WHY DO SO FEW LOCAL PEOPLE VISIT NATIONAL PARKS? EXAMINING THE CONSTRAINTS ON ANTALYA'S NATIONAL PARKS IN TURKEY

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ABSTRACT

National parks are significant tourism and recreational areas that are widely used in many countries. Although such areas are widespread in Turkey, their resource value is underestimated. For this reason, this research aims to identify the constraints regarding local people's use of national parks and investigate the effects of demographic features on these constraints. This research conducted in Antalya, which is the city with the most national park areas in Turkey. Mixed method approach was applied in this study. In the first stage, a sample of 100 people in Antalya were interviewed. In the second stage, a questionnaire was given to 2,367 people. The three-dimensional leisure constraints model was used as the study's theoretical framework. The findings showed that lack of information/facilities (structural) was the main restriction on local people's use of national parks, followed by accessibility/finance (structural), maintenance (structural), social (interpersonal) and individual/ psychological (intrapersonal) factors. Use of national parks was also affected by demographic features of sex, age, marital status, having a child, income and education level. In conclusion, the existence of structural constraints as dominant national park use is advantageous in constraint management. The Turkish national parks and the tourism authorities should therefore change their management strategies regarding this issue.

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INTRODUCTION

The notion of the national park, as the new form of "area use" first developed in the USA (Runte, 2010) in 1872, following the announcement of Yellowstone National Park. This notion of national park management was then adopted in Australia, Canada, New Zealand and Mexico before the 19th century ended, before spreading in Europe in the early 19th century. Initially, although the main purpose in developing national parks was nature protection, the recreational and tourism activities performed in these areas formed the building block of national park understanding. While using national parks as a resource for recreation and tourism provided economic benefits, it also aimed to protect the natural and cultural heritage, and support increased quality of life (Eagles & McCool, 2004). Although demand for national parks has increased significantly over the last century in the USA and Canada, which are considered as the leading countries in national parks, a decrease in the number of visitors has been reported (Stevens, More, & Markowski-Lindsay, 2014). While the current debate in these countries where the national park system is highly developed has been over how to sustain the present structure, in Turkey, instead, the current debate is focused on developing the national park system. For example, according to a report published by the American Travel Union (2014), at least 40% of Americans, out of a population of approximately 320 million, have visited a national park at least once in the last five years (As cited in Miller & Washington, 2014). Furthermore, when other areas in the country subsidiary to the National Park Services (NPS) are included, the number of visitors is 331 million (National Park Service Annual Visitation Highlights, 2017). In Turkey, however, the demand to visit national parks is below the desired level due to a lack of resource value, and insufficient numbers of local people or foreign visitors. According to 2016 data, the number of visitors (both local and foreign) who visited Turkey's 42 national parks was about 17 million (General Directorate of Nature Conservation and National Parks, 2017), even though the population of the country is 80 million (Turkish Statistical Institute, 2017a) and the number of foreign visitors is 31 million (Association of Turkish Travel Agencies, 2017). While the number of the national park visitors in Turkey represents 21% of Turkey's population, when the number of tourists is taken into consideration, this decreases further. One of the reasons for low figure, in comparison to developed countries, is that Turkey's national park system was only started in the late 1950s. It is also necessary to conduct exploratory research regarding the use of national park areas in Turkey to identify the present situation

and people's understanding. One of this research subject is to determine the factors that affect the use of national parks by local people. To develop the national park system in Turkey, it is necessary to identify the constraints on people's use of national parks. Accordingly, this study aims to determine these constraints, identify the demographic factors underlying them, thereby contributing to the literature and helping to eliminate the aforementioned deficiencies.

LITERATURE REVIEW

Studies on leisure constraints started in the 1970s and became highly developed in the 1990s (Crawford, Jackson, & Godbey, 1991). Leisure obstacles, barriers and preventers were identified as prohibitory factors. The focus of leisure constraint research was initially on the barriers to people's participation in recreational activities. While the term *barrier* refers to not taking part in a recreational activity, the term *constraint* is defined as a limit to "joining to an activity or limiting the level of pleasure" (Jackson, 1988). Crawford and Godbey (1987) argue that constraints affect not only participation but also adoption of leisure preferences. The term *leisure constraints* is interrelated and dimensional. The most popular and known classification related to this term is the hierarchical model (Shores, Scott, & Floyd, 2007) developed by Crawford et al. (1991). According to this model, leisure constraints can be classified under three categories: intrapersonal, interpersonal and structural. Intrapersonal constraints relate to stress, anxiety, perceived skills, etc., intrapersonal and personal psychological conditions, interpersonal constraints, family disinterest, lack of a partner etc. and social interaction. Structural constraints, which include financial resources, time, transportation, suitability of opportunities, family life lifecycle, business-occupational-professional life and climate, are exogenous. Crawford et al. (1991) found that interpersonal and intrapersonal constraints have more effect on selection of leisure time activities whereas structural constraints have more effect on participation selection. According to the same study, personal constraints are the most powerful of the leisure constraints whereas structural constraints are less powerful.

The dimensions of leisure constraints have been applied to a number of specific groups participating in leisure time activities (Thapa, 2012). The most widely developed constraints in the literature concerning parks and recreation are insufficient time, transportation, accompanying person, distance, cost, family responsibility, fear and bad air conditions

(Zanon, Doucouliagos, Hall, & Lockstone-Binney, 2013). Other well-established constraints are lacking awareness (Lawton & Weaver, 2008; Pennington-Gray, Thapa, & Holland, 2002) and lack of information/knowledge (Alberta Community Development, 2000; Godbey, Graefe, & James, 1992; Le & Holmes, 2012; Scott & Kim, 1998; Virden & Yoshioka, 1992; Walker & Crompton, 2013).

Another point to focus on is what other factors influence these constraints. While earlier studies focused on race or gender distinctions, recent studies have extended to other demographic factors like socio-economic status, income, educational level and place of residence. Some studies have investigated how social inequality affects participation in outdoor recreation activities. However, because of that limited sample size and geographic coverage, many studies often failed to examine the perceived constraints faced by these groups (Ghimire, Green, Poudyal, & Cordell, 2014). Thus, although there is strong evidence that age, sex, race and education limit park visits (Zanon et al., 2013), there is no consensus on the matter.

METHODOLOGY

The Research Area

Antalya province in southern Turkey was chosen as the area of research, mainly because it has the most national parks (5), a dense population and many visitors, which are a resource value for the region. The city is Turkey's fifth largest city (Turkish Statistical Institute, 2017b) with the population of 2,328,555. Antalya is one of the country's most significant tourism and recreation centers with its natural, cultural and structural features, hosting more than 10 million overseas tourists per year.

Research Design

A mixed method approach was employed in this study to determine the constraints affecting local people's use of Antalya's national parks. In social research, a mixed method approach involves collecting two or more types of data, often both qualitative and quantitative, and planning the analysis techniques accordingly (Greene, Kreider, & Mayer, 2005). While qualitative research methods examine in detail, quantitative method make it possible to reach many participants. Using these two approaches

together therefore provides an opportunity to understand the research problem better than by employing each approach alone (Creswell & Plano Clark, 2007). In addition, the leading reason for employing mixed methods in a study is that, when quantitative and qualitative methods are used in time sequence, the quantitative data study helps the qualitative dimension of the study (Schoonenboom & Johnson, 2017). Another reason for using a mixed method approach is that, in constraints research, it is useful to develop a question pool of constraint items so that researchers can adopt these for the constraint scales in order to meet their needs (Hubbard & Mannell, 2001).

Qualitative Approach: Interview

To determine the constraints limiting the use of national parks by local people, the researchers employed a half-restructuring technique. In this study, 100 people (52% women, 48% men, average age: 36.49±14.80 years), living in Antalya Province voluntarily participated in the study in the period March-April 2016. In order for national park use distribution to be balanced, the participants were first asked "Do you visit national parks in your leisure time?".47% of the participants had used the national parks while 53% had not. During the interviews, which lasted about 5-6 minutes, the participants were asked about the constraints affecting their visits to national parks and their responses were recorded on forms. The interview forms were collected by the researchers for coding by the quantitative analysis method(Strauss & Corbin, 1990).To begin coding, the sentences entered in the interview forms were first conceptualized then similar concepts were collated and schematized as: transportation (27.4%), cost (13.2%), work load density (11.3%), time (10.4%), disinterest (9.4%), lack of maintenance of the area (6.6%), lack of transportation (4.7%), safety (3.8%), social environment (3.8%), entrance fees (2.8%), health problems (1.9%), insufficient tour organization (1.9%).

Quantitative Approach: Questionnaire Study

The questionnaire used in this study consisted of three sections. To determine participants' use of national parks the following question was asked, after giving information about the national park concept: "Do you visit national parks in your leisure time?" (61.2% "Yes", 38.8% "No"). For the next section, a pool of 31 questions was formed based on the literature

(Kruger & Douglas, 2015; Lawton & Weaver, 2008; Mowen, Payne, & David, 2005; Nadirova & Jackson, 2000; Pennington-Gray et al., 2002; Shores et al., 2007; Thapa, 2012; Zanon et al., 2013) to identify the national park constraints relevant to the participants, based on the three-dimensional Hierarchical Model (Crawford et al., 1991) used in previous studies on leisure constraints. The themes identified in the interviews in the first part of the study were contrasted with the question pool to determine whether the question pool covered the themes obtained from the interview study. This demonstrated that there was no need to add extra propositions to the questionnaire beyond those obtained from the interview study themes. Participants responded to the questionnaire through a five-point Likert scale with "1, I strongly disagree" to "5, I totally agree". The final part of the questionnaire asked for demographic information about the participants (Table 1).

The questionnaire was administered through face-to-face survey method in May-October 2016 with 3,000 voluntary participants residing in Antalya region. Of these, 363 participants (12.1%) stated that they had no idea whatsoever about national parks so their data was discarded from the study, leaving 2,637 people. The statistical analysis of the data obtained was performed through SPSS 21.

Table 1. *Sample characteristics (N=2367)*

Gender			Marital status			Children		
Females	1172	44.4%	Single	1774	67.3%	Yes	788	29.9%
Males	1465	55.6%	Married	863	32.7%	No	1849	70.1%
Age			**Income (TL*)**			**Level of education**		
18 >	110	4.2%	1500 >	422	16.0%	Primary school	66	2.5%
18-25	1036	39.3%	1500-2500	759	28.8%	Secondary	189	7.2%
26-35	729	27.6%	2501-3500	727	27.6%	school		
36-45	346	13.1%	3501 <	729	27.6%	High school	763	28.9%
46-55	283	10.7%				University	1619	61.4%
56-65	106	4.0%						
65 <	27	1.0%						

*1$=3.79TL (11.01.2017)

RESULTS

To reveal the factorial structure of issues related to local people's views about the constraints on national park usage, an exploratory factor analysis was performed using Varimax Rotation (KMO .92) and the

Bartlett test (p<.05). Cross-loading and low communality items were discarded from the scale, leaving 24 items. The eigenvalue of the scale, ranging between 4.30 and 2.05, formed of 5 dimensions that accounted for 62.2% of the total variance (Table 2). For each dimension, a validity analysis was carried out to establish that the Cronbach's alpha value of each dimension was at an acceptable level (I= .881, II= .828, III= .798, IV= .820, V= .720).

Table 2. *Factor analysis of NP usage constraints items*

	M	SD	I	II	III	IV	V
I-INDIVIDUAL/PSYCHOLOGIC	2.35	.86					
Have physical/health problem	2.22	1.10	.83				
No abilities to participate	2.37	1.11	.80				
Fear of the forest/natural areas	2.27	1.09	.76				
Feel uncomfortable in natural areas	2.37	1.09	.68				
Have physical disabilities/health problem in family	2.36	1.21	.68				
Lack of equipment for outdoor activities	2.60	1.18	.66				
Don't like the outdoor activities	2.33	1.09	.62				
II-ACCESSIBILITY/FINANCE	3.12	.86					
Expensive entrance fees	3.12	1.17		.77			
Lack of transportation	3.32	1.09		.70			
Distance to NP is too far from Antalya centrum	3.30	1.09		.69			
Lack of financial means	2.75	1.11		.68			
Lack of time	3.14	1.13		.47			
III-LACK OF INFORMATION/FACILITIES	3.40	.81					
Limited information and knowledge about NP	3.61	1.15			.80		
No organized tours to NP	3.47	1.07			.73		
Limited information what to do in NP	3.42	1.14			.73		
Inadequate activity areas in NP	3.22	1.04			.61		
Lack of accommodations in NP	3.28	1.05			.56		
IV-SOCIAL	2.77	.93					
Family/friends not interested in visiting NP	2.83	1.17				.81	
Family/friends preferred to different activities in their leisure time	3.00	1.14				.69	
No one to go with	2.61	1.18				.66	
NP is not place to go with family in leisure time	2.67	1.12				.58	
V-MAINTAINTENANCE	2.94	.85					
NP is overcrowded	2.85	1.01					.70
NP not well-maintained	3.01	1.06					.63
Poor conditions of the roads in NP	2.97	1.10					.56
Eigenvalue			4.30	3.16	2.90	2.52	2.05
% of variance explained			17.93	13.17	12.10	10.48	8.54
Cumulative % of variance explained			17.93	31.10	43.20	53.68	62.22

KMO: .918; Bartlett's Test of Sphericity: 30498.81 (.000)

The dimensions that emerged concerning constraints on national park use were named as follows: individual/psychological, accessibility/finance, lack of information/facilities, social and maintenance. The results obtained displayed similarity to the hierarchical model Crawford et al. (1991) with three dimensions: intrapersonal, interpersonal and structural constraints. However, in the current study, the structural constraints were divided into three parts: accessibility/finance, lack of information/facilities and maintenance. The lack of information/facilities dimension (3.40), which was the main constraint in people's use of national parks, was followed by accessibility/finance (3.12), maintenance (2.94), social (2.98) and individual/psychological (2.78). The total score for the scale, ranging between 24 and 120, was obtained by adding the scores from all 24 items. A higher score indicates a higher level of perceived constraints, with a mean score of 69.11.

Use of National Park and National Park Visitation Constraints

An independent t-test was conducted to compare National Park Visitation Constraints (NPVC) scores for the National Park users and National Park non-users. There was a significant difference in the scores for in total and all sub-dimensions (p=.000). These test result suggest that NPVC scores of the participants who had visited national parks in their leisure time was lower than those who had not visited any national park in total (t=-20.04, p<.001) and all sub-dimensions (I. t= -17.98, p<.001: II. t= -12.74, p<.001; III. t=-5.98, p<.001, IV. t= -14.04, p<.001, V.t= 21.79, p<.001).

Table 3. *Perceived constraints visitors and non-visitors to NP*

	Yes (n=1614)	No (n=1023)	t	p
Total Score	2.69±.59	3.18±.61	-20.04	.000
I-Individual/Psychologic	2.13±.78	2.72±.85	-17.98	.000
II-Accessibility/Finance	2.96±.84	3.39±.83	-12.74	.000
III-Lack of Information/Facilities	3.33±.81	3.52±.79	-5.98	.000
IV-Social	2.77±.82	3.22±.82	-14.04	.000
V- Maintenance	2.49±.87	3.23±.84	-21.79	.000

Gender and National Park Visitation Constraints

Examination of the total constraint scores of local people who do not visit national parks showed no meaningful difference between men and

Table 4. *Perceived Constraints to NP visitation by gender, marital status and having children*

	Gender				Marital status				Having Children			
	Female (n=1172)	Male (n=1465)	t	p	Single (n=1774)	Married (n=863)	t	p	Yes (n=788)	No (n=1849)	t	p
Total Score	2.87±.63	2.89±.65	-.88	.381	2.86±.63	2.93±.66	-2.65	.008	2.92±.66	2.86±.64	2.44	.015
I-Individual/Psychologic	2.29±.81	2.42±.89	-3.94	.000	2.33±.86	2.42±.85	-2.33	.020	2.43±.84	2.33±.86	2.72	.007
II-Accessibility/Finance	3.14±.88	3.12±.86	.70	.487	3.13±.85	3.14±.87	-.276	.782	3.12±.88	3.13±.85	-.24	.811
III-Lack of Information/Facilities	3.47±.81	3.35±.80	3.68	.000	3.35±.81	3.51±.79	-4.96	.000	3.51±.79	3.35±.81	4.67	.000
IV-Social	2.93±.86	2.95±.84	-.55	.583	2.92±.84	3.00±.87	-2.21	.027	2.99±.88	2.92±.83	1.68	.093
V- Maintenance	2.74±.92	2.81±.93	-1.77	.076	2.78±.91	2.78±.96	-.203	.839	2.78±.96	2.78±.91	-.94	.925

women (p>.05). However, when the sub-dimensions were examined, a difference emerged between individual/psychological and lack of information/facilities. In the individual/psychological sub-dimension, the average score of men was higher than women's (t=3.94, p=.000), on the other hand in the lack of information/facilities sub-dimension, women's mean scores were higher than those of men (t=.82, p=.000).

Marital Status and National Park Visitation Constraints

There was also a significant difference between marital status and national park constraints scores for the individual/psychological, lack of information/facilities and maintenance dimensions (p<.05). Constraint scores for married national park visitors were higher than those for unmarried visitors, both overall (t=-2.65, p<.05), and for individual/psychological (t=-2.33, p=<.05), lack of information /facilities (t=-4.96, p<.00) and maintenance (t=-2.21, p<.05).

Having Children and National Park Visitation Constraints

There were also significant differences between the total constraint scores of families with children and for individual/psychological and lack of information/facilities dimensions

(p<.05; .001). The mean overall scores for national park participant families with children were higher than those of families with no children (t=-2.44, p<.05), as well as for individual/ psychological (t=-2.72, p=<.05) and lack of information/facilities (t=-4.6,7 p<.001).

Age and National Park Visitation Constraints

A significant difference was also determined between age and the national park visitation scale (F=5.61, p<.001) and for all dimensions (I. F=6.72 p<.001; II. F=7.51, p<.001; III.F=4.41, p<.001, IV.F=2.76, p<.05, V.F=3.54, p<.05). In order to further identify this difference, the groups were contrasted with each other using the post hoc Tukey test, as presented in Table 5.

Income and National Park Visitation Constraints

There was a significant statistical difference between income level and the national park constraints scale (F=9.40, p<.001), and for the individual/psychological, (F=10.51, p<.001), accessibility/finance (F=13.90, p<.001) and social (F=9.42, p<.001) dimensions. In order to further identify this difference, the groups were contrasted with each other using a post hoc Tukey test, as shown in Table 5.

Level of Education and National Park Visitation Constraints

There was a significant statistical difference between income level and the national park visitation constraints scale (F=7.28, p<.001), and for individual/psychological, (F=12.10, p<.001), lack of information/facilities (F=6.93, p<.001) and social (F=5.06, p<.05) dimensions. In order to further identify this difference, the groups were contrasted with each other using a post hoc Tukey test, as shown in Table 5.

Table 5**.** *Perceived Constraints to NP visitation by age, income and education levels*

		N	Total Score	Factor I	Factor II	Factor III	Factor IV	Factor V
Age groups	1) 18 >	110	2.94±.60	2.48±.82	3.18±.89	3.35±.74	2.90±.85	2.92±.87
	2) 18-25	1036	2.89±.61	2.35±.86	3.23±.80	3.34±.81	2.96±.78	2.82±.90
	3) 26-35	729	2.85±.67	2.34±.85	3.04±.90	3.39±.83	2.93±.88	2.77±.93
	4) 36-45	346	2.77±.63	2.22±.78	2.94±.85	3.44±.79	2.87±.85	2.62±.97
	5) 46-55	283	2.92±.65	2.42±.85	3.16±.88	3.56±.82	2.91±.90	2.72±.96
	6) 56-65	106	3.02±.73	2.59±.94	3.20±.94	3.46±.69	3.12±.98	2.89±.98
	7) 65 <	27	3.35±.80	3.08±1.0	3.45±.1.0	3.79±.85	3.40±1.0	3.11±1.0
	F		6.72	7.51	4.14	2.76	3.54	5.61
	p		.000	.000	.000	.011	.002	.000
	Post hoc test		1<7;2>4;2<7; 3<7;4<5;4<6; 4<7;5<7	7>6;7>5;7>4; 7>3;7>2;7>1; 6>4	2>3;2>4; 4<5;4<7	2<5;3<5	7>4	1>4;2>4
Income status	1) 1500 >	422	2.98±.53	2.43±.79	3.31±.80	3.40±.73	3.02±.77	2.94±.84
	2) 1500-2500	759	2.93±.59	2.46±.83	3.19±.84	3.40±.78	2.95±.80	2.84±.87
	3) 2501-3500	727	2.85±.69	2.35±.88	3.08±.88	3.40±.84	2.91±.86	2.72±.97
	4) 3501 <	729	2.80±.69	2.22±.89	3.00±.87	3.41±.86	2.92±.92	2.67±.97
	F		9.40	10.51	13.90	.069	1.78	9.42
	p		.000	.000	.000	.976	.150	.000
	Post hoc test		1>3;1>4;2>4	1>4;2>4;3>4	1>3;1>4;2>4	-	-	1>3;1>4;2>4
Level of education	1) Primary school	66	3.15±.66	2.88±.86	3.32±.89	3.37±.68	3.21±.90	3.10±.83
	2) Secondary school	189	2.96±.62	2.51±.80	3.13±.80	3.44±.74	2.99±.80	2.94±.91
	3) High school	763	2.91±.63	2.38±.78	3.15±.88	3.51±.79	2.94±.84	2.77±.94
	4) University	1619	2.84±.64	2.31±.89	3.11±.85	3.35±.83	2.93±.85	2.75±.93
	F		7.28	12.10	1.58	6.93	2.45	5.10
	p		.000	.000	.193	.000	.062	.002
	Post hoc test		1>3;1>4	1>2;1>3;1>4; 2>4	-	3>4	-	1>3;1>4;2>4;

DISCUSSION AND CONCLUSIONS

This study aimed to identify the constraints regarding local people's use of national parks in Antalya province, Turkey. The results showed that the structure of national park constraints here are similar to those identified by Crawford, Jackson and Godbey's (1991) three-dimensional model. However, the dimension for structural constraints developed in this study is more complex than that of the earlier model. While the findings of Nyaupane, Morais and Graefe (2004) on nature-based tourism constraints supported the three-dimensional model, their dimension of structural constraints is similarly more complex. Likewise, Alexandris and Carroll

(1997) also found variety within the structural dimension of the three-dimensional leisure time model regarding the perception constraints of recreational sports participants.

While it has been argued that outdoor recreation constraints are similar to other leisure constraints (Walker & Virden, 2005; White, 2008), in the related literature it has also been claimed that structural constraints are more dominant than the others (Pennington-Gray et al., 2002). The most important constraint identified in this study is the lack of information/facilities dimension, which was defined as a structural constraint, followed by the accessibility/finance dimension. Several studies in the related literature have shown that lack of information is a constraint or barrier to national park usage (Alberta Community Development, 2000; Godbey et al., 1992; Le & Holmes, 2012; Scott & Kim, 1998; Virden & Yoshioka, 1992; Walker & Crompton, 2013). Furthermore, Martoglio (2012) identified that the lack of information about national parks could be a significant constraint factor for visiting these places. Some of the constraints could affect negatively on the levels of participation in leisure activities. Moreover, Oh, Oh, and Caldwell (2001) claimed that only interpersonal constraints affect leisure participation levels. In this frame, as basic park usage constraints, structural constraints can be regarded as advantageous for management in comparison to other constraints. Covelli, Burns, and Graefe (2006) pointed out that managers could impact the state of lack of information positively. While Thapa (2012) claims that management of interpersonal constraints is difficult, Kruger and Dauglas (2015) argue that structural constraints can be managed through effective communication messages and suitable communication channels to train the target market. In addition, structural constraints are considered in two categories by leisure time specialists/managers, namely lack of public transportation, crowds, bureaucratic procedures and facilities, which can be managed or dealt with, and material barriers, business hours and climatic conditions, which cannot be managed or dealt with (Walker & Crompton, 2013). Within this conception, Scott (2005) defines these barriers as "institutional barriers" like lack of information/facilities and maintenance that can be managed, in contrast to accessibility/finance structural constraints, and social and individual/psychological constraints that can only be partly managed or are unmanageable. Providing more information about parks is considered one of the most desired strategy to reduce the constraint factors in the literature (Mowen, Payne, & David, 2005). The present study supports this strategy, and suggests the park managers and authorities to do advertising campaign to make residents

aware of the Antalya's National Park in Turkey. In parallel to the findings of these studies, studies geared towards increasing people's knowledge and awareness of national parks may play a significant role in managing the constraints related to use of these areas. Besides, provision of facilities to meet people's expectations is another way of leisure negotiation strategies for usage of national parks. Therefore, studies concerning people's expectancies are important.

Relationships between Socio-Demographic Characteristics and National Park Use Constraints

Age, sex, race, income level and education level all affect park visits (Zanon et al., 2013). In this study, differences were found between national park use constraints and socio-demographic features. Understanding of these differences can therefore be valuable, especially for national park managers and leisure time specialists involved in managing national parks. Zanon et al. (2013) emphasized that gender was the most prevalent socio-demographic parameter in the 45 % of the studies done about the constraints of park visitation in North America. And most studies reported that females have more constraint factors to visit parks than males. While no significant overall differences were found between men and women in national park use constraints, there were differences within the individual/psychological and lack of knowledge/facilities dimensions. These results show similarity to Shores et al.'s (2007) study, and this study highlighted that time, interest and knowledge are prominent constraint factors for females. In the lack of knowledge/facilities dimension, the perception of women regarding constraints was higher than men, which his normal for the Turkish community where men are dominant. In addition, women more than men preferred joining home and related social gatherings rather than outdoor recreational activities (Lee, Scott, & Floyd, 2001), which might increase the constraints due to knowledge and opportunity. Within the individual/psychological dimension, the item "Forests or other natural environments scare me and I feel uncomfortable in outdoor recreation areas" was a higher constraint for men than women. In previous studies, while "fear" for women was defined as the most important leisure constraint (Zanon et al., 2013), it is known that women give more importance to self-defense than men (Johnson, Bowker, & Cordell, 2001). However, the findings of the present study provided a different result. This may be because most studies in the literature are related to outdoor recreation. Besides, there are fewer studies of gender

and national park usage than for race and the other ethnic demographic features (Weber & Sultana, 2013). Furthermore, in their nature-based tourism studies, Pennington-Gray and Kerstetter (2002) reported similar results, but their study did not measure scales that are particular to women. Therefore, in-depth studies concerning gender effects should be made in the future.

A person's position in their lifecycle is one of the basic determinants of leisure time use (Torkildsen, 2005, p. 108) and it is natural that married people experience more leisure constraints, due to increased family responsibilities than unmarried people (Alexandris & Carroll, 1997). Previous studies indicate that constraints like access, knowledge and suitable infrastructure generally restrict families from leisure time activities outside their homes (Reis, Thompson-Carr, & Lovelock, 2012). The present study found statistically significant differences between single people, married national park users with children and families without children. The total scores of national park use constraints for married participants and those for the individual/psychological, lack of knowledge/facilities and maintenance dimensions were higher than for single people. Similarly, the national park use constraints perceived by participants with children for the individual/psychological and lack of knowledge/facilities dimensions were higher than for participants with no children. Unsurprisingly, therefore, this study confirms that marriage and having children impose more constraints on national park use. While developing strategies for coping with individualistic and psychological constraints is rather difficult, strategies for coping with perceived structural constraints are more achievable. Thus, it is very advisable to offer the means and facilities to individuals who can participate as a family. Accordingly, to increase people's awareness and knowledge about leisure opportunities and benefits of national parks for families could be considered as a strategy to cope with structural constraints. The current study promotes the approaches of McDonald & Price (2009), and Reis et al. (2012) to enhance the park awareness of families, and suggests park managers to provide facilities and parks that attract family groups' attention to parks. In addition, in-depth lifecycle-specific studies can provide a detailed examination of the subject.

Age is another factor that affects leisure behavior, and a strong predictor of constraints as well. Previous research shows that the old people joined few outdoor recreational activities because of physical and age constraints (Iso-Ahola, Jackson, & Dunn, 1994). Furthermore, old people have more constraints towards park use than young people

(Raymore & Scott, 1998; Scott & Jackson, 1996). In the current study, there was a significant relationship between age and national park use as old people over 65 perceived more constraints than younger age groups. Floyd et al. (2006) state that physical constraints increase with age so the rate of older people's participation in recreational activities decreases as they prefer more passive activities. The present study supports these findings.

Shores et al. (2007) found that people over 65 participate in fewer outdoor activities than young people in the USA due to financial constraints. Although these old people are actually healthier than the young, more than 20 % suffer from loneliness and poverty, which constrain their participation in recreational activities. In Turkey, the rate of poverty of people over 65 years and living in a single household is 16.3% (Turkish Statistic Institute, 2017c), so this situation might similarly affect their national park use.

Income, educational levels and profession all significantly affect leisure time participation (Lee et al., 2001). Most outdoor recreational activities are related to financial and cultural resources so income and education levels affect the rate of participation in outdoor activities (Ghimire et al., 2014). Stevens et al. (2014) reported that economic factors, such as income, play critical roles in consumer behavior, and it also shapes the level of park visitation. Scott and Munson (1994) observed that the people with low incomes perceive more constraints towards park visits than those with high incomes. They stress that income level, sex, age, race and level of education are the most significant factors that constrain park visits. In the present study, significant differences between income level and overall national park use constraints and dimensions were also found. Those with low incomes (TL<1500 or TL 1500-2500) perceived higher constraints than those with higher income levels. This supports the claim that a low income limits participation in outdoor recreation activities and park visits. This study has some limitations. For instance, due to having no information about how income levels create constraints for residents, future studies could focus on economic factors of park visitations deeply.

In addition to level of income, another significant factor affecting participation in outdoor recreational activities is the level of education. According to Kelly (1996), education level is a more important factor than income and profession in leisure time activities. Previous studies reported that as perceived constraints decrease the level of education increases (Alexandris & Carroll, 1997; Searle & Jackson, 1985). This study also found

a significant relationship between education level and national park use and the constraint dimensions. That is, those with a low education level (primary education) perceive more constraints than those with a higher education (university) level. The latter group possess skills oriented towards outdoor recreation and have the chance to access this social and cultural environment more easily (Lee et al., 2001), which may be the cause of this difference. Furthermore, it is thought that people with higher education are more inclined to visit such areas (Chen, 2009), which affects an individual's national park use constraints.

Park-based activities in developing countries are both economic and social-cultural resources. Therefore, these activities need to be managed with a sustainable long-term strategy with respect to visitors and site management (Mulholland & Eagles, 2002). The results of the present study suggest basic strategies to park managers and authorities. Firstly, (a) to promote awareness of local peoples about national parks and, (b) secondly to offer opportunities to local people according to their demographic features such as age, or marital status etc. Having conducted the study only with the local people in Antalya province could be accepted as a limiting factor. Hence, future research could be done with expanded sample size by adding the visitors/tourists in different provinces, in order to investigate the differences between visitors/tourists and local peoples. Another restrictive factor of the present study was that no in-depth reasoning questions were asked in the questionnaire to explore underlying and more personal reasons of respondents. Thus, future studies could be designed with qualitative approach to clarify the problem.

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