

The Relationship Between Environmental Consciousness in the Context of New Environmental Paradigms and Ecotourism Knowledge

Yeni Çevresel Paradigmalar Bağlamında Çevre Bilinci ve Ekoturizm Bilgisi Arasındaki İlişki

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ABSTRACT

The research aims to determine the relationship between the students' perceptions of environmental consciousness and ecotourism knowledge in tourism-related departments. In this context, data were collected with a survey using a quantitative research method between April 10, 2021, and May 10, 2021, via Whatsapp and Facebook. The universe of the research is the students in two 2-year degrees, undergraduate, master, and doctorate programs studying in tourism-related departments in Turkey. The research sample is the students (400 participants) who have been selected to represent this program. As a result of the analysis, it was found that there were medium- and low-level positive relationships between factor dimensions. According to the correlation analysis performed for the sum of both scales, it was found that there is a medium-level positive relationship between environmental consciousness and ecotourism knowledge. It was determined that the regression analysis results support this result.

Keywords: Ecotourism, ecotourism knowledge, environmental consciousness

ÖZ

Araştırmanın amacı, turizmle ilişkili bölümlerde okuyan öğrencilerin çevre bilincine ve ekoturizm bilgisine ilişkin algıları arasındaki ilişkiyi belirlemektir. Bu bağlamda, nicel araştırma yöntemi kullanılarak bir anket formuyla veriler 10 Nisan – 10 Mayıs 2021 tarihleri arasında whatsapp ve facebook aracılığıyla toplanmıştır. Araştırmanın evreni, Türkiye'de turizmle ilişkili bölümlerde okuyan ön lisans, lisans, yüksek lisans ve doktora öğrencileridir. Araştırma örneklemini ise Türkiye'de turizmle ilişkili bölümlerde okuyan evreni temsil edecek sayıda ulaşılan (400 katılımcı) öğrencilerdir. Analizler sonucunda faktör boyutları arasında orta ve düşük düzey pozitif yönde ilişkiler olduğu bulgulanmıştır. Her iki ölçeğin toplamı için yapılan korelasyon analizine göre çevre bilinci ve ekoturizm bilgisi arasında orta düzey pozitif yönde ilişki olduğu bulgulanmıştır. Regresyon analizi sonuçlarının bu sonucu desteklediği belirlenmiştir.

Anahtar Kelimeler: Ekoturizm, Ekoturizm bilgisi, çevre bilinci

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Introduction

Early research on environmentally responsible behavior focused on the assumption that knowledge is linked to attitudes and attitudes toward behavior in a linear model. This is because when people become more knowledgeable about the environment and environmental issues, the belief prevails that people will become more aware of environmental and environmental problems and, later on, thus becoming more motivated to act more responsibly toward the environment (Lee & Moscardo, 2005, p. 548). Considering that most environmental problems are caused by people's lifestyles, attitudes, and value judgments, an understanding of education that can change people's attitudes toward nature and shape their value judgments is important in our age in the intervention of environmental problems. Since there is a direct relationship between environmental education and environmental problems, it is also important to determine students' level of consciousness, perspective, or attitude

toward environmental problems (Demir & Yalçın, 2014, p. 7). In addition, it is necessary to determine the students' level of knowledge about ecotourism due to the nature of ecotourism being environmentally sustainable, especially focusing on environmental protection (Cömert & Mete, 2018, p. 605). In this case, it can be said that tourism and the environment are intertwined (Avcıkurt, 2017, p. 50).

The effects of tourism on the environment may differ according to the tourism activities in the destinations and the characteristics of the ecosystem. However, in general, environmental problems caused by tourist concentration cause significant damage to the natural environment in many destinations (Akdağ et al., 2014, p. 260). In preventing this destruction, it is important for the sustainability of the destinations that the local people living in the destinations, tourism workers, and those who visit the destinations have a high level of environmental consciousness and ecotourism knowledge.

The main purpose of the research is to reveal the relationship between environmental consciousness and ecotourism knowledge variables. Having responsible generations with environmental consciousness and ecotourism knowledge is important for the sustainable development of tourism. Therefore, it can be said that there is a greater need for environmental consciousness in the field of general education. Environmental attitudes and behaviors can be effectively changed through education by talking and discussing environmental issues, caring for environmental values, and accepting that human beings are responsible for the ecosystem to become more conscious about nature. In this context, it is important to provide environmental education and to know the global importance of ecotourism within the framework of sustainable environmental consciousness in order to create environmental consciousness at every stage of educational institutions and to reflect this consciousness in attitudes and behaviors positively.

Understanding people's knowledge of environmental consciousness and the concept of ecotourism can be seen as a necessary knowledge for tourism planners and ecotourism marketers to create marketing strategies to be able to plan and market efficiently. In addition, research is important in detecting wrong attitudes and behaviors regarding nature, as it may cause severe damage to the environment. To prevent damage, the person who is primarily responsible should be instilled with a sense of being responsible for the environment. At this point, research can encourage environmental organizations, tourism-related organizations, and other relevant stakeholders to carry out various works on the need to mobilize environmental consciousness and the need to take measures to develop or strengthen positive attitudes and behaviors toward the environment. Thus, long-term sustainable tourism planning can be made in ecotourism destinations, which can be beneficial to the local community and nature. In this context, it is thought that the research is important and will contribute to the literature in terms of research findings and suggestions made in line with these findings.

Theoretical Framework

Ecotourism

The idea of ecotourism first appeared in an article by Budowski in 1976. However, the term ecotourism started to be used in the 1980s. Due to the negative effects of mass tourism on natural areas, ecotourism, which is based on nature, has become a popular and more popular tourism with the combination of the concepts of ecology, ecosystem, and ecology (Orams, 1995, p. 3). Ecotourism, which was the subject of discussion by ecotourists in the 1970s, accepted by tourism researchers in the 1980s and one of the fastest growing branches of tourism in the 1990s, has been a strong but difficult type of tourism (Björk, 2007, pp. 23–24).

Ecotourism is a subcomponent of sustainable tourism. The potential of ecotourism, perceived as an effective tool for sustainable development, is the main reason developing countries are now embracing it and including it in their economic development and conservation strategies (Kiper, 2013, p. 773). According to the definitions of government agencies, scientists, experts, and special protection groups since 1960, ecotourism does not only mean enjoying the beautiful ecological landscape in destinations but also emphasizes the evolution of environmental protection behavior and thinking patterns. Turning from a thought into an action, ecotourism was developed as an attempt to preserve the quality of tourism resources through ecological conservation (Fang et al., 2018, p. 4). To summarize, ecotourism includes environmentally sustainable behaviors as well as social, cultural, and economic development of the region and the local population (Cini et al., 2012, p. 88).

Ecotourism takes into consideration the facilities and possibilities that the natural environment can carry and protects the natural environment against negative effects. At the same time, ecotourism is sensitive to the demands and needs of the local community and provides a better understanding of other cultures and natural environments (Demir and Çevirgen, 2006, pp. 55–57). In this context, the main purpose of ecotourism is neither to revive the ecosystems that have begun to disappear nor to eliminate the poverty of society. The main purpose of ecotourism is to improve the living standards for local people and traveling tourists and to protect the natural environment in a way that includes political, cultural, and social dimensions (Sirakaya et al., 2001, p. 421). This can only be possible with the positive attitudes and behaviors of a generation whose environmental consciousness has been formed with the same consciousness.

Environmental Consciousness

Environmental consciousness is a measure of a person's ability to understand the nature of environmental processes and problems, the degree of their interest in environmental quality, and to what extent they depend on positive environmental behavior in daily life (Yeung, 1998, p. 252). Environmental consciousness is a method to understand the importance of environmental degradation and protection. Moreover, consciousness and understanding of environmental issues form the basis for meaningful actions toward environmentally sustainable development. While environmental consciousness respects the environment, it helps social groups and individuals gain knowledge and sensitivity on environmental issues (Wijesinghe et al., 2016, pp. 6–7). While raising environmentally sensitive citizens, elements such as environmental knowledge, action strategies, environmental attitudes, environmental control focus, verbal commitment, and a sense of responsibility should be taken into account. Environmentally sensitive behavior is individuals' characteristic who

are knowledgeable and anxious about the environment, and individuals therefore act in a manner that avoids harming the environment (Chiu et al., 2014, p. 879).

Environmental attitude and knowledge often determine environmental competence and a person's attitude, along with other characteristics. In this context, environmental education can affect a person's environmental knowledge and attitudes and therefore support a person's environmental competence (Akbaş & Kırımı, 2019, p. 1247). As a result, person's thoughts, attitudes and behaviors related to nature and elements of nature, consciousness and interaction styles with the elements of nature, the ability to perceive, feel, understand and know the social and natural environment, the values, morality, norms, knowledge and perception level that direct his / her relations with the environment reflect his / her environmental consciousness level.(Atasoy, 2005, p. 112).

Environmental locus of control relates to personal perceptions and external obligations to environmental stewardship stemming from one's beliefs about the relative ability or uselessness of each party to influence change (Cleveland & Kalamas, 2015). In this context, the locus of control is a key dimension of pro-environmental behavior (Chiang et al., 2019). Environmental responsibility can be defined as an individual who intends to show a direct tendency toward solving environmental problems, taking action primarily within the scope of environmental and social benefit rather than his own economic benefit (Kükrer, 2012, p. 4507). Environmental damage is the degradation of the environment through the depletion of resources such as air, water, and soil, the destruction of ecosystems, and the destruction of wildlife (Choudhary et al., 2015). It is clear that the destruction of the environment expresses the process of self-destruction of humanity. In this case, one of the most important measures to be taken is to change the approach of individuals to nature and the environment. Therefore, it is a prerequisite to implementing an education process that can create environmental consciousness in individuals from childhood (Dolmacı & Bulgan, 2013, p. 4867).

Methods

Aim and Research Hypothesis

The research aims to reveal the relationship between environmental consciousness and ecotourism knowledge. In this context, the research hypothesis has been developed by including a lot of research on the subject.

Bagri et al. (2009) investigated the environmental orientation and tourists' consciousness of ecotourism visiting some of the environmental highlights of North India. A comparative analysis has been made on the tourists' environmental orientation, who keep traveling for pilgrimage, adventure, and entertainment. The findings of the research reveal that there are significant differences in environmental orientation and consciousness of ecotourism among tourists traveling for pilgrimage, adventure, and entertainment purposes. It has been determined that tourists traveling for pilgrimage and adventure exhibit superior environmental orientation compared to tourists traveling for entertainment purposes. Regarding ecotourism consciousness, none of the three groups show significant consciousness about ecotourism. The results of the study show that the transformation of general environmental orientation to ecotourism consciousness is not linear.

Yeung (1998) found in his research that he aimed to determine the environmental consciousness of students' level in Hong Kong and that the participants had only a limited understanding of environmental issues. It also found that the participants' level of anxiety for environmental quality in terms of attitude and behavior was limited. Most participants were less willing to take an active role in protecting the environment in situations involving conflicts with personal freedom or physical exertion, expression of ideas, or attempts to influence other people.

Schmidt (2007) aimed to determine the effect of an environmental education course on student attitudes and behaviors in his research. It was predicted that enrolling in a course on environmental issues would be associated with an increase in pro-environmental attitudes and behaviors and would also increase the relationship between environmentally sensitive attitudes and behaviors as a function of class participation. The results showed that there was a significant difference in environmentally friendly attitudes and behaviors between students enrolled in the course and not. It has been observed that students enrolled in a course on environmental problems have a higher level of environmental consciousness and exhibit more environmentally sensitive behaviors than students who do not take the course. Students not enrolled in the course generally exhibited lower levels of environmental consciousness.

Oğuz et al. (2011) aimed to determine the undergraduate students' level of consciousness and sensitivity to environmental issues. In the study, it was determined that although the students have conceptual knowledge about the conservation of resources and environmental problems, their behaviors and attitudes in their daily lives are not at the same level. Cömert and Mete (2018) aimed to determine students' level of knowledge about ecotourism in their research. In the study, it was determined that the students did not have sufficient knowledge about ecotourism. It has been observed that they agree that ecotourism is a type of tourism that protects the environment or is sensitive to the environment. The hypothesis of the research created in this context;

H₁: There is a positive significant relationship between environmental consciousness and ecotourism knowledge.

Environmental protection and sociocultural and economic development should be considered as a whole in sustainable tourism. It is necessary to adhere to ecotourism principles in ensuring continuity in ecotourism. However, in many cases, contrary to the principles of ecotourism, it is seen that the local people cannot benefit sufficiently from ecotourism and that investments that harm nature are made in order to gain more profit. Unconscious and unplanned tourism investments cause the deterioration of environmental values and damage to local culture (Kuter and Ünal, 2009, p. 154). In order to prevent these negativities, environmental consciousness and a sustainable ecosystem should be established through the education system. However, a sustainable ecosystem is a system that can protect its own structure and function forever (Aarts, 1999, p. 91).

Natural disasters that occur as a result of people's unconscious pollution, destruction, and unplanned consumption of natural resources threaten people's lives, future generations, and other living creatures. The damage caused by humans to nature has become beyond the surface and even damages the atmosphere. The best way to deal with these threats is undoubtedly to be sensitive to the environment and to grow children with this idea (Uğurlu & Akay, 2017, p. 28). Nature-based training is an important factor in solving and preventing environmental problems. The most basic way to achieve the purpose of nature-based education successfully is to create positive behavior, attitude, thought, and consciousness in individuals (Keleş et al., 2010, p. 386).

Data Collection

A report was sent to Sırnak University Ethics Committee on February 16, 2021, to determine whether the scale questions to be used in the research are appropriate, and we received the reply regarding the ethical compliance of the scale questions on April 9, 2021.

The data were collected with a survey between April 10, 2021, and May 10, 2021, using a quantitative research method. In the study, the survey form was deemed appropriate to be used as a data collection tool because it is an economical data technique, more data can be collected, and it is possible to approach the universe by providing easy access to large masses and it also provides the opportunity to access data very quickly (Ural & Kılıç, 2006, p. 56). In some universities in Turkey, academicians in tourism-related departments were interviewed and they support their students by sharing the survey on WhatsApp and Facebook pages, and thus the data were collected via WhatsApp and Facebook. The easy sampling method was used in the research, which is a scanning model. The data were analyzed using a statistical package program.

Measures, Population, and Sample

Ecotourism knowledge scale was prepared by Cömert and Mete (2018), using the studies of Kavak (2015) and İnan (2015). The environmental consciousness scale (the new environmental paradigms scale) was developed by Dunlap and Liere (1978) to illuminate the new worldview of environmental attitudes. The first study on environmental consciousness subject in Turkey was conducted by Furman (1998) in Istanbul. There are a total of 43 items, 28 of which are on the scale of ecotourism knowledge used in the research and 15 items are on the scale of environmental consciousness. The 5-point Likert scale was used in the research.

The universe of the research consists of students in two 2-year degrees, undergraduate, master, and doctorate programs studying in tourism-related departments in Turkey. The research sample is the students (400 participants) who participated in several studies representing the universe. Since the research population is over 10,000, the number that will represent the universe was calculated as 384 people by calculating the unlimited universe formula ($n = (P \times Q \times Z\alpha^2) / H^2 = 0.5 \times 0.5 \times 1.96^2 / 0.05^2 = 384$) (Ural & Kılıç, 2006, s. 47). Ecotourism knowledge scale was prepared by Cömert and Mete (2018), using the studies of Kavak (2015) and İnan (2015).

Data Analysis

Before determining the relationship between environmental consciousness and ecotourism knowledge, a reliability analysis was performed first. For the reliability of the scales, Cronbach's alpha value was calculated and the item-whole correlation method was used. It has been paid attention that the item-total correlations are greater than .25 and not negative (Kalaycı, 2014, p. 412).

Explanatory factor analysis was performed and the construct validity was reviewed. The suitability of the sample size for factoring was done by using the Kaiser–Meyer–Olkin (KMO) test before explanatory factor analysis (Çokluk et al., 2012, p. 207); the compatibility of the data to multivariate normal distribution was checked with Bartlett's sphericity test (Çokluk et al., 2010, p. 208).

When there is an overlapping item in factor analysis, the difference should not be less than .100 (Bayram, 2009, p. 205). In addition, attention was paid to having a factor load of .40 and above for the items (Büyükoztürk, 2018, p. 134). To name the factors, the relevant literature and variables with large weights under one factor were taken into account (Kalaycı, 2014, p. 330).

After determining the above-mentioned prerequisites for the research were provided, correlation analysis was conducted to determine the relationship between environmental consciousness and ecotourism knowledge variables. In addition, regression analysis was performed to express the relationship between the independent and the dependent variables with a mathematical equation (Kalaycı, 2014, p. 199).

Findings

The distribution of the participants' demographic characteristics is given in Table 1. The participants' demographic characteristics consist of gender, age, program type, and the program studied.

Findings Regarding Reliability and Factor Analysis

Cronbach's alpha value was calculated as .840 for the sum of the ecotourism knowledge scale. Since all item correlation values are less than .25, it has been deemed appropriate to remove items such as "Tourism and eco-tourism mean the same thing" (–.023), "I do not know the benefits of eco-tourism" (.235), "Eco-tourism enables the development of other commercial and industrial activities in the region" (–.176), "Eco-tourism accelerates the urbanization phenomenon of rural areas" (–.230), and "Ecological product sales should be made in order to improve eco-tourism" (–.226). After the items were removed, the Cronbach's alpha coefficient increased from .840 to .907.

In the Kaiser–Meyer–Olkin (KMO) test, it was determined that the KMO sampling adequacy value was .944. This value shows that the sample size is significantly sufficient for factor analysis (Çokluk et al., 2012, p. 207). Bartlett's sphericity test value of the ecotourism knowledge scale is 4467.570; this value is significant at the .0001 level. The significance of chi-square values of Bartlett's sphericity test at .0001 indicates that the data came from a multivariate normal distribution. In this case, multivariate statistical techniques can be applied to the data (Çokluk et al., 2010, p. 208). The factor analysis results of the ecotourism knowledge scale are in Table 2.

Table 1.
Findings on the Participants' Demographic Characteristics

| | Frequency | Percent |
|--|------------|------------|
| Gender | | |
| Female | 205 | 51.3 |
| Male | 195 | 48.8 |
| Total | 400 | 100 |
| Program types | | |
| Two-year degree | 47 | 11.8 |
| Undergraduate | 304 | 76.0 |
| Master's degree and doctor's degree | 49 | 12.3 |
| Total | 400 | 100 |
| Age | | |
| Between the ages of 16 and 20 | 76 | 19.0 |
| Between the ages of 21 and 25 | 168 | 42.0 |
| Between the ages of 26 and 30 | 69 | 17.3 |
| Between the ages of 31 and 35 | 41 | 10.3 |
| 36 ages and over | 46 | 11.5 |
| Total | 400 | 100 |
| Departments being studied | | |
| Tourism management department | 137 | 34.3 |
| Tourism and hotel management department | 62 | 15.5 |
| Tourism guidance department | 57 | 14.3 |
| Tourism management and hotel hood department | 35 | 8.8 |
| Travel and accommodation and food – beverage management department | 37 | 9.3 |
| Tourism-related master's degree and doctor's degree departments | 31 | 7.8 |
| Tourism-related 2-year degree and undergraduate departments | 41 | 10.3 |
| Total | 400 | 100 |

It can be said that the results of the factor analysis of the ecotourism knowledge scale in Table 2 are under the pre-acceptance stated. A total of 23 items out of 28 items explaining ecotourism knowledge come together with 4 factors. In addition, it has been found that it contributes 58.696% to the total variance.

The first factor has been named "the perspective on ecotourism," the second factor is "the contribution of ecotourism to economic development," the third factor is "the contribution of ecotourism to environment," the fourth factor is "the contribution of ecotourism to sociocultural development." The eigenvalue of the first factor is 9.694, its average is 4.0078, and Cronbach's alpha coefficient is .619; This factor contributes 16.099% to the explained variance and is expressed with 8 items. The eigenvalue of the second factor is 2.541, the average is 4.2904, and the Cronbach's alpha coefficient is .835; This factor contributes 15.794% to the explained variance and is expressed with six items. The eigenvalue of the third factor is 1.259, its average is 4.2846, and Cronbach's alpha coefficient is .838; This factor contributes 15.013% to the explained variance and is expressed with six items. The eigenvalue of the fourth factor is 1.005, its average is 4.3717, and Cronbach's alpha coefficient is .760; This factor contributes 11.790% to the explained variance and is expressed with three items.

Cronbach's alpha value was calculated as .721 for the sum of the environmental consciousness scale. Since all item correlation values are less than .25, it has been deemed appropriate to be removed items such as "Animals and plants have the right to live at least as much as human beings" (.036), "Even though human beings have very special abilities like intelligence, they are still subject to the laws of nature" (-.013), "Today's consumption habits cause serious environmental disasters" (.112), and "As long as we know how to use and develop it correctly, the natural resources in the world are sufficient for everyone" (.187). Thus, after the items were removed, the Cronbach's alpha coefficient increased from .721 to .750.

In the KMO test, determining the sample adequacy value as .825 shows that the sample size is significantly sufficient for factor analysis. An item that is "People have the right to change nature in line with their wishes and desires" was not loaded on any factor. Therefore, it was observed that the Cronbach's alpha coefficient made again increased from .750 to .793, and in the KMO test, the KMO sampling adequacy value increased from .825 to .835. The Bartlett's sphericity test value of the environmental consciousness scale is 1245.759 and this value is significant at the level of .0001, indicating that the data show multiple normal distributions, so multivariate statistical techniques can be applied to the data (Çokluk et al., 2010, p. 208). The factor analysis results of the environmental consciousness scale are shown in Table 3.

When Table 3 is examined, the results of the factor analysis of the environmental consciousness scale are in accordance with the stated pre-acceptance. A total of 10 items out of 15 items explaining environmental consciousness are gathered under 2 factors, and they contribute 52.634% to the total variance.

Table 2.
Factor Analysis Results of Ecotourism Knowledge Scale

| | Communalities | Factor Load | Eigenvalues | Total Variance Explained | Mean | Cronbach's alpha |
|--|---------------|-------------|--------------|--------------------------|---------------|------------------|
| Factor 1: Perspective on ecotourism | | | 3.703 | 16.099 | 4.0078 | .619 |
| I know enough about ecotourism. | .588 | .718 | | | | |
| Ecotourism is a type of tourism that provides the opportunity to generate more income. | .529 | .671 | | | | |
| I know about eco-villages. | .572 | .649 | | | | |
| Ecotourism is a type of tourism that explains nature and teaches it practically. | .662 | .602 | | | | |
| Ecotourism is a type of tourism that provides escape from stress and relaxation. | .540 | .569 | | | | |
| Ecotourism offers a holiday in touch with nature. | .508 | .475 | | | | |
| Ecotourism is a tourism product that includes tours and activities related to nature. | .490 | .474 | | | | |
| Ecotourism provides getting away from stress. | .499 | .401 | | | | |
| Factor 2: Contribution of ecotourism to economic development | | | 3.633 | 15.794 | 4.2904 | .835 |
| Ecotourism contributes to the promotion of the region. | .631 | .711 | | | | |
| The ecotourism development improves the economic situation of the region. | .572 | .692 | | | | |
| Ecotourism creates new business opportunities for local people. | .547 | .636 | | | | |
| Thanks to ecotourism, the local people's purchasing power increases. | .651 | .628 | | | | |
| Ecotourism provides additional income to the public. | .588 | .579 | | | | |
| Ecotourism improves the people's quality of life. | .570 | .517 | | | | |
| Factor 3: Contribution of ecotourism to environment | | | 3.453 | 15.013 | 4.2846 | .838 |
| Ecotourism enables the public to keep the environment cleaner. | .714 | .755 | | | | |
| Ecotourism brings people closer together. | .623 | .743 | | | | |
| Ecotourism is an environmentally friendly type of tourism. | .658 | .705 | | | | |
| Ecotourism supports the protection of nature. | .623 | .526 | | | | |
| Ecotourism is a type of tourism that protects the environment and contributes to local well-being. | .504 | .464 | | | | |
| Ecotourism helps preserve the historical-cultural structure. | .513 | .438 | | | | |
| Factor 4: Contribution of ecotourism to sociocultural development | | | 2.712 | 11.790 | 4.3717 | .760 |
| Ecotourism acts as a bridge in the recognition of different cultures. | .625 | .728 | | | | |
| Ecotourism makes the people take pride in their national and cultural values. | .694 | .708 | | | | |
| Ecotourism makes people more conscious about culture and environment. | .599 | .548 | | | | |

Note: Varimax rotation principal component analysis – explained total variance: 58.696%; KMO sampling adequacy: .944 – Bartlett's sphericity test: 4467.570 p.d.: 253, $p < .001$; overall average: 4.2012 – Cronbach's alpha: .907.
Response categories: (1) Strongly disagree, (2) Disagree, (3) No idea, (4) Agree, and (5) Strongly agree.
KMO = Kaiser-Meyer-Olkin.

The first factor was named “*Human-centered judgments*” and the second factor “*Environment-centered judgments.*” The eigenvalue of the first factor is 3.702, its average is 3.6190, and Cronbach's alpha coefficient is .876. This factor contributes 35.494% to the explained variance and is expressed with 5 items. The eigenvalue of the second factor is 1.562, its average is 4.2855, and Cronbach's alpha coefficient is .531. This factor contributes 17.140% to the explained variance and is expressed with 5 items.

Findings on Correlation and Regression Analysis

Correlation analysis was conducted to determine the unity and direction between ecotourism knowledge and environmental consciousness (Nakip, 2005, pp. 244–245).

When the relationship between the dimensions of ecotourism knowledge is examined in Table 4, there are high levels of positive linear relationships among perspective on ecotourism dimension with contribution of ecotourism to economic development dimension ($r = .677$, $**p = .000 < .01$), with contribution of ecotourism to environment dimension ($r = .652$, $**p = .000 < .01$), with contribution of ecotourism to sociocultural development dimension ($r = .634$, $**p = .000 < .01$). It is seen that there are high levels of positive linear relationship among contribution of ecotourism to economic development dimension with contribution of ecotourism to environment dimension ($r = .660$, $**p = .000 < .01$), with contribution of ecotourism to sociocultural development dimension ($r = .641$, $**p = .000 < .01$). In addition, it is observed that there is a high-level of positive linear relationship between contribution of ecotourism to environment dimension with contribution of ecotourism to sociocultural development dimension ($r = .643$, $**p = .000 < .01$).

Table 3.
Factor Analysis Results of Consciousness Scale

| | Communalities | Factor Load | Eigenvalues | Total Variance Explained | Mean | Cronbach's Alpha |
|---|---------------|-------------|--------------|--------------------------|---------------|------------------|
| Factor 1: Human-centered judgments | | | 3.549 | 35.494 | 3.6190 | .876 |
| Mankind has the right to control nature. | .756 | .865 | | | | |
| Man has the power to make the world livable in any situation, thanks to his mind and technology. | .677 | .817 | | | | |
| The ecological crisis is overestimated. | .667 | .817 | | | | |
| Human will be able to control nature as he/she wishes by learning all the subtleties of nature with his/her thought and intelligence. | .635 | .791 | | | | |
| Nature has a balance strong enough to eliminate all the negativity caused by modern industrial society. | .602 | .776 | | | | |
| Factor 2: Environment-centered judgments | | | 1.714 | 17.140 | 4.2855 | .531 |
| Human intervention in nature often ends in disaster. | .508 | .711 | | | | |
| Nature has an easily perishable balance. | .509 | .589 | | | | |
| People overuse nature and natural resources. | .503 | .560 | | | | |
| Earth is like a spaceship with limited resources and habitats. | .476 | .539 | | | | |
| The population is increasing above the world's carrying capacity. | .499 | .478 | | | | |

Note: Varimax Rotation Principal Component Analysis – Explained total variance: 52.634% KMO Sampling Adequacy: .835 – Bartlett's sphericity test: 1245.759 p.d. : 45, $p < .001$; overall average: 3.9523 – Cronbach's alpha: .793.
Response categories: (1) Strongly disagree, (2) Disagree, (3) No idea, (4) Agree, and (5) Strongly agree.
KMO=Kaiser-Meyer-Olkin.

When the relationship between environmental consciousness dimensions is examined, it is seen that there is a low level of a positive linear relationship between the human-centered judgments dimension and with environment-centered judgments dimension ($r = .287$, $**p = .000 < .01$).

When the relationship between ecotourism knowledge and environmental consciousness is examined, it is seen that there is a medium level of a positive linear relationship between perspective on ecotourism dimension with human-centered judgments dimension ($r = .406$, $**p = .000 < .01$), with environment-centered judgments dimension ($r = .360$, $**p = .000 < .01$). It is seen that there is a medium level of a positive linear relationship between the contribution of ecotourism to the economic development dimension with human-centered judgments dimension ($r = .366$, $**p = .000 < .01$); a low level of a positive linear relationship between the contribution of ecotourism to economic development dimension with environment-centered judgments dimension ($r = .338$, $**p = .000 < .01$). It is seen that there is a medium level of a positive linear relationship between the contribution of ecotourism to the environment dimension with human-centered judgments dimension ($r = .354$, $**p = .000 < .01$); a low level of a positive linear relationship between the contribution of ecotourism to environment dimension with environment-centered judgments dimension ($r = .281$, $**p = .000 < .01$). Finally, it is seen that there is a medium level of a positive linear relationship between the contribution of ecotourism to the sociocultural development dimension with human-centered judgments dimension ($r = .443$, $**p = .000 < .01$), with environment-centered judgments ($r = .363$, $**p = .000 < .01$). In this case, according to the results of the correlation analysis, "H₁: There is a positive and significant relationship between ecotourism knowledge and environmental consciousness." Hypothesis is accepted.

Table 5 shows the results of the regression analysis made on the dimensions of environmental consciousness and ecotourism knowledge.

In Table 5, the parameter values obtained from the predicted result of the model and their t -values are shown. t Statistic is used to test whether the variables are significant separately. The F statistic is used to test the significance of the model as a whole (Kalaycı, 2014). Therefore, as a result of the multiple regression analysis on the dimensions of ecotourism knowledge and environmental consciousness, it was found that the effects of the perspective on ecotourism ($p = .007$) and the contribution of ecotourism to sociocultural development ($p = .000$) on human-centered judgments were statistically significant. According to the F statistic ($F = 28.452$, $p = .000$), the model was found to be significant as a whole. As the number of independent variables in the model increases, the R^2 value increases. Therefore, it is preferred to make comments by looking at the adjusted R^2 value in multiple linear regression analysis (Hoş, 2020, s. 311; Kalaycı, 2014; Kanıt & Baykan, 2004, s. 362). In this case, it can be said that 21.6% of the variability in students' perceptions of human-centered judgments can be explained by their perspective on ecotourism and the contribution of ecotourism to sociocultural

Table 4.
Correlation Analysis

| | Mean | Std. Deviation | 1 | 2 | 3 | 4 | 5 | 6 |
|--|--------|----------------|--------|--------|--------|--------|--------|---|
| 1. Perspective on ecotourism | 4.0078 | .43072 | 1 | | | | | |
| 2. Contribution of ecotourism to economic development | 4.2904 | .50260 | .677** | 1 | | | | |
| 3. Contribution of ecotourism to environment | 4.2846 | .51521 | .652** | .660** | 1 | | | |
| 4. Contribution of ecotourism to sociocultural development | 4.3717 | .57824 | .634** | .641** | .643** | 1 | | |
| 5. Human-centered judgments | 3.6190 | 1.01163 | .406** | .364** | .354** | .443** | 1 | |
| 6. Environment-centered judgments | 4.2855 | .47661 | .360** | .338** | .281** | .363** | .287** | 1 |

Note: **Correlation is significant at the .01 level (two-tailed).

Table 5.
Multiple Regression Analysis

| Dependent Variable | Constant and Independent Variable | Unstandardized Coefficients | | Standardized Coefficients | | ANOVA | | | | | Tolerances | VIF | |
|--------------------------------|--|-----------------------------|------------|---------------------------|--------|-------|--------|------|------|----------------|------------|------|-------------------------|
| | | Beta | Std. Error | Beta | t | Sig. | F | Sig. | R | R ² | | | Adjusted R ² |
| Human-centered judgments | Sabit | -.835 | .450 | | -1.854 | .064 | 28.452 | .000 | .473 | .224 | .216 | | |
| | 1. Perspective on ecotourism | .424 | .157 | .181 | 2.700 | .007 | | | | | | .439 | 2.279 |
| | 2. Contribution of ecotourism to economic development | .085 | .136 | .042 | .624 | .533 | | | | | | .428 | 2.335 |
| | 3. Contribution of ecotourism to environment | .048 | .130 | .025 | .371 | .711 | | | | | | .447 | 2.239 |
| | 4. Contribution of ecotourism to sociocultural development | .499 | .133 | .285 | 4.424 | .000 | | | | | | .473 | 2.115 |
| Environment-centered judgments | Constant | 2.456 | .220 | | 11.161 | .000 | 19.534 | .000 | .406 | .165 | .157 | | |
| | 1. Perspective on ecotourism | .203 | .077 | .184 | 2.645 | .008 | | | | | | .439 | 2.279 |
| | 2. Contribution of ecotourism to economic development | .106 | .067 | .112 | 1.592 | .122 | | | | | | .428 | 2.335 |
| | 3. Contribution of ecotourism to environment | -.039 | .064 | -.042 | -.613 | .540 | | | | | | .447 | 2.239 |
| | 4. Contribution of ecotourism to sociocultural development | .166 | .055 | .202 | 3.019 | .003 | | | | | | .473 | 2.115 |

VIF, variance inflation factor.

development. However, it was found that the effects of the contribution of ecotourism to economic development ($p = .533$) and the contribution of ecotourism to the environment ($p = .711$) dimensions on human-centered judgments were not statistically significant.

In the same table, as a result of the multiple regression analysis on the dimensions of ecotourism knowledge and environmental consciousness, it was found that the effects of the perspective on ecotourism ($p = .008$) and the contribution of ecotourism to sociocultural development ($p = .003$) on environment-centered judgments were statistically significant. According to the F statistic ($F = 19.534$, $p = .000$), the model was found to be significant as a whole. Since it is preferred to make comments by looking at the adjusted R^2 value in the multiple linear regression analysis (Hoş, 2020, p. 311; Kanit & Baykan, 2004, p. 362), it can be said that 15.7% of the variability in students' perceptions of environment-centered judgments can be explained by their perspective on ecotourism and the contribution of ecotourism to sociocultural development. However, it was found that the effects of the contribution of ecotourism to economic development ($p = .122$) and the contribution of ecotourism to the environment ($p = .540$) dimensions on environment-centered judgments were not statistically significant. In Table 5, tolerance values of $>.10$ and VIF values of $<.10$ indicate that there is no multicollinearity.

Conclusion

As a result of the research aiming to determine the relationship between environmental consciousness and ecotourism knowledge, it was found that there is a medium-level positive relationship between the variables. As a result of the research, it can be said that as the students' perceptions of ecotourism increase positively, according to students' perceptions of ecotourism dimensions, their perception of the contribution of ecotourism to economic development, its contribution to the environment, and its contribution sociocultural development also increases positively. As students' perceptions of the contribution of ecotourism to economic development increase positively, their perception of the contribution of ecotourism to the environment and sociocultural development increases in the same direction. In addition, it can be said that as students' perceptions of the contribution of ecotourism to the environment increase positively, their perception of its contribution to sociocultural development increases positively. According to students' perceptions of environmental consciousness, as the students' perceptions of their human-centered judgments increase positively, their perceptions of environment-centered judgments also increase positively. In addition to these, it can be said that as students' perceptions of the contribution of ecotourism to economic development, its contribution to the environment, and sociocultural development increase positively, their perceptions of human-centered and environment-centered judgments also increase positively. Meanwhile, as a result of the multiple regression analysis of the dimensions, the effect of the perspective on ecotourism and the contribution of ecotourism to sociocultural development on human-centered judgments and environment-centered judgments was also found to be statistically significant.

The fact that the students' environmental consciousness general average is calculated as 3.9523 shows that the environmental consciousness levels of the students are high. In addition, the average of the human-centered judgments dimension was calculated as 3.6190 and the environment-centered judgments dimension was calculated as 4.2855, indicating that students displayed an approach towards environment-centered judgments rather than human-centered judgments. Çalışkan et al. (2019), according to the results of the research in which they evaluate the employees' environmental perspective in the tourism sector in the context of human and environmental centrism through the Environmental Paradigm Approach in Adıyaman, is in line with the results of the research that the participants generally exhibit an environmental-centric approach. In addition, Oğuz et al. (2011), in their research, determined that

students have conceptual knowledge about the conservation of resources and environmental problems is another research that is parallel with the results of the research.

While 10.3% (41 people) of the students stated that they did not have any ideas for the statement “I know about ecotourism,” 84.6% of them (193 people – agree/145 people – strongly agree) agreed. According to this result, it can be said that the students’ knowledge of ecotourism is sufficient. In the same statement, Cömert and Mete (2018) stated that 35.4% of the participants did not have an opinion and according to this result, it was determined that the potential tourism professionals’ knowledge, who studying at the tourism faculty, was not at a sufficient level, which is not in line with the results of the research.

In the context of the research, it can be said that the most important point is the positive reflection of this on their attitudes and behaviors rather than the students’ high level of ecotourism and environmental consciousness. When considered from this point of view, it should be seen as the main goal that educators should emphasize the necessity of reflecting students’ knowledge of ecotourism and environmental consciousness positively to their attitudes and behaviors, and transform this into a lifestyle.

In order to bring environmental consciousness and ecotourism knowledge to young generations and to reflect this on attitudes and behaviors, all organizations and associations related to environmental protection, tourism-related organizations in the context of sustainable tourism, non-governmental organizations, and other official organizations emphasize the importance of environmentally friendly products or green product consumption, the importance of recycling, and the unnecessary use of resources and their importance for the continuation of life frequently organizing educational seminars, conferences, festivals and other events related to environmental protection. Because a healthy environment is needed for a quality life. In addition, for ecotourism to make more beneficial contributions to the environment, organizations related to environmental protection must develop applicable policies and strategies to prevent the consumption of resources, ecotourism investments that may cause irreversible damage to the environment, damage to biodiversity, and damage to ecological integrity. Thus, with these practices, works that emphasize the importance of environmental protection for young generations can set an example; it can be emphasized the importance of being responsible toward the environment in ensuring the sustainability of ecotourism destinations. In addition, the environmental, economic, and sociocultural effects of sustainability of ecotourism on society can positively occur.

There are only a few previous researches in the domestic and foreign literature where ecotourism knowledge and environmental consciousness are studied together. Therefore, in order to overcome this deficiency, researchers are recommended to investigate the relationship between ecotourism knowledge and environmental consciousness variables in different and larger sample groups. Thus, studying these variables with different sample groups will provide to obtain new findings on the relationships between variables and provide them to be compared with previous findings. In addition, examining the mediating effect of different variables related to the subject in the relationship between these two variables and conducting research on these two variables with different sample groups in different cultures is another issue that can be suggested to researchers, considering that it can contribute to making better comparisons.

Research variables are limited by the reliability and validity dimensions of the measurement tools applied. In addition, the fact that the data were collected through a survey form consisting of Likert-type scales endures all the limitations caused by the use of surveys and Likert-type scales.

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