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Reserach Article

EXAMINING STUDENTS' CONSTRAINTS TO PARTICIPATE IN WINTER SPORT ACTIVITIES IN A WINTER TOURISM DESTINATION

Harun ÇALHAN[1*] (orcid.org/ 0000-0002-7256-2411)

[1]Erciyes University, Tourism Faculty, Departmant of Tourism Guidance, Kayseri, Turkiye

Abstract

The main aim of the study is to examine students' constraints to participate in winter activities in a winter tourism destination. The population of the research consists of tourism students studying in the Tourism Faculty, Erciyes University, Kayseri. Questionnaire technic was used in the study. The data was collected between the dates of December 16 and December 31, 2019 by method of convenience sampling. A total of 213 students were included in the study. As a result, students' main constraints have been found as expensive skiing clothing and equipment, lack of enough money to spend for winter tourism activities and lack of affordable all-inclusive ski tours in the destination. Six factors which explain students' constraints to participate in winter tourism activities have been found as (a) fear constraints (b) economic constraints (c) anxiety constraints (d) other leisure activities (e) accompany constraints and (f) transportation constraints. These six factors statistically differ ($p<0.05$) according to students' gender, year, getting a student loan, level of family income, level of interest in winter sports, family members' level of interest in winter sports and visit level of Erciyes winter center in 2019 season.

Key Words: Winter Tourism, Winter Sports, Constraints, Students.

* Sorumlu yazar: hcalhan@erciyes.edu.tr
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Introduction

The leading countries in tourism are trying to make the best use of the winter, ski and mountain resources in order to diverse tourism activities and extend the tourism season (Albayrak, 2013: 146). Winter tourism is the basis of mountain tourism and mountain sports. Winter and ski tourism destinations have unique structural and textural features that enable tourism and sport activities and other related activities (Ceylan & Demirkaya, 2009: 82). Winter and ski tourists are an important market segment because of having completely different holiday and destination selection process than other tourist types. Winter and ski tourists choose winter and ski destinations especially according to their difficulty levels in winter sports to gain memorable sporting and adventure experiences (Yfantidou, Nikou and Matsouka, 2018: 77). Although sport, entertainment and adventure oriented tourists constitute main tourist type of the winter tourism, sport activities are not the only purpose of tourists for vacationing to the mountains. A significant number of tourists visit winter tourism destinations only for natural scenery and relaxation and do not ski at all (Dupuis, 2004: 134).

Communication and interactions between academic researches and sectors have great interest in scientific researches in recent years. The basic assumption for explaining this interest is that knowledge is created in academia and then transferred to businesses for further development and processing. Studies on the relationship between academia and the sectors show that research conducted at universities is important for the development of business success and its impact should not be underestimated (Hjalager, 2002: 468-469). Although there is a common understanding in the literature that winter and ski tourism is a very important alternative tourism for countries, it is stated that there is still a limited number of studies in the literature and also a great lack of research on winter and ski tourism (Bausch and Unseld, 2017: 206; Çalhan and Çakıcı, 2019).

This study aims to determine the participation constraints of tourism students who study in a winter tourism destination and have possibility to work in the sector after graduation, towards winter and ski tourism activities. The study also aims to determine the tourism students' level of participation to winter and ski tourism activities. In addition, considering the limited number of academic studies in the literature and the lack of research on winter and ski tourism, it is thought that this study may contribute to the relevant literature as well as provide guiding information to researchers who will work on winter tourism. Moreover, this study is considered important and valuable because it provides information about the participation levels of tourism students to winter and ski tourism activities and provides information about how constraints differ according to some demographic characteristics. In the literature section, firstly, the concepts of winter and ski tourism were discussed. The historical development of winter and ski tourism, the basic quality factors and natural and environmental threats of winter and ski tourism centers were examined. In the last part of the literature, basic winter tourism data of the world and Turkey are given. In the methodology section, the population and sample of the research, data collection method, data collection process and analysis methods are explained. In the findings section, the findings obtained from the data collected in the research are presented. In the conclusion section, the conclusions reached based on the findings are given. The study ends with future recommendations on the subject.

Literature Review

Winter tourism is a special and important alternative tourism type because it is out of the summer season that accepted as high season of tourism (Altaş, Çavuş and Zaman, 2015: 347). As a matter of fact, winter tourism is one of the fastest growing markets in tourism and the number of ski tourists is constantly increasing despite the negative impact of global warming (Gajdosikova, Gajdosik and Kueerova, 2019: 162). Winter tourism is defined as a type of tourism that can be done based on the suitability of geographical factors such as slope, aspect, as well as the duration of snowfall and snow on the ground (Albayrak, 2013: 146), and consists of the activities that include travel to snowy and sloping areas suitable for skiing and benefiting from touristic services especially accommodation, food and beverage, travel and entertainment services (Koşan, 2013: 294). In addition, winter tourism is also defined as all of the activities carried out in a certain period of the year (Altaş, Çavuş and Zaman, 2015: 346), where many different snow related winter sports are performed in the parts that snow is present (Daştan, Dudu and Çalmaşur, 2016: 404), depending on the snowfall of regions with a certain height and slope (Ay, Karakurt Tosun and Yıldırır Keser, 2016: 32).

Winter and ski tourism started with mountaineering in the early twentieth century. In this period, Nordic skiing and Alpine skiing pioneered ski tourism. With the emergence of international mass tourism in the 1960s and 1970s, modern winter and ski tourism industry was created by expanding small ski areas and building many new ski areas. In the 1980s and 1990s, winter tourism market is matured because of the increase in the number

of ski resorts and slow down of ski tourists. Increasing competition and higher customer expectations have forced ski resorts to invest in comfort issues such as new technology faster cable cars and chairlifts and take steps to improve the reliability, quality and seasonal length of the winter tourism product. Large capital investments and rising operating costs have changed the winter tourism market and have resulted in the closure of many small ski resorts. Today, ski tourism is stagnant in markets that are historically considered as pioneering (e.g. USA, Canada, and France) or at the maturity level with declining demand (e.g. Switzerland, Japan). On the other hand, basic changes in the economic structure of emerging markets such as China and Eastern Europe have led to the emergence of new markets with high growth rates (Steiger, Scott, Abegg, Pons and Aall, 2019: 1343-1344). In winter tourism centers, duration of snow on the ground, topographic condition of the ski area, number of sunny days, mechanical facilities, presence of food, beverage and entertainment units and accessibility as well as landscape, flora and cultural values (Koşan, 2013: 294) and the snow cover that is often called "snow safety", amount and reliability of snow are considered as important factors (Tranos and Davoudi, 2014: 165) that increase the attractiveness of winter and ski tourism product.

The average snow thickness in winter tourism centers should be around one meter, the duration of snow that determines the ski season should be about six months, and the infrastructure and superstructure of tourism centers should be sufficient (İbret, 2006: 62). In addition, in some studies (Tranos and Davoudi, 2014: 165), it is stated that a ski resort must have sufficient snow for at least 100 days to be economically viable. Although there are various winter sport activities such as sledding, ice hockey, ice skating and other sports in winter tourism destinations, skiing is the first sport that comes to mind when winter tourism is mentioned. Sports activities can sometimes be disrupted in winter tourism centers because of the fact that skiing is a sport that is quickly affected by atmospheric events. Strong winds, storms, fog, heavy snowfall and icing prevent performing winter sports. Fog is one of the atmospheric events and a negative factor as it reduces skiers' visibility. Fog is a serious obstacle for skiing. Another important weather phenomenon for skiing is wind speed. The direction and speed of the ski tracks according to the wind are also extremely important (Ceylan, 2009: 211).

According to the report of the Organization for Economic Cooperation and Development (OECD), a one Celsius more increase in the global average air temperature pulls the snow line 150 meters up in the ski resorts. If this happens, it means that at least 10% of many ski resorts in Europe will be considered to have unreliable snow. If the temperature rises two Celsius more, about 33% of the winter tourism centers in Europe will have unreliable snow. This means that the winter season will be shortened, ski tourism will start later and end earlier, that cause great distress (Tranos and Davoudi, 2014: 165). Although majority of the visitors participate in various snow related winter sports during winter months in winter tourism centers, some visitors visit winter tourism centers also in order to gain different winter experiences such as benefiting from the fresh air of the mountains, benefiting from the humidity change provided by the altitude and the abundant oxygen provided by the natural forest vegetation (Albayrak, 2013: 146). Moreover, visitors can also visit winter tourism centers in order to rest, to have fun, to relax, to get away from the stress of the complicated life and to participate in various entertainment activities (Ayaz and Apak, 2017: 82). In addition, visitors participate in winter tourism activities in order to take a short holiday in winter season and integrate alternative tourism types such as health, hunting, culture, youth, eco-tourism etc. with winter tourism (Albayrak, 2013: 147).

Winter tourism demand is affected from snowfall, income level of the tourists, money value in a destination, general prices, transportation costs, time of the Easter holiday (Falk, 2010: 912), weather conditions shortening the ski season, climate and climate change (Bank and Wiesner, 2011: 62). Similar to the Easter holiday of foreign visitors, it can be said that especially the semester holidays are an important period increasing domestic demand for winter tourism in Turkey (Ayaz and Apak, 2017: 83). Furthermore, the weather forecast for outdoor activities in winter tourism constitutes another important factor for winter season. In winter months, outdoor snow sports are closely related to weather conditions. Among all meteorological events, air temperature and wind speed are the most important factors in winter tourism activities and directly affect snow sports. Air temperature is a crucial factor for winter tourism centers because of affecting the snow quality (Cai, Di and Liu, 2019: 3). Rise in temperature and less snowfall pose a major threat to the sustainability of the winter tourism industry in mountainous regions. In addition, when winter centers do not have enough snow, tourism businesses experience loss of income and tourism staff's quality of life decreases (Dar, Rashid, Romshoo and Marazi, 2014: 2550).

In most winter tourism destinations, artificial snow machines are used in case there is not enough snow due to the high air temperature. Artificial snow production is used to improve the snow cover when the natural snow cover is thin and contributes to the prolongation of the ski season. With artificial snow production, it is possible

to extend the ski season until 2-3 weeks before the "natural" start of the ski season or 2-3 weeks after its end (Pickering and Hill, 2003: 140). Although air temperature is an important factor in artificial snow production, winter tourism destinations also use artificial snow production as an important strategic move to gain a strategic advantage in increasing competition and to meet the needs of winter tourists. Artificial snow production was carried out on 10% of the tracks in the Swiss Alps in the 2000s and on 36% of the tracks in the 2010s. It is stated that the rate of artificial snow in the Austrian Alps is 62% and in the Italian Alps 100% of the tracks (Rixen, Teich, Lardelli, Gallati, Pohl, Putz and Bebi, 2011: 229). Although the level of snow is an important factor for all winter tourism visitors, professional ski tourists prefer destinations with a wider and more assertive slope network and they are less sensitive to price compared to other non-professional ski tourists. On the other hand, low-level and beginner ski tourists pay more attention to entertainment facilities, tourist attractions and accommodation quality in winter tourism centers (Bausch and Unseld, 2017: 205).

Although the exact figures regarding the number of tourists participating in winter and ski tourism in the world cannot be revealed, it is estimated that approximately 400 million skiers visit international ski destinations annually. In addition, the number of international ski centers for winter tourism is 2084, one third of them is in the Alps, and the number of mechanical facilities is 26109. There are 51 winter and ski destinations worldwide, each of that is visited by at least one million winter tourists every year (Vanat, 2019: 13-15). In Turkey, there are winter sports themed 29 "Culture and Tourism Conservation and Development Zones" and "Tourism Centers". In terms of accommodation and mechanical facilities, nine of these regions are active and seven of them are partially active. Kayseri Erciyes, Erzurum Palandöken, Bursa Uludağ, Bolu Köroğlu, Kastamonu Çankırı Ilgaz, Kars Sarıkamış, Kocaeli Kartepe, Isparta Davraz and Sivas Yıldız Mountain are the current active winter tourism centers in Turkey. The total number of existing mechanical facilities in Turkey's winter tourism centers is 102 and the total available bed capacity is 11459 (Ministry of Culture and Tourism, 2021). In this context, it can be said that winter tourism is an important developing tourism type in Turkey that considerable amount of international and national tourism investment is made.

Conceptual Model

Participation constraints in winter tourism is a subject that has been studied in the literature since the 1990s (Evren, 2019). Crawford, Jackson and Godbey (1991) developed a model of main sport constraints that are intrapersonal, interpersonal and structural constraints. The authors explained intrapersonal constraints as individual psychological constraints, interpersonal constraints as individuals' characteristics and structural constraints as intervening factors. Later, Williams and Lattey (1994) made a study on constraints of female non-skiers and skiers. Their study results indicated that non-skiers perceive ski as a competitive, dangerous and hard to learn sport. Additionally, financial costs of ski sport was expressed as a constraint. Gilbert and Hudson (2000) conducted a study to explore limiting factors for skiers. They determined that non-skiers' main constraints are intrapersonal factors such as fear, stress, depression and anxiety. According to their study results, skiers' main constrains are about time, family and economic factors. Moreover they stated that economic factors are the major limitation for both non-skiers and skiers. Tuppen (2000) emphasized that cost factors are important difficulty for winter destinations to attract skiers. As he stated, the perceptions that skiing is expensive sport and suitable for high income groups, is an important difficulty for winter tourism destinations. Williams and Fidgeon (2000) identified constraints of non-skiers as the media image, instructional requirements, cost and time commitments. Andronikidis, Vassiliadis, Priporas and Kamenidou (2007) performed a field study to investigate most important constraints of skiers. They have found that intrapersonal constraints which are personal characteristics such as perceived self-skill, stress, and moral values are the main constraints. They also determined that structural constraints which are external environmental factors such as time, accessibility, and financial limitations, are another important constraint for skiers' participation in winter sports. Alexandris, Kouthouris, Funk and Chatzigianni (2008) explored constraints limiting skiers' to participate in winter activities. They have determined five main constraints which are experience constraints, personal constraints, time constraints, financial/accessibility constraints, and accompany constraints. Probstl, Unbehaun, and Haider (2008) conducted a field study to investigate winter sport tourists' destination choice. Their study results indicated that skiers may give up winter sports if costs increase and skiing becomes more expensive. Hudson, Hinch, Walker, and Simpson (2010) investigated skiers' constraints to participate in sport tourism. They have determined main constraints as intrapersonal, interpersonal and structural constraints. Additionally, the authors detected that parental and language barriers, lack of information about the sport and age (too young or too old) are the main constraints of skiing as well.

Priporas, Vassiliadis, Bellou and Andronikidis (2015) made a study to examine basic constraints of winter sport tourists. They defined four constraint categories which are intrapersonal, family and friends related,

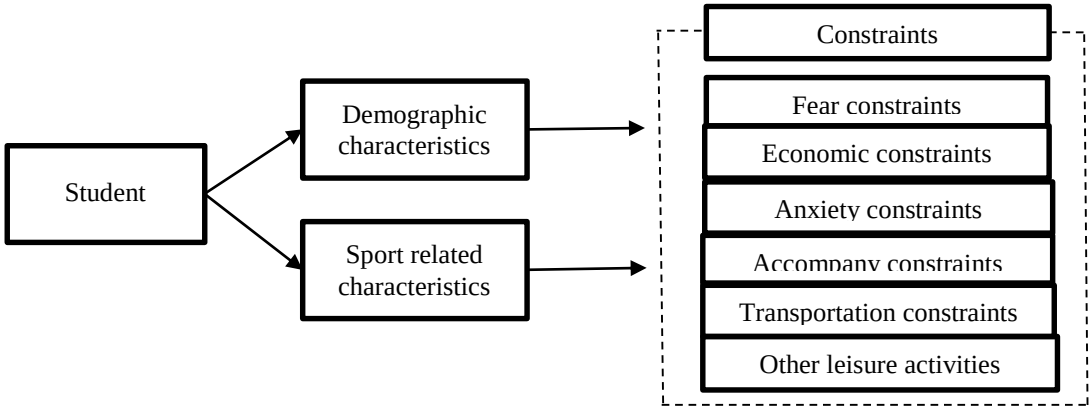
financial cost, and winter sports constraints. Their study results indicated that demographic and behavioral characteristics are directly related to the participation constraints. Kim, Kang and Kim (2018) performed a study to examine constraints for participation in winter sports. They determined intrapersonal constraints to participate in winter sports as lack of knowledge, skill, interest and energy, whereas interpersonal constraint as lack of friends. They detected structural constraints as financial cost, time, accessibility, safety and weather. Evren (2019) explored the main constraints that restrict the youth for winter tourism activities. His study findings indicated that the most important constraints of young people in winter tourism are financial constraints. Additionally, he determined that lack of money of the participants and their friends, and the expensiveness of ski equipment are the other important constraints of youth. Hesari and Kohan (2021) conducted a study to examine role of restrictions in motivating winter sports tourists. They determined constraints as intrapersonal constraints, interpersonal constraints, friendship and kinship constraints, and organizational constraints. The friendship and kinship constraints was explained as lack of suitable companions and family members. Their study results showed that friendship and kinship constraints is the most effective limitation for ski tourists.

Based upon this review of the literature, a research model was developed in the study. The model reflects the assumption that students' constraints to participate in winter sport activities differ according to students' some demographics and sport related characteristics. In the model, six dimensions explain students' constraints to participate in winter sport activities which are fear constraints, economic constraints, anxiety constraints, accompany constraints, transportation constraints and other leisure activities. In the light of the research model and given literature, the following two main hypotheses were developed:

H1: Students' constraints to participate in winter sports activities significantly differ according to demographic characteristics.

H2: Students' constraints to participate in winter sports activities significantly differ according to sport related characteristics.

Figure 1. Research Model



Methodology

This study was conducted to investigate the students' participation level to winter tourism activities and constraints that limit their participation to winter tourism activities in a winter tourism destination. The study has the characteristic of descriptive research and the quantitative research method has been used within the scope of the research. In this study, the convenience sampling method has been adopted as research method.

Sample

Kayseri is one of the oldest settlements in Anatolia, where there are remnants of different civilizations. Beginning from the Chalcolithic ages (B.C. 4000), the city has been an important settlement during the Assyrian, Hittite, Phrygian periods and until the end of the Roman period. Kayseri is an open-air museum that houses the remains of these civilizations. Mount Erciyes, the symbol of Kayseri, has been one of the important winter sports centers of Turkey. In addition to winter sports, Erciyes also offers mountaineering, hiking and trekking opportunities (Ministry of Culture and Tourism, 2022a). Kayseri as a developing winter and culture tourism destination where hosted more than 500.000 tourists in 2021 (Ministry of Culture and Tourism, 2022b). In this study, an empirical research was conducted in order to explore students' participation status in winter tourism activities and constraints that limit their participation. The population of the study consists of

tourism students studying in Erciyes University Tourism Faculty. According to the Faculty records, 482 students re-enrolled in the fall term of 2019. However, there was no information about the number of students regularly attend to the Faculty. In this context, all the students that could be reached were included in the study. 213 students participated in this study on a voluntary basis.

Questionnaire

The questionnaire used in the study consisted of demographic questions and participation related questions to winter tourism activities. The scale items of constraints to participate in winter tourism activities that used in this study was developed by Gilbert and Hudson (2000) and Evren (2019). The questionnaire is divided into three parts: demographics (7 questions), participation related questions to winter tourism (7 questions) and constraints to participate in winter tourism activities (29 items). A five-point Likert-type scale was used for the evaluation of the scale items. In this context, tourism students were asked to score 1= not constrains at all and 5= constrains completely.

Data Collection

Research data was collected through a questionnaire. The questionnaires were administered between the dates of December 16 and December 31, 2019 to the volunteer students. In this study, convenience sampling method was used. This method involves getting participants wherever you can find them and normally wherever is convenient (Jackson, 2011: 119). The method was preferred in order to obtain data quickly and economically. A total of 213 students who were willing to fill out the questionnaire were included in the study. Ethics Committee Approval was not obtained in this study, because of the data collection process was completed before the announcement. Higher Education Council TR Index Ethics Committee Criteria were announced on 1 January 2020.

Data Analysis

The data was analyzed and evaluated using the statistic program for social sciences. A reliability analysis was utilized to test the internal consistency. The results showed that the Cronbach's alpha coefficients for the 29 item-scale were quite high (0,846), and it was internally consistent and reliable. The alpha coefficient was calculated to be 0.758 for the first part of the scale and 0.814 for the second part with the split-half method. Interpreting the Cronbach's alpha coefficient is quite easy. If the alpha coefficient is close to 1, the internal consistency of the items in the scale is high (Kula Kartal and Mor Dirlik, 2016: 1870). In this context, according to the test results, it can be said that the scale used in the study is highly reliable (Kılıç, 2016: 47). In order to assess the distribution of the data, Kolmogorov-Smirnov (K-S) and Shapiro-Wilk (S-W) tests of normality were applied. The significance of the K-S test was 0.072 and S-W's significance was 0.243. The level of significance for both tests are greater than alpha of 0.05. It was also found that the skewness (0.279) and kurtosis (0.090) scores were between −1.5 and +1.5 values indicating that the data was normal distribution (George and Mallery, 2010; Abu-Bader, 2021) and it is suitable for performing parametric tests. The data was analyzed by using some central distribution measures, exploratory factor analysis, t-test and ANOVA. In the study, $p<0.05$ was considered statistically significant.

Findings

Profile of the Respondents

Demographics of the tourism students who participated in this study is presented in Table 1.

Table 1. Demographics of the Tourism Students

	(n)	(%)		(n)	(%)
Gender			**Year**		
Female	96	45,1	1st year	56	26,3
Male	117	54,9	2nd year	68	31,9
Total	213	100	3rd year	47	22,1
Age			4th year	42	19,7
18-20	80	37,6	*Total*	213	100
21-23	108	50,7			
24 and above	25	11,7	**Level of family income (according to the living country)**		
Total	213	100	Low	35	16,4
Department			Middle	167	78,4
Tourism Management	124	58,2	High	11	5,2
Tourism Guidance	89	41,8	*Total*	213	100

Total	213	100	**Status of getting scholarship or student loan**		
Working status while studying			Yes	130	61,0
Yes	42	19,7	No	82	38,5
No	171	80,3	Missing	1	0,5
Total	213	100	*Total*	213	100

As it can be seen, most of the students are male (54.9%), between the ages of 21-23 (50.7%). The majority of the students are in tourism management department (58.2%), studying at second year (31.9%) and their family have middle level income (78,4%). Moreover, most of the students get scholarship/student loan (61%) and not working in a job (80,3%) while studying.

In addition, most of the students (52,1%) participate in sport activities but most of them are less interested (55,4%) in winter sports. The majority of their families are not interested at all (51,6%) in winter sports. Most of the students visited (79,3%) Mount Erciyes at least once but only 39,9% of the students visited for winter sports. Moreover, most of the students (68,1%) did not visit Erciyes in 2019 winter season and the majority of the students (85,9%) have not visit a different winter tourism center before.

Table 2. Sport Related Characteristics of the Tourism Students

	(n)	**(%)**		**(n)**	**(%)**
Level of interest in winter sports			**Participation status to sport activities**		
Not interested at all	28	13,1	Yes	111	52,1
Less interested	118	55,4	No	100	46,9
Interested	*52*	24,4	Total	211	99,1
More interested	15	7	**Level of family members' interest in winter sports**		
Total	213	100	Not interested at all	110	51,6
Visit status of Erciyes			Less interested	77	36,2
Yes	169	79,3	Interested	22	10,3
No	44	20,7	More interested	4	1,9
Total	213	100	Total	213	100
Number of visit in this year			**Visit status of Erciyes for winter sports**		
None	59	27,7	Yes	85	39,9
Once	72	33,8	No	128	60,1
Twice	35	16,4	Total	213	100
Three times and more	47	22,1	**Number of visit in the 2019 season**		
Total	213	100	None	145	68,1
Visit status of other winter tourism centers			Once	39	18,3
Yes	30	14,1	Twice	16	7,5
No	183	85,9	Three times and more	13	6,1
Total	213	100	Total	213	100

Central Distribution Measures

Some of the central tendency measures are given in Table 3. Constraints with the highest means are "too expensive skiing clothing and equipment ($\overline{x}$: 3,84)", "not having enough money ($\overline{x}$: 3,58)", "lack of affordable all-inclusive ski tours ($\overline{x}$: 3,51)", "having friends do not have enough money ($\overline{x}$: 3,41)" and "perceive winter sports as expensive ($\overline{x}$: 3,40)" respectively. According to this, it is possible to say that tourism students' main constraints to participate in winter tourism activities are basically about their economic conditions. As it can be seen in Table 3, "expensive skiwear and equipment" is found as the highest constraint that tourism students' most important barrier participating in winter sports. Constraints with the lowest means are "worrying about being humiliated in front of friends ($\overline{x}$: 1,67)", "having friends very good at this sport ($\overline{x}$: 1,75)", "considering the learning process humiliating ($\overline{x}$: 1,92)", "concern about the lack of snow in ski resorts ($\overline{x}$: 1,99)" and "considering winter sports as very stressful ($\overline{x}$: 2,04)" respectively. As it is understood from the Table 3, the tourism students do not consider learning process of winter sports which are especially ski and snowboarding as a humiliating process. Also, they do not see winter sports as stressful or tedious. In this sense, it can be said that tourism students are generally positive about participating in winter sports but their economic condition do not allow.

Table 3. Some Central Distribution Measures of Students' Constraints

	Constraints to participate in winter sports	n	Mode	Median	Mean	Std. Deviation	Mean Rank
1	Too expensive skiing clothing and equipment	213	5,00	4,00	**3,8498**	1,08852	**1**
2	Not having enough money	213	4,00	4,00	**3,5822**	1,04568	**2**
3	Perceive winter sports as expensive	212	3,00	3,00	**3,4057**	1,12514	**5**
4	Having friends do not have enough money	212	4,00	4,00	**3,4104**	1,06939	**4**
5	Lack of public transportation to the ski resorts	208	3,00	3,00	3,0240	1,11831	9
6	Preferring other leisure activities	212	3,00	3,00	3,0708	1,24668	6
7	Cannot finding anyone to go to the ski resort with	209	3,00	3,00	2,7321	1,24614	12
8	Not having time for winter sports	213	3,00	3,00	2,7465	1,30729	11
9	Having friends do not have time for it	211	3,00	3,00	2,7299	1,15388	13
10	Lack of affordable all-inclusive ski tours	212	3,00	3,00	**3,5189**	1,13731	**3**
11	Not enough attractive ski resorts	211	2,00	2,00	2,4360	1,19101	20
12	Having friends do not interested in winter sports	213	3,00	3,00	2,9014	1,14704	10
13	Requiring a lot of planning	211	2,00	3,00	2,6351	1,08869	15
14	Considering winter sports as very dangerous sports	213	3,00	3,00	2,6526	1,19805	14
15	Crowding of the ski slopes	213	3,00	3,00	3,0610	1,26306	8
16	Being more interested in other leisure activities	211	3,00	3,00	3,0664	1,31488	7
17	Not finding winter sports attractive enough	211	2,00	2,00	2,6256	1,28993	16
18	Afraid of getting hurt	213	1,00	2,00	2,5728	1,44412	18
19	More difficult learning process than most of sports	212	3,00	3,00	2,6085	1,28148	17
20	Afraid of height	212	1,00	2,00	2,1792	1,32277	22
21	High level of physical challenge in winter sports	213	1,00	2,00	2,4930	1,28349	19
22	Concern about the lack of snow in ski resorts	212	1,00	2,00	**1,9906**	1,07972	**26**
23	Considering winter sports as elitist sport	210	1,00	2,00	2,2905	3,12520	21
24	Worrying about getting wet and cold	213	1,00	2,00	2,1408	1,28448	23
25	Afraid of ski lifts	211	1,00	2,00	2,1043	1,21832	24
26	Having friends very good at this sport	213	1,00	1,00	**1,7559**	1,02632	**28**
27	Considering winter sports as very stressful	213	1,00	2,00	**2,0423**	1,22594	**25**
28	Considering the learning process humiliating	213	1,00	1,00	**1,9202**	1,18490	**27**
29	Worrying about being humiliated in front of friends	213	1,00	1,00	**1,6714**	1,03931	**29**

Scale levels: 1. Not constrains at all – 5. Constrains completely.

Dimensions of Students' Constraints to Participate in Winter Tourism Activities

In order to reveal the factor structure of students' constraints to participate in winter tourism activities, exploratory factor analysis was conducted. Kaiser Mayer-Olkin (KMO) and Bartlett's sphericity tests were used to assess the dataset. Since the KMO coefficient of the scale was greater than 0.80 (KMO= 0.832), the sample adequacy was evaluated as "very good" (Gray and Kinnear, 2012: 606). According to Bartlett's sphericity test, the value of the scale ($p \leq 0.001$) was found to be 2354,613. In factor analysis, in order to obtain significant factors basic component analysis was selected. The Varimax technique was used as one of the vertical rotation techniques and the data with a factor load above 0.50 was accepted (Gray and Kinnear, 2012: 608-610). Factor analysis was performed within the stated rules and as a result of the removal of two items, factor analysis was applied to the last 27 items. The results of exploratory factor analysis are shown in Table 4.

The first factor "fear constraints" which is the result of factor analysis includes seven items. The first factor comprises the fear items of injury, height, lifts, cold and danger. The first factor has an eigenvalue of 7.036 and explains 26.05% of the total variance. The reliability coefficients of the first factor were 0.875. The second factor "economic constraints" consists of four items and the items are about lack of money and expensiveness. The second factor has an eigenvalue of 3.163. The second factor explained 11.71% of the total variance and the reliability coefficient was determined to be 0.832. The third factor "anxiety constraints" consists of four items and the items are especially related with anxiety of humiliation. The third factor has an eigenvalue of 2.508. The third factor explained 9.288% of the total variance and the reliability coefficient was determined to

be 0.839. The fourth factor "other leisure activities" which is the result of factor analysis includes three items. The fourth factor is about students' leisure activity choice instead of winter sports.

Table 4. Results of Exploratory Factor Analysis

Items	Factor Loadings						Communalities	Eigenvalue	% of Variance	Mean	p. value
	1	2	3	4	5	6					
Fear constraints											
Item 18	,815						,707			2,57	
Item 21	,763						,700			2,49	
Item 19	,694						,616			2,60	
Item 24	,677						,526	7,036	26,05	2,14	0,875
Item 14	,661						,614			2,65	
Item 25	,659						,598			2,10	
Item 20	,643						,492			2,17	
Economic constraints											
Item 3		,819					,705			3,40	
Item 2		,816					,682	3,163	11,71	3,58	0,832
Item 1		,810					,673			3,84	
Item 4		,743					,628			3,41	
Anxiety constraints											
Item 29			,867				,806			1,67	
Item 28			,843				,828	2,508	9,288	1,92	0,839
Item 27			,664				,805			2,04	
Item 26			,560				,461			1,75	
Other leisure activities											
Item 16				,803			,727			3,06	0,752
Item 6				,758			,657	1,550	5,740	3,07	
Item 17				,636			,577			2,62	
Accompany constraints											
Item 9					,790		,669			2,72	
Item 7					,598		,575	1,461	5,410	2,73	0,704
Item 12					,571		,591			2,90	
Item 8					,557		,517			2,74	
Item 10					,548		,534			3,51	
Transportation constraints											
Item 22						,677	,587			1,99	
Item 5						,628	,533	1,112	4,118	3,02	0,685
Item 11						,578	,491			2,43	
Item 15						,528	,529			3,06	

Extraction method: Principal Component Analysis; **Rotation method:** Varimax
Kaiser-Meyer-Olkin sampling adequacy: ,832 **Bartlett's test of sphericity***:* 2354,613; df: 351; p<0.001;
Total Variance Explained: %62,331 **Scale levels:** 1. Not constrains at all – 5. Constrains completely.

The fourth factor has an eigenvalue of 1.550 and explains 5.740% of the total variance. The reliability coefficients of the first factor were 0.752. The fifth factor "accompany constraints" consists of five items and the items are about lack of friends for winter sports. The fifth factor has an eigenvalue of 1.461. The fifth factor explained 5.410% of the total variance and the reliability coefficient was determined to be 0.704. The sixth factor "transportation constraints" which is the result of factor analysis includes four items. The sixth factor comprises the lack of private and public transportation items. The sixth factor has an eigenvalue of 1.112 and explains 4.118% of the total variance. The reliability coefficients of the first factor were 0.685.

Results of t-test and ANOVA

The t-test and ANOVA were used in order to test the research hypotheses and determine whether tourism students' constraints to participate in winter tourism activities differ according to demographics and sport related characteristics. An independent-groups t-test is used when there is an interval-ratio data, a between-

participants design, and one independent variable with two levels (Jackson, 2011: 366). ANOVA, also referred to as variance analysis, was used to investigate whether the arithmetic mean values of three or more independent variables were different (Jackson, 2011: 298). The t-test was applied to determine whether tourism students' constraints to participate in winter tourism activities differ according to gender, department, job status while studying and getting a student loan. Moreover, students' sport related characteristics such as visit status of Erciyes winter tourism center, visit status for winter sports and visit status of other winter tourism centers were also examined.

In order to test the homogeneity of variance, the results of the Levene test were examined and it was observed that the variance of the students' constraints to participate in winter tourism activities was homogeneous ($p>0.05$). The t-test results are shown in Table 5. Statistically significant ($p<0.05$) test results are displayed in the table. It was determined that "fear constraints" dimension did not show differences according to students' department, status of getting a student loan, working status while studying, visit status of Mount Erciyes and other winter tourism centers ($p>0.05$), whereas there was statistically significant difference according to gender ($p=0.001$). "Economic constraints" dimension did not indicate any differences in terms of students' gender, department, visit status of Mount Erciyes and other winter tourism center ($p>0.05$), whereas there was difference according to status of getting a student loan ($p=0.013$). Similarly, "other leisure activities" dimension show difference according to status of getting a student loan, ($p=0.033$) whereas there were not any differences in term of other characteristics. "Anxiety constraints", "accompany constraints" and "transportation constrains" dimensions did not demonstrate any differences in terms of all demographic and sport related characteristics.

Table 5. Results of t-test

Dimensions	Variables	n	Mean	Std. deviation	t value	d.f.	p
Fear constraints	Female	96	2,6510	,96183	3,583	211	0,001
	Male	117	2,1848	,93096			
Economic constraints	Getting a student loan	130	3,6833	,86163	2,501	210	0,013
	Not getting a student loan	82	3,3750	,89430			
Other leisure activities	Getting a student loan	130	2,7872	,98131	-2,141	210	0,033
	Not getting a student loan	82	3,0996	1,11415			

*n: 213; confidence interval %95; significance level: $p<0.05$

ANOVA was conducted to test the research hypotheses and determine whether tourism students' constraints to participate in winter tourism activities differ according to age, year, family income, level of interest in winter sports, family members' level of interest in winter sports and visit level of Erciyes winter center in 2019 season. In order to test the homogeneity of variance, the results of the Levene test were examined and it was observed that the variance of the students' constraints to participate in winter tourism activities was homogeneous ($p>0.05$).

The ANOVA results are presented in Table 6. Statistically significant ($p<0.05$) test results are displayed in the table. It was found that "fear constraints" dimension did not show any difference according to students' age, year, family members' level of interest in winter sports and visit level of Erciyes winter center in 2019 season ($p>0.05$), whereas there was significant differences according to family income and level of interest in winter sports ($p<0.05$). "Economic constraints" dimension did not indicate any differences in terms of students' age, year and level of interest in winter sports ($p>0.05$), whereas there were differences according to family income, family members' level of interest in winter sports and visit level of Erciyes winter center in 2019 season ($p<0.05$).

Similarly, "anxiety constraints" dimension indicated differences according to family income and level of interest in winter sports ($p<0.05$) whereas there were not any difference in term of other characteristics. "Other leisure activities" dimension demonstrate significant differences according to year and level of interest in winter sports ($p<0.05$) whereas there were not any differences in term of students' age, family income, family members' level of interest in winter sports and visit level of Erciyes winter center in 2019 season. "Accompany constraints" did not significant according to students' age, year, family income, level of interest in winter sports and visit level of Erciyes winter center in 2019 season ($p>0.05$), whereas there was difference according to family members' level of interest in winter sports ($p=0.026$). "Transportation constraints" did not demonstrate any differences according to demographics and other characteristics.

Table 6. Results of ANOVA

	Demographic Variables		n	Mean	Std. Deviation	F Value	p
Fear constraints	A	Low level income	35	2,0401	,94155	3,036	0,049
	B	Middle level income	167	2,4534	,97822		
	C	High level income	11	2,6364	,72665		
	A	Not interested at all (individual)	28	2,7908	1,03855	6,689	0,001
	B	Less interested	118	2,4988	,90803		
	C	Interested	52	2,1731	,98705		
	D	More interested	15	1,6079	,71195		
Economic constraints	A	Low level income	35	4,1190	,67407	8,900	0,001
	B	Middle level income	167	3,4561	,87925		
	C	High level income	11	3,4318	,92932		
	A	Not interested at all (family members)	110	3,7295	,77603	5,243	0,002
	B	Less interested	77	3,5119	,94123		
	C	Interested	22	2,9545	,85090		
	D	More interested	4	3,3542	1,36486		
	A	None (visit Erciyes)	145	3,6575	,83870	2,806	0,041
	B	Once	39	3,4038	,98277		
	C	Twice	16	3,5625	,82412		
	D	Three and more	13	3,0000	,94648		
Anxiety constraints	A	Low level income	35	1,4786	,79143	4,026	0,019
	B	Middle level income	167	1,9012	,92528		
	C	High level income	11	2,2045	,99886		
	A	Not interested at all (individual)	28	2,0179	1,01363	2,939	0,034
	B	Less interested	118	1,9534	,96849		
	C	Interested	52	1,6442	,75788		
	D	More interested	15	1,4000	,65329		
Other leisure activities	A	1st year	56	2,7768	1,08724	3,784	0,011
	B	2nd year	68	3,2255	,90226		
	C	3rd year	47	2,6099	1,05482		
	D	4th year	42	2,9524	1,11790		
	A	Not interested at all (individual)	28	3,2619	1,03977	10,963	0,001
	B	Less interested	118	3,1398	1,06685		
	C	Interested	52	2,5064	,75405		
	D	More interested	15	1,9556	,88072		
Accompany constraints	A	Not interested at all (family members)	110	3,0273	,82436	3,159	0,026
	B	Less interested	77	2,9214	,83056		
	C	Interested	22	2,6182	,63218		
	D	More interested	4	2,0625	,75870		

* n: 213; confidence interval %95; significance level: p<0.05

According to the t-test and ANOVA results, it is seen that students' constraints differ according to gender, family income, year and status of getting a scholarship or a student loan. Therefore, the first research hypothesis of the study which (H1) students' constraints to participate in winter sports activities significantly differ according to their demographics, is partially supported in the study. Additionally, it is understood that students' constraints differ according to level of interest in winter sports, level of family members' interest in winter sports and visit status of Erciyes. In this context, the second research hypothesis of the study which (H2) students' constraints to participate in winter sports activities significantly differ according to their sport related characteristics, is partially supported as well.

Conclusion and Discussion

Some significant findings have been provided as a result of the study which has been conducted with the aim of determining the tourism students' constrains to participate in winter tourism activities in a winter tourism destination. Students' main constraints have been found as "considering skiing clothing and equipment

expensive", "not having enough money to spend for winter tourism activities" and "lack of affordable all-inclusive ski tours" in the winter destination. The main constraint that expensive skiing clothing and equipment finding supports Williams and Lattey's (1994), Gilbert and Hudson's (2000), Williams and Fidgeon's (2000) studies that they have also found the same results. As Gilbert and Hudson (2000) stated, economic factors are the major limitation for both non-skiers and skiers to participate in winter sports. In addition, Tuppen (2000) said that cost factors are important difficulty for winter destinations to attract skiers. Moreover, Probstl et al. (2008) emphasized that cost factors are very important obstacles for skiers.

The second important constraint that not having enough money to spend for winter tourism activities finding supports Andronikidis et al., (2007) and Priporas et al.'s (2015) study results that they found lack of money as a serious barrier for existing and potential skiers. This result also supports Evren's (2019) study results that he found lack of money as the major constraint for youth's participation to winter tourism activities. Priporas et al. (2015) stated that according to most previous studies, money is still one of the important constraints of participation to winter sport activities. The role of money in the participation to winter sports increases, especially in economic crises. Saving or borrowing money for winter sport participation is also seen as an important constraint by Kim, Kang and Kim (2018). They emphasized that time and money is a big issue especially for college students. Although, ski resorts make discounts for weekdays, students cannot benefit from it because of their courses. Andronikidis et al. (2007) suggest that free or discounted ticket application which can be held as "buy three tickets and get one free ticket for the lift" can help repeat arrivals.

The third important constraint found in the study is lack of affordable all-inclusive ski tours in the winter destination. The history of tours to ski resorts is quite old. Henry Lunn organized the first overseas trips in the early 1900s, and especially the first ski tours to Switzerland (Sarı Çallı, 2015). When the definitions of winter tourism are examined, it is seen that package tours to ski centers or individually organized ski tours are highlighted in these definitions (Demirel and Kırıcı Tekeli, 2020). Rokenes, Schumann and Rose (2015) experienced a ski tour in Idaho, USA and report ski guides behaviors in their study. The authors stated that the trip they experienced, was a three-day all-inclusive ski tour included accommodation, and full day tours. They stated that ski guides try to create and increase customer perceived value and by means of all-inclusive ski tour packages. Mamia and Niemi (2012) emphasized that all-inclusive ski tours have a long history in the Alps and there is a dynamic and intensive competition for ski trips. As they stated that some of the companies in the region prepared packages for 35-65 year old tourists and offer ski tours to Switzerland by air.

Williams and Fidgeon (2000) stated that non-skiers demand arrangement of ski trips that packaged more electively and cover winter resort facilities. The concerns and fear of most non-skiers can be relieved by preparing packages that include transportation, accommodation, lift tickets, equipment rental, ski instruction, post-ski activities. As it can be understand, it is vital for ski resort tourism managers and tourism investors to understand the constraints of participation in winter ski tourism activities. Ski sector have a dynamic nature and huge investments (Koşan, 2013). Therefore, all-inclusive affordable packages should be prepared for actual and potential winter tourists by cooperating with national and/or international travel agencies and tour operators. Necessary steps should be taken to attract both professional skiers and potential ski tourists to winter resorts. In particular, taking into account the economic shortages of youth and university students, special ski packages should be prepared. These corrective steps can revitalize and increase the attractiveness of ski areas that tourism managers and ski resort investors desired.

The reliability analysis of *Cronbach's Alpha* showed highly acceptable result (α=0.84) and exploratory factor analysis extracted six factors which explain tourism students' constraints to participate in winter tourism activities as (a) fear constraints (b) economic constraints (c) anxiety constraints (d) other leisure activities (e) accompany constraints and (f) transportation constraints. Fear constraints dimension indicates statistically significant differences according to gender, family income and level of interest in winter sports. Economic constraints dimension shows differences according to status of getting a student loan, family income, family members' level of interest in winter sports and visit level of Erciyes winter center in 2019 season. Anxiety constraints" dimension demonstrate difference according to family income and level of interest in winter sports. Other leisure activities dimension shows differences according to year, status of getting a student loan and level of interest in winter sports. Accompany constraints indicate difference according to family members' level of interest in winter sports. Transportation constrains dimensions did not demonstrate any differences in terms of all demographic and sport related characteristics. As a conclusion, six constraint factors differ according to students' gender, year, getting a student loan, level of family income, level of interest in winter sports, family members' level of interest in winter sports and visit level of Erciyes in 2019 season. Therefore, two main research hypotheses are partially supported in the study.

The number of questionnaire is not adequate for rigorous analyses. Therefore, further researches can be done in larger samples in different student groups such as non-skiers/skiers and potential skiers and also in different winter tourism destinations. Moreover, comparative studies can be more productive for the constraints/barriers to participate in winter tourism activities knowledge available in the current literature.

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