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Does Participation in Outdoor Sports Affect Environmental Attitudes? A Research on University Students

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Abstract

This study aims to compare the environmental attitudes of college students who participate in outdoor sports. This study's sample group consisted of 320 university student volunteers who participate in outdoor sports (n=147) and non-participants in outdoor sports (n=173). The Environmental Attitude Inventory (EAI) developed by Milfont and Duckitt (2006) was used to assess participants' environmental attitudes. Turkish validity and reliability analysis of the original form was conducted by Ak (2008). The data obtained from the survey results were collected using Microsoft Excel program and analyzed using SPSS 18.0 package program. Descriptive statistics methods (frequency, percentage, arithmetic mean, and standard deviation) were used in the analysis of the obtained data. In addition, the T-test for independent samples was used to compare the means of two different groups, and the one-way analysis of variance (ANOVA) was used to investigate the differences between the means. On the other hand, Pearson's correlation analysis was used to determine the correlation between the groups. In the analysis of the results, a significance level of $p > 0.005$ and $p > 0.01$ was assumed. As a result, the environmental attitudes of the participants in outdoor sports were more favorable than those of the others. If participation in outdoor sports is widespread and children's participation in these activities is encouraged, it could be essential in preserving nature and enhancing environmental awareness.

Introduction

All sports that are practiced in nature are classified as nature sports (Ardahan & Lapa, 2011). They are activities in which one fights against the potential difficulties and risks of nature without motor or animal support, using the knowledge, skills and condition of nature sports to sustain life. Sports activities performed in nature have been classified as "nature sports," "outdoor recreation," "adventure sports," "adventure recreation," and "extreme sports," depending on the danger they involve, the risk performance, and the auxiliary elements used (Koçak & Balcı, 2010).

In fact, it covers a broad educational process such as participating in nature sports, planning, protecting and using

natural resources, engaging with nature and living away from technology and urban comforts (Esenaş et al., 2016). In this process, a direct connection with the natural environment is established. The situations that individuals want to experience in the learning process are achieved through activities in nature. In this way, the individual and social benefits of sharing experiences with the natural environment come to the fore. While nature activities provide individuals with high motivation to participate, environments are created where skills such as decision making, team communication and unity, problem solving, idea generation, and mutual trust can be used effectively (Dinç, 2018).

Human-nature relations constitute the main source of the current environmental problems faced by humanity. While human beings fought the forces of nature in the beginning, they have nowadays started to dominate the nature and consumed natural resources rapidly (Daştan, 1999). At the same time, human beings are also a part of the environment and thanks to it they can continue their lives. Without a suitable and healthy environment, we cannot talk about the continuity of life and liveliness (Demirel et al., 2009). Until urbanization, man lived in harmony with nature, then the balance has continuously shifted against the natural ecosystem and the sources became insufficient to replace themselves (Akten & Tanrıbir, 2014). Environmental education has both cognitive, affective, and behavioral goals. Its cognitive goals are to increase the ecological culture and environmental literacy of individuals, and its affective goals are to develop values, behaviors, and attitudes toward the environment and environmental problems. The goal of environmental education is to create attitudes. The behavioral goals consist of raising individuals who actively take responsibility for solving environmental problems and strive to fulfill these duties (Doğan & Kuruluş, 1997).

Today the concurrent require a high level of professionalism, mostly because of the enormous size of the material profits and losses and this creates a big pressure and stress on the human. So, there is a need of a very good management of the environment to over come this pressure and to realize the humans (Aybek et al., 2019). Today, although global climate change, air, water, and soil pollution, ozone layer depletion, acid rain, and biodiversity decline are considered the most important environmental problems, these expansion problems threaten all life forms, and human-induced encounters with soil conditions are an important problem (Watson & Halse, 2005).

There are studies that show that environmental education, when conducted in nature through field studies, facilitates the transformation of acquired knowledge into behavior, is more durable, and enables the acquisition of positive attitudes and values toward the environment (Erten, 2006; Farmer et al., 2007). While nature sports and outdoor recreation can have positive impacts on natural areas, they can also cause various negative impacts (Ardahan, 2012; Atik et al., 2009). Due to these negative impacts, the environmental attitudes and behaviors of individuals participating in outdoor recreational activities are a very important issue for the sustainability of natural areas.

According to ecological philosophy, man learns that he must take into account the desires and interests of nature when he identifies with nature, finds himself in nature, and reflects on his own desires and interests in his relations with nature. The importance of the natural environment can be learned in interaction with it. With this in mind, environmental education is important because it increases interest in nature when it takes place in the natural

environment and allows us to view life through empathy with natüre (Atasoy, 2006; Ozaner, 2004; Palmberg & Kuru, 2000). For this reason, the environmental attitude of people who participate in activities in nature is considered very important. The purpose of this study is to investigate the effect of participation in nature sports activities on the environmental attitudes of university students.

Literature Review

According to Chan and Lau (2000), environmental attitude is synonymous with concern for the environment (Chan & Lau, 2000). Environmental attitude expresses an individual's general attitude toward the environment (Kim & Choi, 2005). Schultz, Shriver, Tabanico, and Khazian (2004) defined environmental attitude as the collection of beliefs, affect, and behavioral intentions that an individual holds about environmentally related activities or issues (Schultz et al., 2004). In a study conducted at the University of Illinois, the following factors were cited as motivations for outdoor sports: Love of the outdoors, escape from crowds, routine, family and responsibilities, physical activity, creativity, recreation, self-improvement and acquisition of new skills, building social relationships, meeting or observing new people, building relationships with people who might be expected (e.g. a famous climber coming to an event attracts people who want to meet him), being with family, thirst for knowledge, helping others, social responsibility, stimulating elements or inviting structures (e.g. a waterfall attracts people); These are listed as gaining social power, self-actualization, fighting spirit, rebellion, desire for success, competition (internal and external), passing time and eliminating boredom, and intellectual aesthetics (Ardahan & Lapa, 2011; Ibrahim & Cordes, 2002). The benefits of outdoor sports for individuals are: Group dynamics, leadership skills, self-confidence enhancement, individual decision making, risk management, taking responsibility for self and others, positive effects on personality and body development, positive effects on self-confidence and others (Hilton, 1992; McKenzie, 2000; Wagner & Roland, 1992; Yerlisu Lapa et al., 2010).

Environmental Attitudes

Empirical studies have found that individuals' attitudes toward waste prevention have a mediating effect on the relationship between their moral norms and their environmental behavior. In addition, studies have found that the relationship between environmental attitudes, people's moral norms, and environmental intention is positive and significant (Choi et al., 2016; Han et al., 2020; Matthies et al., 2012).

According to Ebejer (2014), meaning together with the physical features of the place and the activities carried out, contributes to the creation of a "sense of place," which could be described as an experience that "goes beyond the physical or sensory characteristics of a place (Ebejer, 2014). Some studies have highlighted the importance of camping as psychological recreation, a special place for family traditions and memories, a positive influence on family functioning, an experience of nature, an expression of one's identity, social interaction with other campers, and an opportunity for children to learn and develop new skills (Winter, 2005). As Özdemir (2015) noted, studies that identify people's perceptions and thoughts that guide the creation and protection of environments that allow them to continue to experience nature are important (Özdemir et al., 2004). In another study conducted on environmental awareness in different age groups, participants were informed about their families, cultural groups

they belong to, circles of friends, etc. Although it was found that they were affected throughout their lives, it was concluded that gender and education level were particularly important in explaining this level of awareness (Coertjens et al., 2010; Tunç et al., 2012). On the other hand Szagun and Pavlov (1995) argued that environmental awareness is in part a function of experience, and that outdoor experiences serve to provide an experiential basis for developing knowledge about the environment and values for protecting it (Szagun & Pavlov, 1995).

An individual's desire to escape the stressful and hectic city life can also lead to their desire to explore. It is noted that this tendency, which individuals see as an escape, increases the demand for various activities in nature day after day, which is considered the main source of nature sports (Kalkan, 2012). This is to the extent that Goldenberg (Goldenberg, 2001) defines nature education as a growing field that promises growth and development in the future. states that nature sports "occupy an important place in contributing positively to people's physical and mental health, reducing the impact of crowded and intense city life on people, and improving social relations among people ."

Methods

Sample Selection

The research group of the study consists of a total of 320 students studying at Gaziosmanpaşa University, with an average age of 22.40±2.23 years and voluntarily participating in the study.

Data Collection Instrument

To determine participants' attitudes, the Environmental Attitude Inventory (EAI), described in detail by Milfont and Duckitt (2006) and translated into Turkish by Ak (2008), is used. The original scale consists of 12 subscales rated on a 7-point Likert scale (1=disagree at all, 7=disagree at all) (Çetinkaya, 2015). The scale was subjected to principal component factor analysis (PCA) using the rolling method. The reliability value of the scale was determined to be .93 (Cronbach's alpha). This value shows that the scale used in the study is reliable (Hacıcaferoğlu, 2014). The highest value that can be taken from the scale is 364, and the lowest value that can be taken is 52.

Data Analysis

The data obtained from the survey results were collected using the Microsoft Excel program and analyzed using the SPSS 18.0 package program. Descriptive statistics methods (f) frequency, (%) percentage, (X) arithmetic mean, and (Ss) standard deviation were used in the analysis of the obtained data. In addition, the T-test for independent samples was used to compare the means of two different groups, and the one-way analysis of variance (ANOVA) was used to investigate the differences between the means. On the other hand, Pearson's correlation analysis was used to determine the correlation between groups. In the analysis of the results, a significance level of $p > 0.005$ and $p > 0.01$ was assumed.

Results

Of the 320 people who participated in the study, 138 were women and 182 were men. The general average age of the participants was 22.40±2.23years, for females 21.5±2.20 years, and for males 23.1± 2.51years. It was found that 173 of the participants did not participate in nature sports, while 147 participated in nature sports activities. Most of those participating in the study have been participating in these activities for 1-3 years.

Table 1. Demographics

Scale of environmental settings subdimensions		Participating	Non participating	Total
N		147	173	320
Age		22.60 ± 2.83	22.42 ± 2.32	22.40±2.23
Gender	Male	86	91	177
	Female	61	82	143
Activity Age (year)	Less than 1	30		
	1-3	77		
	4-6	10		
	7-9	25		
	More than 10	5		

Table 2. Comparison of Environmental Attitudes of University Students who participate in Outdoor Sports and those who do not

Scale of environmental settings subdimensions		$\bar{X}$	sd	df	t	p
Human-Centered Approach	Participating	5.86	1.20	245	-82	.38
	Non participating	5.95	0.20			
Ecocentric Approach	Participating	5.72	1.17	365	3.25	.00*
	Non participating	5.30	1.37			
Enjoying Nature	Participating	6.12	1.16	366	6.58	.00*
	Non participating	5.17	1.58			
Trust of science	Participating	4.53	1.34	367.4	0.01	0.98
	Non participating	4.53	1.37			
Population growth	Participating	5.70	1.04	321.3	-.97	.32
	Non participating	5.83	0.88			
Environmental Action	Participating	4.94	1.29	369	4.80	.00*
	Non participating	4.27	1.47			
Distrust of Science	Participating	4.04	1.63	372	0.36	.06
	Non participating	3.90	1.77			
Protection Policies	Participating	3.97	1.55	376.4	3.65	.00*
	Non participating	5.84	1.76			
Environmental Fragility	Participating	5.98	1.34	376.4	4.12	.00*

Scale of environmental settings subdimensions		$\bar{X}$	sd	df	t	p
	Non participating	5.22	1.77			
Population Control	Participating	4.40	1.60	366	.62	.55
	Non participating	4.30	1.54			
Total Score	Participating	284.80	40.20	366	3.20	.00*
	Non participating	272.93	36.40			

*p<0.01

Table 3. Comparison of the Environmental Attitude Scale by Gender

Scale of environmental settings subdimensions		$\bar{X}$	sd	df	t	p
Human-Centered Approach	Male	5.78	1.04	368	-3.05	.00**
	Female	6.15	0.90			
Ecocentric Approach	Male	5.35	1.32	368	-3.35	.00**
	Female	5.75	1.37			
Enjoying Nature	Male	4.62	1.36	368	-.88	.33
	Female	4.67	1.43			
Trust of science	Male	5.63	1.45	368	-87	.32
	Female	5.83	1.32			
Population growth	Male	5.70	0.94	368	-2.36	.03*
	Female	5.82	0.90			
Environmental Action	Male	4.54	1.39	368	-58	.56
	Female	4.67	1.47			
Distrust of Science	Male	3.94	1.63	368	-45	.66
	Female	4.05	1.57			
Protection Policies	Male	5.39	1.65	368	-1.47	.13
	Female	5.64	1.66			
Environmental Fragility	Male	5.48	1.64	368	1.74	.08
	Female	5.72	1.77			
Population Control	Male	4.44	1.64	368	.77	.45
	Female	4.33	1.57			
Total Score	Male	272.40	38.52	368	-2.85	.00**
	Female	281.03	37.60			

**p<0.01; *p<0.05

Discussion and Conclusion

In the context of scientific studies on education, the behaviors of individuals Since it takes a long time to determine the change in environmental attitudes, attempts are made to observe indirect changes through different variables such as environmental awareness and environmental sensitivity. Educational research, conducted both inside and

outside the classroom, comes to different conclusions regarding the relationship between these variables (Emel & Uygun, 2012). When the study results are examined, the general average age of the subjects participating in the study was 22.40±2.23years, and it was found that most of them had been participating in these activities for 1 to 3 years (48%). These results arise from the fact that the study population consists of university students. The fact that 68.9% of those participating in the study have been participating in these activities for less than 4 years supports the idea that the age of entry into outdoor sports is concentrated in university age.

Similar studies show that there is a positive relationship between age and environmental attitudes and that young people even have high environmental attitudes (Özmen et al., 2005). In general, it can be said that the participants are in the young age group and their environmental attitude scores are high. In a similar study conducted with university students, no significant relationship was found between young participants' pro-environmental behaviour and their age (Özdemir et al., 2004). Early childhood outdoor recreational experiences can play an important role in influencing environmental attitudes by contributing to the formation of values. For example, Kahn and Lourenco (2002) found that children have the capacity to develop complex value judgments about the environment (Kahn Jr & Lourenço, 2002).

The study found statistically significant differences between the gender of the participants and the total scores of environmental attitude and the sub-dimensions of human-centered approach, ecology-centered approach, and population growth. This difference is in favor of female participants, and the total scores of environmental attitude and the mean scores of the three sub-dimensions are higher for female participants than for males. When examining the results obtained in similar studies, it was found that the environmental attitudes of female participants were more positive than those of men in many studies (Bjerke et al., 2006; Franco et al., 2006).

The results obtained in the study are consistent with the literature, and no statistically significant significance was found between participants' age, total environmental attitude scores, and sub-dimensions. There is no statistically significant difference between the duration of participants' involvement in nature sports and their scores on environmental attitudes and their sub-dimensions. Examining the research results, it can be seen that the duration of participation in nature sports is mostly 3 years and less than 3 years. This result can be attributed to the fact that undergraduate studies last 4 years and that contact with nature sports occurs mainly during university education. For this reason, the duration of participation in extreme sports does not vary much, but it is concentrated in a certain period of time.

There are many studies that support the results found in the research. According to Haluza-Delay (2001), some researchers believe that life experiences in natural environments are important for the development of positive perceptions and behaviors related to the environment (Haluza-Delay, 2001; Tanner, 1999); the primary basis for the development of environmental values and knowledge is interaction with nature (Bögeholz, 2006); some have also indicated that land excursions enhance individuals' awareness of the relationships between themselves, others, and the natural world.

It is expected that individuals who participate in nature sports have a greater environmental awareness. In

examining the literature, it is emphasized that there is no definitive relationship between participation in outdoor sports and environmental attitudes, but there is a relationship between various outdoor recreational activities such as bird watching and hiking (Berns & Simpson, 2009). According to the research results, the environmental attitude of university students who participate in nature sports is higher than those who do not. In a previous study, the difference between environmental awareness and attitude scores was associated with not paying attention to environmental problems even though they were known, not punishing negative behaviors, and not teaching environmentally protective behaviors in education (Yücel et al., 2006).

General environmental awareness of people who practice nature sports it is assumed that the values are rather positive. Keleş (2010) found in his studies that the nature education program significantly affects the environmental awareness, attitudes and behavior of individuals and provides permanence (Keleş, 2010). Güler (2009) reported in his study that environmental education practices based on nature education are effective in gaining knowledge about the environment (Güler, 2010). Therefore, expanding participation in nature sports and supporting participation in these activities, especially at a young age, can play an important role in increasing environmental awareness and protection.

Both intuition and previous research suggest that what individuals do in life often influences what they believe later in life. This study supports the idea that the experiences individuals have in the outdoors (many of which are often recreational) are related to their beliefs about the environment.

The environment is a global public good, and efforts to solve or minimise problems of pollution, environmental degradation, and environmental consumption are necessary to ensure the continued existence of these global goods and for humanity to benefit from them, and require collective thought and action. In order to act collectively, people must have a positive awareness of the environment and be environmentally friendly. In this research conducted to determine the environmental attitudes of university students, it was found that students generally have a positive attitude. In other words, it was found that they have a positive attitude towards actions that protect or contribute to the protection of the environment. However, it is noted that although they have a positive attitude, they do not participate in environmental activities with the same frequency. Other factors such as social norms are also believed to have an influence. In general, the fact that students give positive responses to very familiar or well-known environmental issues shows the gap between attitude and environmental friendliness. The increase of such studies is important to increase environmental awareness and to set important strategies for the environment.

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