agree, 4= I agree, 5 = I totally agree	1–5

Table 2.
Frequency and Percentage Distribution of the Subjects in Terms of General Characteristics

Subject Characteristics		Frequency (F)	Percentage (%)	Valid Percentage (%)*
Gender	Female	215	53.2	53.2
	Male	189	46.8	46.8
	Invalid or no response	–	–	–
Age	0–18	26	6.4	6.4
	19–25	112	27.7	27.7
	26–40	134	33.2	33.2
	41–60	111	27.5	27.5
	61 or above	21	5.2	5.2
	Invalid or No Response	–	–	–
Marital status	Married	190	47.0	47.0
	Single	214	53.0	53.0
	Invalid or no response	–	–	–
Education level	Illiterate	1	0.2	0.2
	Primary school graduate	87	21.5	21.5
	High school graduate	112	27.7	27.7
	Bachelor graduate	162	40.1	40.1
	Master's/doctoral graduate	42	10.4	10.4
	Invalid or no response	–	–	–
Occupation	Worker	40	9.9	9.9
	Civil servant	69	17.1	17.1
	Tradesman	26	6.4	6.4
	Self-employed	54	13.4	13.4
	Housewife	42	10.4	10.4
	Student	73	18.1	18.1
	Retired	32	7.9	7.9
	Unemployed	19	4.7	4.7
	Other	49	12.1	12.1
	Invalid or no response	–	–	–
Average monthly income	Below 1300 TL	85	21.0	23.4
	1301–3000 TL	141	34.9	38.8
	3001–5000 TL	89	22.0	24.5
	5001–10,000 TL	33	8.2	9.1
	Above 10,001 TL	15	3.7	4.1
	Invalid or no response	41	10.1	–
Duration of residence in Istanbul	0–5 years	46	11.4	11.4
	6–10 years	44	10.9	10.9
	11–15 years	54	13.4	13.4
	16–20 years	66	16.3	16.4
	20 years or above	193	47.8	47.9
	Invalid or no response	1	0.2	–
Housing type	Apartment	305	75.5	75.5
	Detached house with a garden	36	8.9	8.9
	Villa in a housing complex	9	2.2	2.2
	Mass housing apartment	34	8.4	8.4
	Shanty house	15	3.7	3.7
	Other	5	1.2	1.2
	Invalid or no response	–	–	–

*Valid percentage (%) values were calculated by adding, on a weight basis, the percentage values (%) of "Invalid or No Response" statements to the other percentage values in each section. However, while the questionnaire data were being digitized and analyzed, the statements in question were defined as "missing value" and excluded from the evaluation.

primary education and high school graduates (50%) and bachelor, master, and doctoral graduates (50%). Regarding occupational status, three different groups were determined: employees (69%), retired or unemployed (13%), and students (18%). In terms of average monthly income, three different income groups were formed: 1300 TL or less (24%), 1301–5000 TL (63%), and 5001 TL or above (13%).

Nature-Based Sports Activities People Want to Do

Regarding desired nature-based sports activities, hiking was mentioned by 68.3% of the subjects, cycling by 44.6%, camping by 36.1%, horseback riding by 34.4%, wildlife observation by 22.3%, paragliding by 20%, mountaineering by 19.8%, paintball by 16.3%, birdwatching by 12.6%, rock climbing by 12.4%, scout camping by 8.7%, orienteering by 5.9%, and other activities by 1.5% (Figure 1).

For the most preferred option (hiking) among the nature-based sports activities that people wanted to do, the Kruskal–Wallis H-test was used to check differences, and significant variations were found in the opinions of the subjects for the gender ($p = .000$) and education level ($p = .001$) groups with a confidence level of 95%. According to the results of Duncan's test that was performed to find differing groups, hiking was generally preferred more by female subjects ($\bar{X} = 0.77$) compared to male subjects ($\bar{X} = 0.59$) and also more by bachelor, master, and doctoral graduates ($\bar{X} = 0.76$) compared to primary education and high school graduates ($\bar{X} = 0.61$). There was no significant and important difference in the age, occupation, and average income groups.

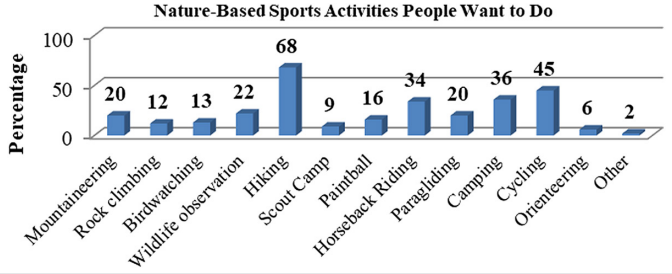

Figure 1.
Nature-Based Sports Activities People Want to Do.

Functions That People of Istanbul Want to Have in Recreation Areas

The subjects expressed their opinions about the functions they want to enjoy in recreation areas, as presented in Table 3. Accordingly, the most desired functions in these areas are nature-based sports, botanical gardens, water sports, camping/caravan spaces, and cafes and restaurants (Table 3).

The Kruskal–Wallis H-test results for the most preferred option (nature-based sports) among the functions desired in recreation areas indicated significant differences in the subjects' views regarding age groups ($p = .043$) with a confidence level of 95%. According to Duncan's Test results to find differing groups, nature-based sports were preferred more by those in the 0–25 and 26–60 age groups ($\bar{X} = 4.10$) compared to those in the age group of 61 or above ($\bar{X} = 3.37$). No significant variation was found between gender, education, occupation, and average income groups ($p > .05$). For botanical gardens, which was the second most preferred option, the age, education, employment, and moderate-income groups did not show substantial differences of opinion; however, female subjects ($\bar{X} = 3.92$) preferred a botanical garden to be available in these areas more compared to male subjects ($\bar{X} = 3.35$).

How People of Istanbul Want to Utilize Wetlands in Recreation Areas

The people of Istanbul said they want to use wetlands in recreation areas, primarily scenic observation areas (Table 4).

Even though the opinions of those subjects who wanted to utilize wetlands primarily as a scenic observation area did not involve a significant difference across the gender, age, occupation, and average income groups ($p > .05$), bachelor, master, and doctoral graduates in the educational status groups ($\bar{X} = 4.55$) wanted to utilize wetlands as scenic observation areas more compared to primary education high school graduates ($\bar{X} = 4.27$).

Table 3.
Functions That People of Istanbul Want to Have in Recreation Areas

Functions Desired in Recreation areas	I Strongly Disagree (%)	I Disagree (%)	I Slightly Agree (%)	I Agree (%)	I Strongly Agree (%)	No Response (%)
Outdoor performance or exhibition area	13	13	22	**23**	21	8
Wildlife observation and birdwatching	8	10	**26**	25	26	5
Nature education activities	**5**	**7**	**22**	**27**	**32**	**7**
Nature-based sports	**5**	**6**	**11**	**30**	**41**	**7**
Multi-purpose sports fields	**11**	**15**	**15**	**21**	**33**	**6**
Camping/caravan space	**9**	**8**	**17**	**26**	**32**	**7**
Cafeteria and restaurant	14	14	21	18	27	7
Amusement park and children's playground	15	19	14	20	25	7
Water sports (canoeing, sailing, etc.)	8	7	20	26	31	8
Bungalow houses	14	13	18	22	25	8
Botanical gardens	**12**	**9**	**13**	**23**	**37**	6

Table 4.
How People of Istanbul Want to Utilize Wetlands in Recreation Areas

How Wetlands in Recreation Areas Are Desired to Be Utilized	I Strongly Disagree (%)	I Disagree (%)	I Slightly Agree (%)	I Agree (%)	I Strongly agree (%)	No Response (%)
Picnic area	8	8	16	27	35	5
Water sports	6	9	16	29	37	4
Scenic observation area	**3**	**2**	**9**	**23**	**61**	**3**
Mariculture	18	18	18	17	23	7

Table 5.
Water-Based Recreational Activities That People of Istanbul Want to Do

Water-Based Recreational Activities That People of Istanbul Want to Do	I strongly Disagree (%)	I Disagree (%)	I Slightly Agree (%)	I Agree (%)	I Strongly Agree (%)	No Response (%)
Canoeing	**18**	**15**	**17**	**14**	**24**	**12**
Windsurfing	21	16	18	15	18	13
Water skiing	18	18	19	16	18	13
Sailing	18	16	19	13	20	14
Jet-skiing	20	16	18	14	19	13
Diving	17	16	16	16	22	13
Spearfishing	22	21	18	13	11	16
Angling	**13**	**11**	**20**	**20**	**24**	**13**
Rowing	12	14	19	17	21	16
Paddle boating	**9**	**12**	**16**	**26**	**27**	**11**
Boat and motorboat excursions	**10**	**11**	**14**	**24**	**30**	10
Radio-controlled model yachting	18	17	18	13	17	16

Water-Based Recreational Activities That People of Istanbul Want to Do

The water-based activities that the subjects wanted to do in recreation areas mainly included *boat and motorboat excursions*, *paddle boating*, *angling*, and *canoeing*, while the least preferred ones were *windsurfing*, *jet-skiing*, *spearfishing*, and *radio-controlled model yachting* (Table 5).

Regarding gender, age, education, occupation, and average income groups, subject opinions did not show a significant difference at a confidence level of 95% for *boat and motorboat excursions* and *paddle boating* among water-based recreational activities ($p > .05$).

Opportunity and Type of Accommodation in Recreation areas

As for the building of accommodation facilities in recreation areas, it was observed that 78% of the subjects wanted accommodation facilities, 21% did not want them, and 1% did not express an opinion.

Among the subjects who wanted accommodation facilities to be built in recreation areas and who made multiple choices regarding the type of such facilities, bungalow houses were mentioned by 48%, tented camps by 36.6%, caravans by 32.7%, scout camps by 12.4%, hotels/motels by 25.7%, and other accommodation facilities by 1.2% of them (Figure 2).

According to the results of the Kruskal–Wallis H-test, the subjects' opinions about the building of accommodation facilities in recreation areas did not involve significant differences from the perspective of gender, age, and average income ($p > .05$). However, the results of the Duncan test that was made to find different groups show that the building of accommodation facilities in recreation areas was not considered more favorably by bachelor, master, and doctoral graduates ($X\bar{X}_{\text{bachelor, master and doctoral graduates}} = 1.25$; $\bar{X}_{\text{primary education and high school graduates}} = 1.17$) in the education level groups and employees and students ($\bar{X}_{\text{employees and students}} = 1.26$; $\bar{X}_{\text{retired or unemployed}} = 1.14$) in the occupation groups.

In the gender, age, occupation, and education level groups, the opinions of those who favored the building of accommodation facilities and who wanted bungalow houses in such areas did not show significant

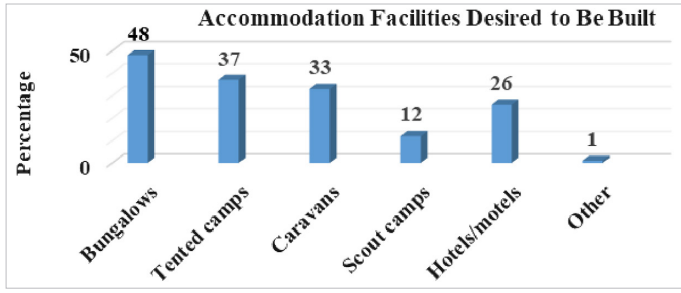

Figure 2.
Accommodation Facilities Desired To Be Built.

differences ($p > .05$). However, in the average income groups, those whose income was 1301 TL or above ($\bar{X}_{1301\ TL\ or\ above} = 0.49$; $\bar{X}_{1300\ TL\ or\ less} = 0.36$) wanted bungalow houses in these areas more.

Features Needed to Improve the Quality of Recreation Areas

When asked for their opinions on the features they want available in existing recreational areas to improve quality, those subjects who made multiple choices mentioned the following as necessary: natural areas (lake or stream) by 76.9% of the subjects, easy accessibility by 67.1%, sufficient green space by 62.9%, accommodation facilities by 40.6%, eating and drinking facilities by 40.1%, indoor areas by 21.5%, and other by 4% (Figure 3).

Regarding natural areas (lakes, streams), which are considered to be most needed for quality improvement in recreation areas, the opinions of the subjects did not involve significant differences in terms of gender, age, occupation, training, and average income groups ($p > .05$).

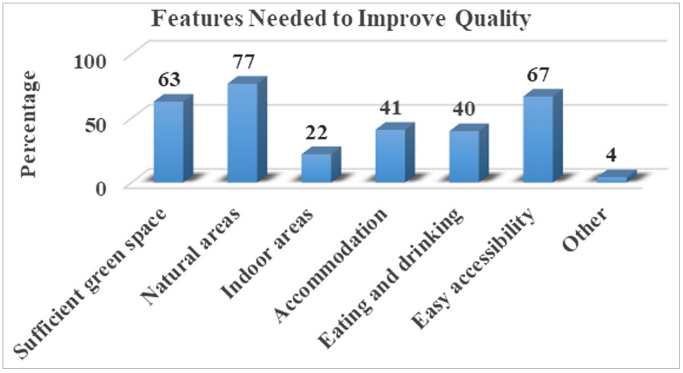

Figure 3.
Features Needed to Improve Quality.

Recreational Activities Which Cannot Be Done Due to Lack of Area in Istanbul

The subjects stated their opinions in the following table about the recreational activities which cannot be done due to the lack of area in Istanbul (Table 6). Accordingly, the subjects' main activities stated they could not do life in nature, paragliding, mountain/rock climbing, camping, and ballooning. In contrast, the subjects had an unfavorable opinion of golf facilities in such areas.

As for life in nature, paragliding and mountain/rock climbing, which were mentioned as the main recreational activities that could not be done due to the lack of area in Istanbul, the opinions of the subjects did not indicate significant differences in terms of the gender, age, occupation, training and average income groups ($p > .05$).

Discussion

Today, the adverse effects of urban life arising from the rapidly increasing developments in industry and technology have worn people down in physical, mental, and spiritual terms. The demand for recreation areas has grown considerably to eliminate or reduce these wearing effects. At the same time, recreation has become a vital need rather than a demand.

To meet this demand, especially in metropolitan areas with a dense population such as Istanbul, recreational areas and open-green spaces should be planned and managed most appropriately and effectively. For this, planning should be done by considering people's opinions from different segments of society with different recreational demands

Table 6.
Recreational Activities That Cannot Be Done Due to Lack of Area in Istanbul

Recreational Activities That Cannot Be Done Due to Lack of Area in Istanbul	I Strongly Disagree (%)	I Disagree (%)	I Slightly Agree (%)	I Agree (%)	I Strongly Agree (%)	No Response (%)
Paragliding	**12.1**	**7.7**	**12.4**	**22.8**	**36.4**	**8.7**
Hand gliding	11.4	11.9	15.8	18.3	23.3	19.3
Ballooning	**10.9**	**7.7**	**18.3**	**20.8**	**30.4**	**11.9**
Mountain biking	6.9	10.4	22.8	21.5	26.5	11.9
Motorcycling	18.1	15.6	23.5	17.1	14.9	10.9
Mountain/rock climbing	**9.2**	**7.7**	**15.1**	**23.5**	**32.9**	**11.6**
Youth camps	7.2	11.9	16.1	24.0	29.0	11.9
Golf course	19.1	21.5	17.6	12.9	16.6	12.4
Camping	**8.7**	**10.4**	**17.3**	**21.3**	**30.4**	**11.9**
Paintball	11.1	15.1	23.8	14.9	18.6	16.6
Angling	18.3	16.1	19.6	16.8	16.1	13.1
Life in nature	**9.2**	**8.2**	**8.9**	**21.5**	**40.4**	**11.8**
Water skiing	14.9	17.8	16.1	17.1	20.0	14.1
Rowing	13.1	17.1	19.3	16.1	20.8	13.6
Sailing	12.6	18.6	18.8	16.6	19.3	14.1
Canoeing	11.6	11.6	17.8	18.3	25.5	15.1
Boat and motorboat excursions	10.4	13.4	21.8	20.5	23.0	10.9
Radio-controlled model yachting	11.1	16.3	22	14.6	19.3	16.6

and expectations on the one hand and the characteristics of recreation areas on the other hand. Thus, the solutions that will best meet the recreational needs of the city will be produced through two factors: (1) a plan which engages the urban community and which is based on an interdisciplinary (including landscape architects, forest engineers, city planners, experts on recreational activities, etc.) cooperation in line with the characteristics of the recreation areas, and (2) the appropriate and effective management of these areas.

The most desired functions in the recreation areas of Istanbul include nature-based sports, botanical gardens, multi-purpose sports fields, nature education activities, and camping/caravan spaces. As for nature-based sports activities, it can be said that the people of Istanbul mostly prefer walking (68%), cycling, camping, and horseback riding activities. The natural environment is the most critical resource in meeting recreational needs. However, the use and conservation balance of the natural environment as a recreational resource should be considered. Otherwise, excessive use of the natural environment beyond its carrying capacity will lead to its destruction and eventually cause the loss of its function as a recreational resource. Therefore, while taking the recreational expectations of the people of Istanbul into account in the planning of recreation areas and open-green spaces, it is vital for sustainable area management and future generations that the principles of use and conservation of these areas are not ignored.

According to a study conducted by Demircan et al. (2018), bachelor subjects communicate with each other in parks due to mutual needs, the necessity of solidarity, blending of children, developing intimacy with those around, the desire to get acquainted with new people, social habits, and the willingness to change. This study determined that the participants with a high level of education compared to those with a low level of education were generally more willing to take walks as a nature-based sports activity and benefit from wetlands as scenic observation areas. As for functions desired to be available in recreation areas, those subjects in the young and middle-aged group, compared to those in the elderly group, stated a more emphasized preference for nature-based sports. Female subjects expressed a stronger appreciation for the availability of a botanical garden in such areas. Therefore, recreational activities appealing to different age groups, gender, income, educational level, etc., are needed.

Recreational demands and expectations are significantly influenced by personal characteristics of people, recreational area characteristics, social value judgments, the population density of cities, green space per capita, etc. Recreational behavior patterns are shaped to the extent those recreational demands and expectations are met. Recreational behavior patterns can change over time to changes in people's characteristics (knowledge and experience, age, income status, societal position, etc.), social value judgments, aspects of recreation areas, etc. Therefore, today's conditions and future expectations should be considered dynamically in the planning and managing of recreational areas and open-green spaces. According to Kaya (2007), the changes in the idea of recreation in the historical process indicate the recreation shift preferences. In parallel to this, a study conducted by Okuyucu (2018) ascertained that the recreational demands and expectations in the province of Bilecik have begun to change due to the change in the population dynamics of the city in the last decade. Thus, people can develop recreational expectations only when they have recreational knowledge and experience.

Istanbul is one of Turkey's provinces with the wealthiest recreational resources in terms of both natural and historical values, including seasides, wooded areas, lakesides, riversides, picnic areas, parks, historical areas, resorts, urban groves, natural forests with no protection status, thematic parks and gardens, urban forests, etc. Although the city people want to visit all these areas and engage in recreational activities, they complain that some cannot be done due to lack of space. Life in nature, paragliding, mountain/rock climbing, camping, and ballooning activities are the main activities they cannot do due to lack of area. Similarly, a study conducted by Kuş Şahin and Güneş (2019) reported that the urban people of Diyarbakır province tend to use existing recreation areas. Still, they also demand the creation of new areas. Due to excessive population density, traffic, intense work pressure, etc., in Istanbul, its people need more recreation areas to start their days more alive and rested. Therefore, they demand that potential recreation areas be used and evaluated.

The urban people of Istanbul stated that to increase the quality of the existing recreation areas, they should include natural areas (lakes and streams) (77%), be easily accessible, have sufficient green areas and accommodation, and have eating and drinking facilities. As for water-based activities that they wanted to do in recreation areas, they mainly mentioned boat and motorboat excursions, cycling, angling, and canoeing. Thus, recreational activity areas include picnic areas, open-green spaces, playgrounds, botanical gardens, cycling and walking paths, resting areas, observation terraces, children's playgrounds, camping areas, artificial ponds, city parks, etc., can be built after conducting the necessary research. Therefore, locations in the city's immediate vicinity that people can easily reach should be preferred when planning recreation areas. On the other hand, places where water resources are located can be designed as recreation areas, or artificial ponds can be built within recreation areas. This will contribute to such sites aesthetically and functionally (doing water sports, regulating the microclimate, etc.) and help the users relax psychologically (peace, dynamism, etc.).

As for recreational activities that cannot be done due to lack of area, enabling these activities by improving the quality of existing recreation areas and utilizing and evaluating potential recreation areas will allow meeting the recreational expectations and demands of urban people to a great extent, all these require interdisciplinary and multidimensional planning. However, it should be noted that municipalities are not the only institutions responsible for planning and managing recreation areas and open-green spaces. Some responsibilities fall to the Ministry of Agriculture and Forestry, central administration, universities, NGOs, the private sector, and other institutions and units. Indeed, all these activities and applications will improve the "urban life quality," meaning that the provision of urban services should exceed predetermined levels and that modern urban and environmental standards should be met. For a high-quality urban life, cities are expected to fulfill the conditions of being liveable, sustainable, and healthy (Sağlık, 2014).

Conclusion and Recommendations

Because a significant part of the existing recreation areas is located in forested lands, which are a valuable resource for potential recreation areas, the forestry-related units of the Ministry of Agriculture and Forestry are inevitably responsible for the planning and management of recreation areas in forested areas. To this end, placing all areas which are available in forested lands and which relate to recreation (national parks, nature parks, natural monuments, natural reserves, resorts, urban forests, etc.) under the umbrella of the General Directorate of Nature Conservation and National Parks will allow performing the works involved in the planning and management of these areas with harmony and create an interdisciplinary work environment and to eliminate conflicts of authority

and responsibility. At the same time, a Planning and Coordination Unit should be established under the Regional Directorates of National Parks, ensuring the planning of recreation areas and all kinds of recreational activities. This unit must work on an interdisciplinary basis (specialist forest engineers, landscape architects, city planners, recreation specialists, etc.). The Planning and Coordination Unit should identify and plan potential recreational areas in forested areas, identify and plan potential recreational areas in forested areas and plan and execute all recreational activities demanded and can be done. Recreational activity type, condition, place, time, etc., should be included in the planning. The programs related to these activities should be accessible to the city's people on the web. In this way, all who demand recreational activities and claim they do not have this opportunity can access the necessary information and participate in the activity that suits them. It is believed that such an application will significantly meet the recreational demands and expectations of the city's people and contribute to employment since it will cause a sector to emerge from all these applications and programs.

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