The role of climatic elements in public tendency towards alternative tourism: a sample of Turkey

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RESUMEN

En años recientes ha ocurrido una aparente modificación en los destinos preferentes de los turistas. Las razones para esto son, desde luego, muy diversas. Debido al ambiente incómodo de las regiones costeras, muchas personas prefieren pasar sus vacaciones en áreas bioclimatológicamente más confortables, como los centros turísticos de montaña o mesetas. El objetivo de este estudio es determinar el efecto del clima y el tiempo en las actividades recreativas por medio de un cuestionario de investigación en la ciudad de Erzurum, en Turquía. Se encontró que aunque la gente que participó en la investigación vive en una ciudad que es un conocido centro de deportes invernales, con características extremas de un período de frío de al menos ocho meses (del final de octubre al de mayo), prefieren el verano para recreación y turismo aunque se les diera la oportunidad de un año completo de actividades recreativas. Se piensa que esto es resultado de la falta de instalaciones recreativas adecuadas para el invierno y se sugiere que éstas deberían construirse

ABSTRACT

In recent years, there has been an apparent alteration in tourists' destination preferences. The reasons for this are, of course, very diverse. Due to discomforting environment of the coastal regions, people may prefer to spend their holidays in bioclimatologically more comfortable areas, such as mountain or plateau resorts. The aim of this study is to determine the effect of climate and weather on tourism and recreational activities via a questionnaire survey in the city of Erzurum, Turkey. It was found that although people who participated the survey live in a city, which is a well-known winter sports center and where extreme climatic features in winter are prevalent and have to experience, at least, an eight-month cold period (from late October to late May), they would still prefer summer season for recreation and tourism even if they were given full year recreation opportunities. This condition was thought to result from the lack of efficient winter recreation facilities and it was suggested that this kind of facilities should be constructed.

1. Introduction

Social, psychological and economic benefits of tourism and outdoor recreation activities are very important especially in the developing countries, like Turkey, where people face consistently increasing economic and environmental stresses. Outdoor recreation is good for the psychology of people since it can prevent or reduce the stress caused by hard living conditions in such countries as Turkey; good for the social life since it can provide suitable environments for people to find others with whom they can share their personal or common troubles and happiness; and good for the economy since people often performing outdoor recreational activities are more productive and happier at work and these activities can produce job opportunities for other people (Toy and Yilmaz, 2009).

As human beings live in a physical environment, the features of this environment affect all their activities. In this respect, weather and climate can be counted among the factors of physical environment, which are the most effective on human activities. In addition, in the assessment of tourism and recreational activities, weather and climate along with topographical and orographical conditions, vegetation and fauna do not only play a defining role but also they are limiting and controlling factors over them (Rudel *et al*., 2007).

Before they implement recreational or tourism activity, people enter a decision making process, at the beginning of which the choice of destination takes place. Many different factors influence the choice of recreational and tourism destinations and the time when people perform these activities. By studying related literature, Braun *et al*. (1999) stated that the choice for or against a destination is influenced by the factors such as attractiveness (e.g. nature, landscape, places of cultural interest), available facilities (of importance to tourists, such as accommodations) and accessibility (e.g. good means of transportation); and also climate and weather are important factors in choice of destination. Hamilton and Tol (2006) stated in their study, where the holiday destination choice was analyzed for tourists from 45 countries, representing all continents and all climates, that tourists are deterred by distance, political instability and poverty while they prefer countries with a sunny yet mild climate and the preferred holiday climate is the same for all tourists being independent of the home climate. Effects of climate and weather on the decision process of tourism and recreational activities are studied well and have tried to be modelled considering other related factors (such as climate change) in the literature. For instance, in a bibliographical study, Scott *et al*. (2006) mentioned about more than 200 references from academic journals, books, government and university reports, and conference proceedings, which more or less showed the effects of climate and weather on tourism and recreation.

Richardson and Loomis (2004) conducted a visitor survey at Rocky Mountain National Park including descriptions of hypothetical climate scenarios (depicting both weather- and resource-related variables), and stated that both direct (weather-related) and indirect (resource-related) climate scenario variables are found to be statistically significant determinants of contingent expected changes in visitation.

The study by Yilmaz *et al*. (2007) analyzed how visitor emotions in a theme park environment influence satisfaction and behavioral intentions. In the present study, it was aimed to solve today's basic problems about parks and recreational areas, and take over them when reencountered. It was also aimed to determine the individual features of park users and to plan the land functions according to the demands of users.

Given the opportunities for outdoor recreation and tourism activities, Turkish people, especially those in the eastern part of the country, would be among the nations who can benefit from these activities perhaps the most. Effects of climatic parameters (e.g. maximum and mean daily temperatures, relative humidity, total precipitation, sunshine, wind speed and global radiation) and weather conditions on tourism and outdoor recreational activities are of special importance in the eastern regions of Turkey (including the city of Erzurum) because severe climatic conditions are prevalent together with the stress on people resulting from the economic and social problems. In this region, long and cold winters affect human activities negatively. For instance, in the city of Erzurum, length of winters is at least six-month from late October to late April and ever recorded minimum temperature in the city is −37.2 ºC. Therefore, local people of the region are required to meet their recreational needs generally indoor and have no opportunities to perform outdoor recreational activities, except for a short period of time, nearly four months. When considered the unfavorable conditions resulting from both climate and lacking of infrastructure, people should perform their outdoor leisure activities in a physically and bio-climatologically comfortable environment. However, in its present condition, the region can not provide this possibility for people with its limited outdoor activity types due to the mentioned poor conditions. In spite of all these disadvantageous properties of the city and the region, in summer months, this area can have a very important alternative tourism potential because of its high elevation, untouched nature, and distinct climate, which can provide people with thermally more comfortable environments in summer months.

If considered all these favourable and unfavourable conditions of the region and the city, every attempt to be realized for the improvement of living conditions and provision of comfortable recreational and alternative tourism environments for local and foreign people will be very important.

Yilmaz *et al*. (2007a) stated in their study, that great care should be taken in designing urban spaces, and landscape architects or urban designers should avoid large asphalt surface and rather use a mix of impervious and porous materials or lighter colour pavements and preferably provide shade from e.g. shading trees.

The objective of this study was to determine the effect of climate and weather on tourism types and recreational activities via a questionnaire survey in the city of Erzurum, Turkey and offer some suggestions for improving tourism and recreational conditions of the city.

2. Materials and methods

The study was conducted in the city of Erzurum, which is located in the Eastern Anatolian Region of Turkey (39º 55'E and 41º 16'N; Fig. 1). Population of the city, where hard climatic features prevail with a mean annual temperature of 5.2 ºC, is 338,073 according to the census of 2007 (Anonymous, 2008).

A questionnaire form including questions about personal characteristics and tourism and recreational preferences of participants was applied to a totally of 45 individuals in various parts of the city. However, of the completed 45 questionnaire forms, only 42 could be evaluated for various reasons, such as incomplete information or illegibility. For the statistical analysis, SPSS 10.0 software package was used. Percentage distributions, means and differences between the groups were calculated using Duncan and *t* tests.
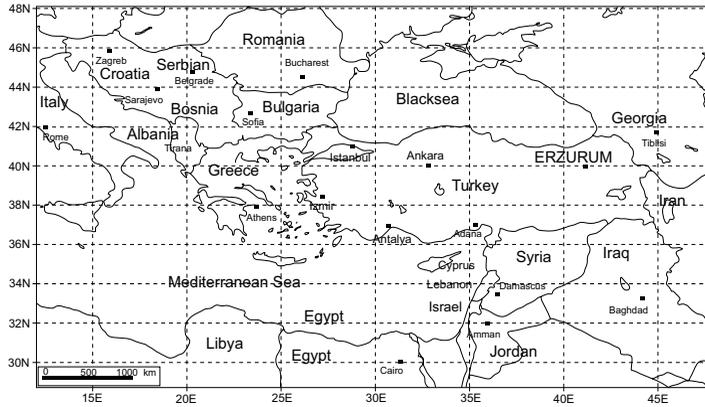
Fig. 1. Location of the study area.

3. Results and discussion

In the first part of the questionnaire (Section A), personal characteristics of the participants were investigated, which are presented in Table I. As can be seen from the table, 23 (54.8%) of 42 volunteers were male; 14 (33.3%) were between 36 and 45 years old; 17 (40.5 %) were university graduate; 17 (40.5 %) were at an income level between 500 and 1,000 Turkish liras and 18 (42.9%) were government officers (Table I).

Table I. Personal characteristics of the subjects.

Demographic factors		Frequency	%
Distribution for gender	Female	19	45.2
	Male	23	54.8
Distribution for age	18-25	12	28.6
	26-35	12	28.6
	36-45	14	33.3
	46-60	2	4.8
	60 above	2	4.8
Distribution for education levels	Primary school	8	19.0
	Secondary school	1	2.4
	High school	16	38.1
	University	17	40.5
Income levels	Less than 500 Turkish liras (TL)	5	11.9
	500-1,000 TL	17	40.5
	1,000-2,000 TL	12	28.1
	2,000-3,000 TL	7	16.7
	Above 3,000TL	1	2.4
Distribution for occupations	Government officer	18	42.9
	Pensioner	1	2.4
	Working at private sector	1	2.4
	Tradesman	1	2.4
	Student	9	21.4
	House wife	12	28.6
Total		42	100

In the second part of the questionnaire (Section B), participants were asked to respond to three multiple-choice questions regarding 1) their present preference of season for recreational activities; 2) their preference of season for recreational activities if given a full-year opportunity; and 3) their preference of weather condition for recreational activities. According to the responses to the questions described above, majority (31; 73.8%) of the participants preferred summer season for recreational activities under present conditions; more than half (24; 57.1%) of them would prefer summer again, if they had full-year recreational opportunity; and again the majority (30; 71.4%) preferred sunny weather conditions (Table II).

Table II. Preferred seasons and weather conditions for recreation.

Questions	Summer	Winter	Spring	Autumn
1	31 (73.8%)	0 (0.0 %)	2 (4.8 %)	9 (21.4%)
2	24 (57.1%)	3 (7.1 %)	1 (2.4 %)	14 (33.3%)
3	Sunny	Rainy	Snowy	Cloudy
	30 (71.4%)	2 (4.8 %)	2 (4.8 %)	8 (19.0 %)

It can be seen that people would mainly prefer summer season and sunny environment even if they were given a full-year recreation opportunity. This condition is very surprising because the city of Erzurum has a well-known winter sport centre at Palandoken mount and therefore, it is naturally expected that people should, at least to some degree, have preferred winter season and snowy environment for recreational purposes. However, people in the city can face extremely cold and snowy weather conditions at least in six months and those in middle and low income group do not have any recreational opportunities in this period from mid-autumn to late spring in spite of the city being a ski center. This condition may be explained with the definition of Braun *et al.* (1999) who stated that the respective images people have in mind, i.e. the psychological representation of weather influence the attractiveness of a potential vacation region or time (good weather and plenty of sunshine are among the most important expectations in connection with vacations).

In the third part of the questionnaire (Section C), participants were asked to rank the choices of the questions about 1) the effective factors in recreational and tourism destinations on their preferences (e.g. climate, natural beauty, physical infrastructures and facilities, cultural diversity, historical and archaeological wealth); and 2) the factors negatively affecting their recreational activities (e.g. economic conditions; family structure, working conditions, climate of the destination, season, accessibility).

According to the answers given by the participants to the first question in Section C by ranking the factors, it was found that natural beauty of the destination is the most important factor on the preference while the cultural diversity of the destination is the least one (Table III). Climate of

Table III. Most important factors effective on preferences of recreational destinations.

Important factors in recreational destination choice	Mean (X)	Order
Natural beauty	2.0000	1
Climate	2.4524	2
Physical infrastructure and facilities	3.3095	3
Historical and archaeological richness	3.5238	4
Cultural diversity	3.7619	5

the destination was determined to be the second most important factor on the preference by 33.3 % of the participants. However, 28.6 % of the participants considered the climate in a destination as the most important effective factor on the destination preference.

According to the answers given by the participants to the second question in Section C by ranking the factors, it was found that economic conditions of the participants are the most important factor negatively affecting recreational activities while the accessibility of the destination is the least effective one. Season and the climate of the destination are in the third and fourth row, respectively (Table IV).

Table IV. Factors negatively affecting recreational activities.

Factors negatively affecting recreational activities	Mean (X)	Order
Economic condition	2.6190	1
Working conditions	3.3571	2
Season	3.4524	3
Climate of the destination	3.5000	4
Family structure	3.7619	5
Accessibility or means of transportation	4.2857	6

In a survey study (Lohmann and Kaim, 1999), conducted over German people, similar results were found with the present study, and landscape was reported to be the most important factor effective on the destination choice even prior to economic reasons, while weather and bioclimate were in third and eighth rows respectively for all destinations included in the study. In another study (Gössling *et al*., 2005), tourists were randomly surveyed in Zanzibar and asked the importance of climate in their decision making process and it was found that more than half of them reported that climate was an important factor on their decision while a small part (17%) stated that climate was not important.

In the fourth (and the last) section of the questionnaire (Section D), participants were asked their opinions through totally 7 agreement questions with 5 choices (i.e. "I certainly agree", "I agree", "No comment", "I don't agree", and "I certainly don't agree") and related to whether; 1) the weather conditions affect their decisions for a recreational activity; 2) nice weather conditions increase their willingness for recreation; 3) snowy weather increases their willingness for recreation; 4) they prefer rainy weather conditions for recreation; 5) they prefer outdoor leisure under nice weather conditions; 6) they prefer staying in under bad weather conditions; and 7) weather conditions have effects on their decisions for a recreational activity.

In the analysis of the agreement questions, One Way ANOVA–Duncan test was used setting the confidence level at 95%. From the results of the statistical analysis of the agreement questions, it can be seen that participants are affected by weather conditions when deciding a recreational activity; nice weather conditions increase their willingness for recreation; and they prefer outdoor leisure under nice weather conditions (Table V).

From these findings, it might clearly be said that weather conditions have statistically significant effects ($p = 0.5$) on tourism and recreational decisions and choices. This condition is consistent with the findings in related literature. For instance, in a survey study (Hamilton and Lau, 2004), it was reported that 73% of sampled population ($n = 394$) learned about the climate of their destination long or short time before their decisions. In another study (Braun *et al*., 1999), where a psychological experimental approach was used to determine the tendency of tourists towards climate change scenarios, it was found that climate change can influence the preferences for vacation destinations.

Table V. Results of statistical analysis of the agreement questions Section D.

Statements	Mean + Std. deviation		95% confidence interval for mean	
			Lower bound	Upper bound
1. Weather conditions affect my decision for a recreational activity.	1.55	+1.017a	1.23	1.86
2. Nice weather conditions increase my willingness for recreation.	1.31	+0.604a	1.12	1.50
3. Snowy weather increases my willingness for recreation.	3.57	+1.451c	3.12	4.02
4. I prefer rainy weather conditions for recreation.	3.14	+1.491c	2.68	3.61
5. I prefer outdoor leisure under nice weather conditions.	1.40	+0.627a	1.21	1.60
6. I prefer staying in under bad weather conditions.	2.17	+1.305b	1.76	2.57
7. Weather conditions don't affect my decision for a recreational activity	4.12	+1.214d	3.74	4.50
Total	2.47	+1.556	2.29	2.64

N = 42

4. Conclusion

This study shows that people are affected by climate and weather conditions in their decision for tourism and recreational destination and time. However, what is really interesting for this survey is that although people who participated live in a city, which is a well known winter spot center extreme climatic features in winter and have to experience at least an eight-month cold period (from late October to late May), they would still prefer summer season for recreation and tourism even if they were given a full-year recreation opportunity. This may show the effect of the image of seasons in people's mind in part, but more important thing in this respect is that because of the lack of economic capabilities and appropriate recreational facilities in the city in winter, people cannot perform these activities. This condition causes people to stay in and be obliged to perform indoor activities in this long and boring period, which is psychologically, socially, and economically a very harmful thing. In order to prevent this condition, it is advisable that people should be provided with efficient winter recreational facilities and children should be educated for winter sports.

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