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Environmentally Friendly Behaviors of Recreationists and Natural Area Tourists: A Comparative Perspective

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Abstract: This study measures the impacts of environmental concern and environmental altruism on eco-friendly behaviors, and the impacts of environmentally friendly behaviors on nature-based tourism behaviors and ecologically friendly purchasing behaviors. The study sample included a population of tourists and recreationists in three different destinations in Turkey. Data were obtained from questionnaires and were analyzed using a Partial Least Squares Structural Equation Model (PLS-SEM). In addition, a one-way ANOVA test was performed to show the differences in common questions for the three destinations. The findings identified that the independent variables positively affected participants' environmentally friendly behaviors and purchasing behaviors. Visitors who participated in hiking on Mount Ida displayed more environmental attitudes than visitors in the other areas in all variables other than the 'environmentally friendly behavior' scale. Among participants, while environmental tourism behavior was the highest variable, environmental concern was the lowest variable. Study participants displayed environmentally friendly behavior in Köprülü Canyon at a higher level than in the other two destinations. The types of activities performed during the journey were considered in recognizing the environment, taking note of environmental problems and acting.

Keywords: environmental concern; environmental altruism; environmentally friendly behavior; environmentally friendly purchasing behavior

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1. Introduction

In recent years, the world has seen many changes in technology, industrialization, healthcare, urbanization, information flows, social networks, and human mobility. [1–5]. Despite their potential positive implications for society, these developments have resulted in increased domestic and industrial waste, leading to polluted water supplies and, in broad terms, pollution of the natural environment [6], which can have significant impacts on people's environmental consciousness and affect their consumer behavior at home and while traveling.

In addition to heavy industry, uncontrolled mass tourism is a major source of environmental degradation [7,8]. Natural resources are an important component of tourism and recreation. For tourists, recreational activities help ease the stress of urban living and enable people to experience change [9,10], but these activities may be affected by unfavorable conditions, and the activities themselves are known to wield considerable ecological impacts in destination regions if not well-planned and managed. Nonetheless, both the demand and supply sides of recreation and tourism can play a part in minimizing negative human impacts on the environment. For example, environmentally conscious consumers have helped some businesses meet their ecologically sensitive needs [11]. In

tourism, catering to the current pro-environmental tendencies of many tourists is seen by service providers as a competitive business advantage [12,13].

Nature-based tourists may demonstrate different ecological values at different localities, and different activity choices may be influenced by their level of environmental consciousness and awareness, and ecological behavior. It is important for researchers to discover outdoor users' perceptions of resources and natural area management. Likewise, nature-based visitors' attitudes and behaviors regarding mitigating environmental impacts in protected areas need further investigation [14]. Understanding the perceptions and behaviors of nature-based tourists and outdoor recreationists can help promote a positive environmental experience and guide management policies and practices [15,16].

The literature is replete with studies that examine the environmentally friendly behaviors of people participating in recreational activities in different natural settings [17,18]. However, as far as we are aware, comparisons of recreationists' environmental behaviors and perceptions in different natural settings have not been undertaken. In this study, tourists who visited three different environments and participated in recreational activities were examined. By comparing these three groups, the study determines which group is the most environmentally sensitive, and the reasons for this are presented.

Outdoor activity-based tourists appear to have diverging motives and characteristics that may influence their environmental sensitivity and behaviors in different natural settings. The limited number of studies on this phenomenon is a challenge to wider and more general comparative assessments that may be useful for destination planning, managing, and marketing. The underlying knowledge gap in the literature is significant with regard to environmental awareness, behavior, and choices in different outdoor settings. Thus, this study compares the attitudes of outdoor recreational tourists toward different ecological assets, their activities, and their environmental consciousness in three different natural areas in Turkey.

2. Conceptual Framework

2.1. Environmental Concern and Environmental Altruism

Because of society's growing environmental awareness, changes in behaviors and lifestyles have become increasingly perceptible [19,20]. Environmentally friendly tourism behavior (ETB) is now a common focus of investigations into the behaviors of visitors in nature-based destinations [21–24]. Destinations blessed with rich natural resources attract considerable visitor attention, and people's interactions with nature reveal their environmental intentions and behaviors [20]. Dolnicar [25] and Vaske and Kobrin [26] report that individuals who act responsibly toward the environment in their outdoor activities tend to practice better environmental behaviors at home. Thus, people's daily environmentally friendly behaviors may reflect their holiday experiences, and vice versa, their environmental behaviors while traveling may reflect their experiences at home [27]. Whether intrinsically motivated or motivated by others, the winner of such behavior is nature and natural resources.

Several factors play a role in developing environmental behaviors, including environmental knowledge [28], environmental values [29], environmental sensitivity [30], environmental concerns [31,32], environmental altruism [33], place attachment [17], personal values [34,35], and subjective norms [24].

People's environmental concern (EC) shows a positive and dominant correlation with environmental protection [36]. Environmental concern affects motivations to prevent environmental destruction and changes behaviors [32]. In addition, environmental concern positively affects the individual's decisions regarding environmentally friendly consumption [37,38]. Chen et al. [37] report that environmentally aware individuals prefer eco-labeled products and prioritize this highly. Studies show that individual ecological concerns affect people's choices of environmental use and consumption [20,39]. People who are actively involved in environmental practices and positive behaviors also tend to

be concerned about the state of the environment. Accordingly, this study suggests the following hypotheses:

H1a: *The environmental concerns of recreationists who hike on Mount Ida positively influence their environmentally friendly behaviors.*

H1b: *The environmental concerns of recreationists who take a hot-air balloon tour over Cappadocia positively influence their environmentally friendly behaviors.*

H1c: *The environmental concerns of recreationists who raft in Köprülü Canyon positively influence their environmentally friendly behaviors.*

Another important concept is altruism, which shows environmental sensitivity. Altruism, in its simplest sense, is the selfless act of helping others [40]. Altruism means giving up something for other people or the planet—in other words, sacrificing something important for the greater good. Environmental altruism (EA) is the willingness of a person to sacrifice something personal to protect and maintain historical values, natural and cultural resources, and/or recreational activity areas [41]. EA promotes environmental welfare regardless of people's personal interests, efforts, and monetary costs [42], and increased environmental altruism promotes responsible environmental behavior [43]. Altruism is also a tool for supporting ecological sustainability by purchasing green products [44] and an important factor in creating awareness. Accordingly, this study suggests the following hypotheses:

H2a: *The environmental altruism of recreationists who take part in hiking on Mount Ida positively influences their environmentally friendly behavior.*

H2b: *The environmental altruism of recreationists who take a balloon tour over Cappadocia positively influences their environmentally friendly behavior.*

H2c: *The environmental altruism of recreationists who raft in Köprülü Canyon positively influences their environmentally friendly behavior.*

2.2. Environmentally Friendly Behavior and Purchasing Behavior

Several studies have shown that environmental concern not only has a positive effect on pro-environmental behavior, but also affects environmental purchasing behaviors [31,32,38]. Environmental responsibility can be better assured with environmentally friendly purchasing behavior. Environmentally friendly behavior (EFB) entails individuals consciously adapting their behaviors in ecologically sensitive ways [45]. People's attitudes toward the environment and their level of ecological responsibility directly affect their purchases [37]. Such attitudes increase the willingness of individuals to pay for environmentally friendly products and ensure that environmentally friendly behavior remains foremost [46]. Environmentally sensitive people typically show their sensitivities not only in their ordinary daily lives, but also in their consumer patterns and behaviors, including vacations. This relationship between consumption and environmental concern and the harmony between them may be reflected in the behaviors of individuals in several ways. Stern [29] suggests that pro-environmental behaviors may include direct involvement in environmental activities, political actions without ecological activities (e.g., filing a petition), and purchasing green products. People often demonstrate this adaptation by taking part in green actions to reduce waste and pollution [47].

The behaviors of individuals toward the environment can be explained by their own perceptions. However, it should not be forgotten that the perceptions of other individuals also contribute to these behaviors and should be investigated [48]. Being able to adopt these behaviors in every aspect of our lives is important in preventing environmental damage, which often occurs with wanton consumerism and negative environmental behavior.

Beyond environmentally friendly consumption and purchasing habits, there is increasing concern among consumers regarding production methods that use scarce resources and result in significant waste [49,50]. Accordingly, many merchandise suppliers have begun manufacturing eco-friendly products, and consumers' willingness to buy these products has increased [51], even if they cost more [52]. These same people tend to choose sustainable vacation alternatives and green travel products [53,54] that will help protect natural and cultural assets and help mitigate environmental problems. Most tourists who participate in outdoor activities demonstrate environmentally friendly behaviors during adulthood [55], and certain activities (e.g., hiking) tend to affect more environmentally friendly attitudes and behaviors [56]. Once such an attitude develops, people tend also to change their purchasing behavior after they realize that wanton consumer behavior can have significant environmental implications. Therefore, this study suggests the following hypotheses and also all hypotheses are shown in Figure 1.

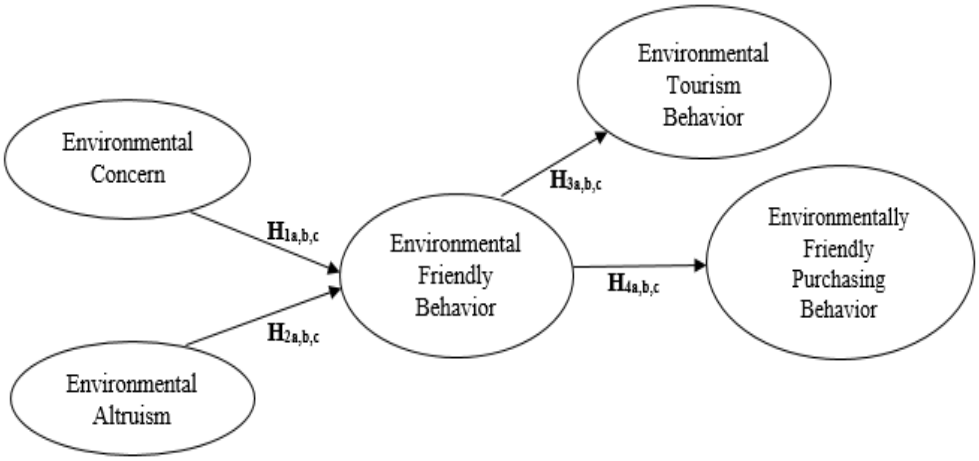

Figure 1. Model of hypotheses developed for the study.

H3a: *The environmentally friendly behaviors of recreationists who hiked on Mount Ida positively influenced their environmental tourism behavior during the activity.*

H3b: *The environmentally friendly behaviors of recreationists who took a balloon tour over Cappadocia positively influenced their environmental tourism behavior during the activity.*

H3c: *The environmentally friendly behaviors of recreationists who raft in Köprülü Canyon positively influence their environmental tourism behavior during the activity.*

H4a: *The environmentally friendly behaviors of recreationists who hiked on Mount Ida positively influenced their environmentally friendly purchasing behaviors.*

H4b: *The environmentally friendly behaviors of recreationists who take balloon tours over Cappadocia positively influence their environmentally friendly purchasing behavior.*

H4c: *The environmentally friendly behaviors of recreationists who raft in Köprülü Canyon positively influence their environmentally friendly purchasing behavior.*

3. Methods

3.1. Study Areas

Turkey's three most recognized national parks were the venues for this study: Mount Ida, Cappadocia/Göreme, and Köprülü Canyon. The first study context was hiking in Mount Ida National Park (Çanakkale). Mount Ida is well-regarded in Turkey and abroad owing to its natural features, including flora and fauna, water bodies, and other natural

assets [57,58]. From a cultural perspective, the region has been populated by several past civilizations and is the subject of many Turkish and Greek myths and folklore [59,60]. It is an especially popular destination for hiking and camping.

The second study context was hot-air ballooning in Cappadocia/Göreme National Park (Nevşehir). Cappadocia is a destination known for its 'fairy chimneys', a natural formation of volcanic lava and ash that developed over centuries, and whose caves and crevices have been inhabited by humans for millennia, creating a unique natural and cultural landscape that draws millions of tourists each year [61]. With the acceptance of Christianity as the official religion of the Roman Empire, people here lived their religion freely and built many religious structures the region (Tosun, 1998). Therefore, the appeal of the region for foreign tourists is inspired by both religion and other cultural heritage [62]. Balloon tours are a popular option for sightseeing in the region, and approximately 110 balloons serve tourists' needs in the area.

River rafting in Köprülü Canyon National Park (Antalya) was the third laboratory for this study. The Köprüçay River runs through the canyon and is where most rafting takes place [63]. Other outdoor activities include water sports, camping, and hiking.

As noted previously, this research aims to determine the relationships between environmentally friendly behaviors in general and the environmentally friendly purchasing behaviors of participants in different outdoor activities in the three natural destinations. The dependent variables used to reveal these relationships were environmental altruism and environmental concern.

3.2. Instruments

A questionnaire was used to collect quantitative data. Section I focused on participants' personal characteristics. Section II included questions from five different scales, including an environmental concern (EC—five items) scale developed by Dunlap et al. [64], the environmental altruism (EA—five items) scale developed by Davis et al. [42], an environmentally friendly behaviors (EFB—11 items) scale developed by Miller et al. [65], an environmental tourism behaviors (ETB—four items) scale developed by Song et al. [24], and an environmentally friendly purchasing behaviors (EFPB—eight items) scale developed by Rubright [66] and Yadav and Pathak [67]. The scale items were reviewed by academic specialists and items were adjusted based on their suggestions. A 5-point Likert scale was used, with 1 denoting totally disagree, and 5 denoting totally agree.

3.3. Data Collection and Sampling

The research population included visitors participating in three different activities in the three natural destinations mentioned above. Initial field visits were undertaken for a reconnaissance and preliminary pilot tests. Later, the study sites were visited at 3–5-day intervals in April and July 2018. The pilot study resulted in 82 questionnaires, and since no problems were detected in the intelligibility of the questionnaire, the questionnaire was administered.

It was not possible to access the entire population, of course; therefore, a nonprobabilistic convenience sample was taken. The survey was administered to approximately 500 recreationists in each destination between April and October 2018. Of the completed questionnaires, 393, 384, and 385 were considered acceptable for Mount Ida, Cappadocia/Göreme, and Köprülü Canyon, respectively. Because there are no systematic statistics on visitor numbers, an appropriate minimum sample size was determined using Cochran's (1963) formula for calculating a sample for proportions, desiring a 95% confidence level and $\pm$5% precision with a maximum variability of 0.5. Accordingly, the appropriate sample size was found to be 384 participants to ensure that the initial statistical analysis had acceptable levels of validity. Thus, the sample size was considered sufficient.

3.4. Data Analysis

The study hypotheses were tested with a structural equation model using a partial least squares (PLS) analysis. SmartPLS (V.3.2.6) helped create a model and assess its validity [68]. PLS is a technique used to predict path coefficients for structural models and has become popular because of its capacity to model latent research through small-to-medium samples under non-normal conditions [69]. A latent structural equation model has two components. The first component is the structural model called the internal model in the context of PLS-SEM [70]. An internal model allows researchers to see the non-observed paths, or paths between the latent structures [71]. The second component of the SEM is the external model, including measurement models, in the context of PLS-SEM [72]. An external model was used to assess the paths between the indicator variables and their corresponding structures.

4. Findings

4.1. Demographics

Table 1 shows the descriptive statistics related to the study participants in the three destinations. Characteristics include gender, age, marital status, education, income, permanent residency, and the number of visits to the areas. The data for all three areas is included in Table 1. The Mount Ida area is indicated by the letter K, Göreme/Cappadocia by the letter G, and Köprülü Canyon by the letters KC in this and other tables and figures.

Table 1. Descriptive statistics of recreationists' characteristics.

Descriptive Statistics of Recreationists												
Feature	**K**		**G**		**KC**		**Feature**	**K**		**G**		**KC**	
Age	**N**	**%**	**N**	**%**	**N**	**%**	**Income**	**N**	**%**	**N**	**%**	**N**	**%**
18–25	49	12.5	37	9.8	59	15.4	**Low**	12	3.0	11	2.8	19	5.0
26–35	202	51.8	149	39.3	187	49.4	**Medium**	237	60.3	233	60.8	228	60.7
36–45	124	31.8	142	37.5	123	32.3	**High**	132	33.6	127	33.0	118	31.2
46 ve +	15	3.9	51	13.4	11	2.9	**Very High**	12	3.1	13	3.4	12	3.1
Gender	N	%	N	%	N	%	**Marriage**	N	%	N	%	N	%
Female	190	48.4	195	51.2	194	50.8	**Married**	274	69.7	192	50.8	243	64.3
Male	203	51.6	186	48.8	188	49.2	**Single**	119	30.3	186	49.2	135	35.7
Education	**N**	**%**	**N**	**%**	**N**	**%**	**Home Continent/Region**	**N**	**%**	**N**	**%**	**N**	**%**
High School	149	37.9	37	9.6	121	31.8	**Turkey**	344	93.8	58	15.6	250	70.2
College	58	14.8	96	25.0	63	16.6	**Europe**	23	6.2	157	42.5	67	18.8
Master	171	43.5	185	48.2	174	45.8	**Asia**	-	-	88	23.8	36	10.1
Post Graduate	15	3.8	66	17.2	22	5.8	**Australia**	-	-	36	9.6	-	-
Visitor Numbers	**N**	**%**	**N**	**%**	**N**	**%**	**South America**	-	-	12	3.2	-	-
One	195	51.9	318	93.4	285	77.3	**North America**	-	-	20	5.3	-	-
Two	129	33.7	16	6.1	67	18.1	**Africa**	-	-	-	-	3	0.9
Three and over	55	14.4	2	0.5	17	4.6							

4.2. Measurement Model

SmartPLS Version 3.2.6 was used to test the structural equation model and the hypotheses. In addition, SPSS Version 19 was used to compare common questions asked of study participants in the three destinations. The data were analyzed using a one-way ANOVA.

Jarvis et al. [73] suggested choosing reflective structures. PLS-SEM includes a two-step evaluation process. In the first stage, the measurement model is evaluated, and in the second stage, the structural model is evaluated. Table 2 shows the analysis results from the reflective structures for research data.

Table 2. Assessment of structures and measurement model.

Scales	K				G				KC			
	$\overline{X}$	α	CR	AVE	$\overline{X}$	α	CR	AVE	$\overline{X}$	α	CR	AVE
EC	4.56	0.823	0.876	0.586	4.21	0.840	0.885	0.607	4.34	0.847	0.890	0.617
EA	4.65	0.717	0.822	0.539	4.22	0.822	0.875	0.583	4.47	0.828	0.880	0.596
EFB	3.72	0.873	0.901	0.539	3.70	0.810	0.859	0.505	3.81	0.854	0.889	0.536
ETB	4.71	0.607	0.792	0.561	4.17	0.833	0.889	0.667	4.55	0.840	0.893	0.676
EFPB	4.57	0.869	0.891	0.508	4.18	0.905	0.921	0.595	4.41	0.910	0.927	0.614

4.3. Testing the Mediation Roles of Environmental Concern and Altruism's Positive Impacts

For all the structures except the 'environmental tourism behavior' scale for the Mount Ida area, internal consistency reliability was satisfactory and greater than the threshold of 0.7 recommended for Composite Reliability (CR) and Cronbach's alpha. The Average Variance Extracted (AVE) exceeded the threshold of 0.5 for all scales, demonstrating sufficient convergent validity. According to Bagozzi and Yi [74], AVE should be 0.5 or over for each of the latent variables. The items with loadings lower than 0.7 in all structures were excluded from the analysis. Five items (EA = 1, EFB = 3, ETB = 1) that had lower values were excluded from the Mount Ida data. For Cappadocia and Köprülü Canyon, only the values lower than 0.7 (G = 5, KC = 4) on the EFB scale were excluded. Hulland [75] suggested that loading a latent variable less than 0.4 or 0.5 is also acceptable for the new scale developed when the loading of reflective indicators is less than 0.7. Other studies likewise excluded latent variables from the measurement model because they were less than 0.5 [76–84]. In those studies, a minimum of three and a maximum of ten scale items were removed to increase the AVE.

At this phase, items that reduced the Cronbach's alpha and AVE were identified on the scales. The information on removing such items, thereby increasing the values was provided above in detail. The remaining scales provided sufficient values both for the alpha coefficient and AVE.

The variables with the highest Cronbach's alpha values for each of the three areas were the EFB (0.873) scale for Mount Ida (K), and EFPB (G = 0.905 and KC = 0.910) scale for Göreme (G) and Köprülü Canyon (KC). The values indicated that the scales were highly reliable [85] (Ursachi et al., 2015). The Composite Reliability (CR) values for structures were also very high. All the values were greater than 0.80 except for Mount Ida ETB (0.792). The scale with the highest AVE value was the ETB scale for Göreme and Köprülü Canyon.

The next step was to assess the discriminant validity. Discriminant validity is another validity method defined by the low correlation between the measure of relation and the measures of other structures [86]. Therefore, the discriminant validity was assessed in this study. Fornell and Larcker [87] suggested that the square root of the AVE in each latent variable could be used to achieve discriminant validity if this value is greater than the other correlation values between the latent variables.

Discriminant validity is given when the diagonal members (square root AVE) are greater than the non-diagonal members in the corresponding lines and columns [88]. Table 3 shows that the square root of each AVE (shown on the diagonal) was greater than the correlation between the corresponding structures in the structure correlation matrix, which showed sufficient discriminant validity for all reflective structures. In general, all the measures presented satisfactory reliability and validity and are shown in Table 3.

In addition, the following table shows the Heterotrait–Monotrait ratio of correlations, which is a better tool suggested recently to assess the discriminant validity [89,90].

Table 3. Results of discriminant validity "Fornell–Larcker".

	Kazdağları (K)					Göreme (G)					Köprülü Kanyon (KK)				
Scales	**EFB**	**EFPB**	**EC**	**EA**	**ETB**	**EFB**	**EFPB**	**EC**	**EA**	**ETB**	**EFB**	**EFPB**	**EC**	**EA**	**ETB**
EFB	**0.734**					**0.711**					**0.732**				
EFPB	0.453	**0.713**				0.468	**0.772**				0.636	**0.783**			
EC	0.373	0.309	**0.765**			0.308	0.212	**0.779**			0.499	0.378	**0.786**		
EA	0.449	0.289	0.492	**0.734**		0.404	0.323	0.581	**0.764**		0.545	0.452	0.601	**0.772**	
ETB	0.537	0.452	0.272	0.292	**0.749**	0.448	0.752	0.230	0.338	**0.816**	0.633	0.693	0.481	0.525	**0.822**

Discriminant validity was tested using this new method, and the results are presented in Table 4. If the HTMT ratio is greater than 0.90, there is a problem with discriminant validity. As presented in Table 4, all the values exceeded the criterion of HTMT.90, which means discriminant validity was not an issue.

Table 4. Results of discriminant validity "HTMT".

	Kazdağları (K)					Göreme (G)					Köprülü Kanyon (KK)				
Scales	**EFB**	**EFPB**	**EC**	**EA**	**ETB**	**EFB**	**EFPB**	**EC**	**EA**	**ETB**	**EFB**	**EFPB**	**EC**	**EA**	**ETB**
EFB															
EFPB	0.458					0.479					0.711				
EC	0.436	0.376				0.387	0.227				0.574	0.416			
EA	0.554	0.339	0.651			0.503	0.358	0.700			0.647	0.524	0.706		
ETB	0.703	0.636	0.378	0.422		0.484	0.857	0.258	0.404		0.735	0.799	0.556	0.631	

4.4. Structural Model

A 1000-repetitive preloading procedure [91] was used to analyze the statistical significance of the weight of sub-structures and path coefficients. The SEM-PLS approach using the software SmartPLS does not provide a traditional assessment of the general fitness of the model as with CB-SEM [88]. As PLS does not usually produce a goodness of fit index, it is the primary way to assess the interpretative power of the R^2 model [86]. Therefore, the adjusted R^2 of all structures was calculated to use a diagnostic tool to assess the goodness of fit (GoF) index introduced by Tenenhaus and his colleagues [92]. GoF shows how well the data fit the proposed model. In the analysis, the GoF index is calculated by taking the square root of the multiplication of mean AVE values for all structures with the mean R^2. Hoffmann and Brinbrich [93] reported the following cut-off values for GoF analysis results: GoFsmall = 0.1; GoFmedium = 0.25; GoFlarge = 0.36. Table 5 shows the goodness of fit index for our research model.

Table 5. GoF Indexes for models.

Kazdağları (K)	Göreme (G)	Köprülü Kanyon (KK)
GoF= $\sqrt{}$ AVE$\overline{X}$ × $R^2\overline{X}$ = $\sqrt{}$ 0.546 × 0.239 = $\sqrt{}$ 0.130 **GoF = 0.361**	**GoF**= $\sqrt{}$ AVE$\overline{X}$ × $R^2\overline{X}$ = $\sqrt{}$ 0.591 × 0.194 = $\sqrt{}$ 0.115 **GoF = 0.339**	**GoF**= $\sqrt{}$ AVE$\overline{X}$ × $R^2\overline{X}$ = $\sqrt{}$ 0.608 × 0.381 = $\sqrt{}$ 0.231 **GoF = 0.481**

The GoF index calculated for the models used in this study was 0.361 for Mount Ida, 0.339 for Göreme, and 0.481 for Köprülü Canyon, indicating the models fit very well. However, it is interesting that GoF cannot be used as a statistical tool for model verification. On the contrary, it is a diagnostic tool that shows how well the collected data fit the proposed model [89].

After the measurement mode and goodness of fit (GoF), the presumptive relations in the structural model were tested. Figure 2 shows the result of the hypothesis tests. The

values in the figure represent the standardized coefficients and their t-values. The adjusted R^2 in Figure 2 refers to the interpretative power of the proposed variables in the corresponding structure. The rate that recreationists' environmental concern and environmental altruism accounted for their environmentally friendly behaviors was 23.2% for Mount Ida recreationists, 16.7% for Göreme recreationists, and 34% for Köprülü Canyon recreationists.

In a review of other values for endogenous structures, KC had the highest R^2 value. For this area, 40% of variances in ETB variables and 40.3% of variances in EFPB variables were explained by the environmentally friendly behaviors of recreationists in their daily lives. For model validity, Chin et al. [91] classified the endogenous latent variables as significant, medium, or weak based on the 0.67, 0.33, or 0.19 R^2 values, respectively. Accordingly, environmentally friendly behavior for Göreme (R^2 = 0.167) can be defined as common for all R^2s except for the endogenous value.

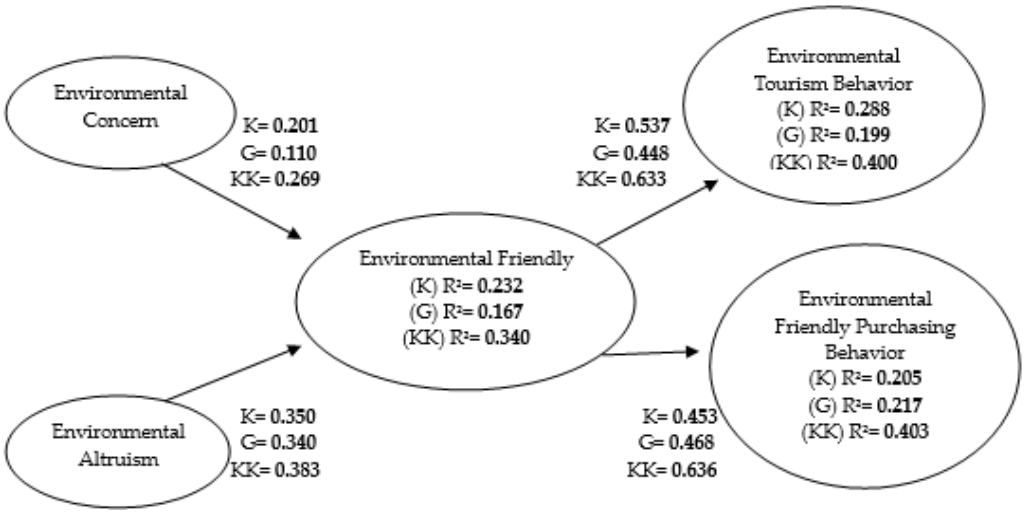

Figure 2. β for path coefficients and R^2 for endogenous structures.

In this research, all of the model hypotheses but one were supported. Only the hypothesis that environmental concern has a positive influence on the environmentally friendly behavior was not supported by the recreationists who joined the balloon activity in Göreme (H1b).

Only two of the dimensions affecting environmentally friendly behaviors were used in the research. The environmental concern of recreationists positively influenced their environmentally friendly behaviors in Mount Ida and Köprülü Canyon. The value was β = 0.201 for Mount Ida and β = 0.269 for Köprülü Canyon.

The environmental altruism variable positively affected environmentally friendly behaviors in all three areas. These results supported hypotheses H1a, H1c and H2a,b,c, but hypothesis H1b was not supported.

Six of the third and fourth hypotheses developed for all three areas were supported. Hypothesis 3 tested whether environmentally friendly behaviors in daily life translate into environmentally friendly behaviors during an outdoor activity. The data indicated that this relationship was positive and significant ($p < 0.000$). The correlation between the two variables was 0.537 for Mount Ida, 0.448 for Göreme/Cappadocia, and 0.633 for Köprülü Canyon. Importantly, recreationists exhibited environmental sensitivity even though it was their vacation experience. Another hypothesis tested whether recreationists put their concern into practice and purchased environmentally friendly products. All three hypotheses were supported and are shown in Table 6 (H4a,b,c; $p < 0.000$). Thus, there was a positive and significant correlation between the environmentally friendly daily life and the environmentally friendly purchasing behaviors of hikers, ballooners, and rafters.

Table 6. Result of the structural model and mediation analysis.

	Kazdağları (K)				Göreme (G)				Köprülü Kanyon (KK)			
Hypotheses	**β**	**t**	***p***	**Result**	**β**	**t**	***p***	**Result**	**β**	**t**	***p***	**Result**
H1a,b,c	0.201	4.264	0.000	Accept	0.110	1.779	0.076	Reject	0.269	4.552	0.000	Accept
H2a,b,c	0.350	7.770	0.000	Accept	0.340	5.946	0.000	Accept	0.383	5.452	0.000	Accept
H3a,b,c	0.537	12.718	0.000	Accept	0.448	0.696	0.000	Accept	0.633	16.089	0.000	Accept
H4a,b,c	0.452	12.530	0.000	Accept	0.468	11.596	0.000	Accept	0.636	15.684	0.000	Accept

4.5. Result of One-Way ANOVA Test

Participants' responses consisting of five scales and 29 questions were tested using a one-way ANOVA. The purpose was to compare recreationists who took part in different activities with different characteristics, used activities with different natural resource values, and had different motivations with regard to environmental issues.

Table 7 shows the ANOVA test results for Mount Ida, Göreme/Cappadocia, and Köprülü Canyon. The comparisons of all dependent variables were significant ($p < 0.05$), meaning that recreationists' attitudes and behaviors varied by the destination or activity type.

Table 7. ANOVA results for study regions.

Sites	**N**	**Group Statistic**		**T Statistic**		**Sites**	**N**	**Group Statistic**		**T Statistic**	
EC		$\overline{X}$	**S.S**	**T**	***p***	**ETB**		$\overline{X}$	**S.S**	**T**	***p***
K	393	4.561	0.430	38.910	0.000	K	393	4.716	0.306	105.015	0.000
G	386	4.215	0.598			G	386	4.177	0.693		
KK	385	4.342	0.615			KK	385	4.556	0.530		
EA		$\overline{X}$	**S.S**	**T**	***p***	**EFPB**		$\overline{X}$	**S.S**	**T**	***p***
K	393	4.651	0.371	78.649	0.000	K	393	4.577	0.381	51.801	0.000
G	386	4.224	0.555			G	386	4.185	0.656		
KK	385	4.476	0.486			KK	385	4.414	0.549		
EFB		$\overline{X}$	**S.S**	**T**	***p***						
K	393	3.721	0.553	3.966	0.019						
G	386	3.700	0.653								
KK	385	3.816	0.620								

Hikers on Mount Ida demonstrated more environmentally friendly attitudes in all variables except for the 'environmentally friendly behaviors' scale. The environmental tourism behavior had the highest value ($\overline{X}$: 4.72) among the variables, whereas environmental concern had the lowest value ($\overline{X}$: 4.56). The comparison of environmentally friendly behaviors revealed that Köprülü Canyon recreationists were more environmentally friendly ($\overline{X}$: 3.81) than those in the other locations.

As previously noted, Mount Ida is a leading natural destination with historical, mythological, and cultural values [57]. Environmental-oriented tourists visit the region. They are comprised of groups and individual recreationists who care about ecological values, are more sensitive to environmental issues, are aware of their environmental responsibilities, and embrace being responsible for promoting environmental benefits. As mentioned in the literature review, one of the major characteristics of environmental tourists is their exhibiting environmentally friendly attitudes and behaviors at similar levels throughout the journey. These people are ecologically sensitive in their ordinary lives and when planning vacations, including choosing a destination and purchasing accommodations, transportation, tours, and activities.

Mount Ida is visited frequently by return consumers. Frequent visits to a location mean that its users favor it—a phenomenon often included within the notion of place attachment.

Place attachment refers to an emotional connection between people and the places they visit [26,94]. Vaske and Kobrin [26] reported on place attachment to natural resources, whereas Devine-Wright and Howes [95] suggested that the sentiment may develop with regard to a familiar destination. Hikers on Mount Ida demonstrate a deeper sense of place attachment.

The more positive environmental results for Mount Ida might be explained by the visits of conscientious tourists as defined above and by the area's environment, which is accessible for frequent visits. Except for day excursionists, Mount Ida is visited mainly by tourists who wish to commune with nature and mostly choose to camp, appear to be well-prepared for activities, and tour their favorite places in the area, and may be guided by a tourist guide. The systematic preparation for the journey includes planning, adequately preparing, and demonstrating knowledge about the place and how best to prepare for it.

The data show that 48% of study participants (N = 184) on Mount Ida had previously visited the area. The frequency of repeat visits to Mount Ida was about 2.2 times higher than Köprülü Canyon and 6 times higher than Göreme. Participants who were knowledgeable about Mount Ida were more concerned with environmental issues. They were willing to sacrifice comfort to help address environmental problems, which they demonstrated by displaying more environmentally friendly behaviors generally and environmentally friendly purchasing behaviors in their daily lives and leisure activities. This group contributes to the local socioeconomic environment by purchasing local products, such as agricultural goods (e.g., jams, olive oil, and soaps). Thus, economically and environmentally speaking, the time they spend in a natural destination is important for the local community.

The results of the ANOVA of the hot-air balloon participants in Cappadocia were lower than at the other sites. Although the values for items in the Göreme/Cappadocia surveys were sufficient (four, on average), it is interesting that they were lower than the other areas. To understand the results better, additional information about the region, the profile of outdoor enthusiasts, and the characteristics of the activity type are warranted.

Cappadocia is uniquely attractive, world-renown (a UNESCO World Heritage Site), and an expensive destination to visit. The majority of tourists in the region are well-educated, affluent, and keenly interested in local culture [96,97]. The region's visitors desire comfort, have high spending potential, and often participate in expensive recreational activities, such as hot-air ballooning. Approximately 110 hot-air balloons serve around 2000 consumers each day during the tourist season; the price is EUR 180 per person. The mean environmental altruism variable was $\overline{X}$: 4.22, which was the lowest among the three research areas, indicating that Cappadocia's visitors are less willing to give up comfort for environmental altruism.

The descriptive statistics indicated that Cappadocia's tourists had the highest levels of education, income, age, and living standards. Such values tend to positively affect individuals' environmental friendliness, attitudes, behavior, and purchasing behavior [98–100]. However, this study found that Cappadocia's visitors were the least environmentally concerned of the three groups, which may be a result of the fact that the area's main market is a mix of nature-based recreationists and mass tourists.

Another possible reason for Cappadocia's lower environmental values might be frequency of visits. Continuous interactions with nature cause individuals to bond with nature and adopt its values [26,95,101]. The stronger this bond, the stronger the individual's interest in protecting the resource will be [18]. Some 93.4% of study participants (N = 318) in Cappadocia were there for the first time; only 16 people had been there more than once. Thus, most of them might not yet have become attached to the destination, which could translate into fewer environmentally concerned behaviors. For example, in the same category, 45.1% of Mount Ida's visitors had visited at least twice and embraced the natural environment.

Köprülü Canyon is located at the provincial border of Antalya, on the southern coast of Turkey. This region is known for sun-sea-sand coastal tourism and provides many opportunities for cultural and recreational activities. The most popular activity is river

rafting. The ANOVA showed that the average of the responses given by participants was very high. There, tourists showed a high sensitivity toward water use, and a significant number undertook this activity with family members. Most rafting routes in Köprülü Canyon are not dangerous, and water flow is relatively low, depending on precipitation in the mountains. These conditions allow consumers of every age to participate in rafting. The presence of children might stimulate more positive environmental responses as parents are concerned about future generations for whom drought and global warming may be a significant concern.

Antalya is a mass tourism destination in Turkey, where most tourists have lower levels of environmental consciousness, are self-interested, consumption-oriented, and comfort-seeking. In most cases, such individuals make little effort to effect environmental conservation [102]. However, our study showed otherwise. The mean responses to environmentally friendly behavior supported this. Köprülü Canyon recreationists displayed more positive ecological behaviors than those on Mount Ida, which is an important ecotourism destination visited by people who generally have higher ecological sensitivities. A few observations can be made regarding the reasons for this result. The most important of these may be that the primary resource used in the area's recreational activities is water, that water is of vital importance for human life, and that the world will potentially face increased drought in the future. Another finding is that the activity with the highest family participation in the three destinations is rafting in Köprülü Canyon; parents participating with their children may be more likely to answer questions considering their children's future welfare. Thus, families traveling together might improve ecological sensitivities. The mean (3.81) of responses from river recreationists in Köprülü Canyon to environmentally friendly behavior was higher than the mean of participants in the other areas. The means of other variables for Köprülü Canyon showed high values (EC-$\overline{X}$: 4.34, EA-$\overline{X}$: 4.47, ETB-$\overline{X}$: 4.55, and EFPB-$\overline{X}$: 4.41), which indicated that river rafters did not fit the general mass tourist profile and chose to participate in this activity because they were already interested in nature. Furthermore, it might be possible for activities that allow interaction with natural resources to help raise environmental awareness.

5. Discussion and Conclusions

Hammit et al. [101] and Kim et al. [103] reported that visits to outdoor recreation areas help build emotional and cognitive bonds between individuals and the destination. Visitors who interact with nature may notice environmental issues better and desire to reduce their personal environmental impacts [25,104]. Therefore, it is important to understand the attitudes of nature-based activity participants toward environmental problems and their own environmental behaviors during the outdoor activity and in their daily lives. Individuals may thus become more aware of their ecological footprint and desire to change or improve their environmental behaviors. Thus, there is a need to investigate and understand the environmental attitudes and behaviors of individuals participating in nature-based tourism. This study attempted to address these important issues.

Natural resource values and nature-based destinations wield considerable appeal for tourists. A prominent declaration among nature users is to 'leave no trace' by reducing the impacts of their behaviors so that natural resources can be sustained in the long term [105]. The environmental concerns of hikers on Mount Ida and rafters in Köprülü Canyon positively influenced their environmentally friendly behaviors, and there was a significant correlation between these two variables. Individuals' environmental concerns lead to them adopt more ecologically responsible behaviors. The depths of environmental awareness differ between market segments, and the literature shows a correlation between environmental concerns and environmentally friendly behaviors [20,32,38]. Yadak and Pathak's [67] study found that environmental concerns influence people's decision making. Lee et al. [38] argued that environmental concerns effectively create good ecological stewards and environmentally friendly product consumption. However, in our study, there were no correlations between the environmental concerns of balloon riders in

Göreme/Cappadocia and their environmentally friendly behaviors. Although this result conflicted with many of the findings in the general literature, it may be explained in light of the comfort levels expected by Cappadocia's visitors, many of whom can be considered mass tourists. Balloon tours are more expensive than hiking and rafting, and although balloon tour participants had higher levels of environmental concern related to items and structures, their concerns did not directly reflect their behaviors. There are several reasons why this may be so, most significantly because balloon rides are short and comfort remains a foremost desire among tourists in the Cappadocia region.

The hypotheses set to understand environmental altruism and environmentally friendly behavior were supported in all three regions (H2a,b,c). In the assessment of values separately, the level of environmental altruism among Mount Ida and Köprülü Canyon visitors was higher than the values for visitors to Göreme/Cappadocia (K: 0.350, and KG: 383; $p < 0.000$). Most participants appeared to be willing to be responsible consumers for the benefit of the environment. This sense of responsibility is important in the formation of a permanent environmental ethos [106]. If people's personal interests conflict with everyone else's and nature's interests, it is obvious that decisions should be made to favor environmental protection. Iwata's [43] study found that people who possess optimistic feelings about environmental protection tend to be more ecologically altruistic. This tendency can pave the way for individuals to develop environmentally responsible behaviors.

One research hypothesis sought to measure the impact of general environmentally friendly behaviors in ordinary life on people's behaviors during their outdoor pursuits. The findings supported this hypothesis in all three regions (H3a,b,c; $p < 0.000$). The correlation between these two variables was especially high in Köprülü Canyon ($\beta = 0.633$) and at Mount Ida ($\beta = 0.537$).

Finally, we aimed to investigate whether normative environmentally friendly behaviors positively influence environmentally friendly purchasing behaviors in the destination. All three hypotheses were supported. The results for Köprülü Canyon again had the highest values; environmentally friendly behaviors in daily life affected visitors' environmentally friendly purchasing behaviors at a level of 0.636 in that region.

In this research, the endogenous structure values indicated that people's variance in environmental behaviors during their touristic activities accounted for their environmentally friendly behaviors in their daily life at the rates of 19.9% for Göreme/Cappadocia, 28.8% for Mount Ida, and 40% for Köprülü Canyon. In addition, environmentally friendly purchasing behaviors were explained by other environmentally friendly behaviors at the rates of 20.5% (K), 21.7% (G), and 40.3 (KG).

Individual environmental concerns are not sufficient alone to protect nature; people's concerns must also be put into practice. Munoz et al. [107] emphasized that actions to protect nature include specific activities to protect nature directly and indirect actions that help build an attachment to nature. Our study showed that visitors' attitudes toward environmental issues are generally put into practice while traveling. Participants demonstrated their eco-sensitivity when planning their vacations, choosing a destination, getting to the destination, and purchasing green products accordingly. In this study, visitors' environmentally friendly behaviors were generally positive. However, it is important for destination managers to ensure the continuity of this situation by helping transform people behaviors in their daily lives into environmentally friendly purchasing patterns.

The world continues to face environmental problems that have become major global concerns (e.g., habitat loss, diminishing natural resources, and climate change). States and organizations have long struggled to overcome these issues, but it is now clear that current solutions are inadequate. To reduce such concerns, consumers must learn to change their habits, which will encourage service providers to sell more eco-friendly products. Outdoor activities in natural areas enable people to come into contact with and observe ecological challenges and help develop solutions. People who visit natural destinations and interact with natural assets are more likely to develop environmentally friendlier behaviors.

Tourist activities in natural areas can change people's worldviews, developing a sense of solidarity with nature. If natural area consumers can see environmental problems firsthand, they may be more willing to change their attitudes and behaviors to help mitigate the problems. Thus, it is crucial to promote participation in nature-oriented activities, and environmental education is critical in achieving the goals of sustainability in nature tourism destinations. Likewise, administrators and public agencies should consider expanding the numbers and sizes of parks and protected areas and provide support for technology, infrastructure, and financial assistance in rural areas that have significant nature-based tourism potential.

Many respondents participated in outdoor activities with their families, especially in Köprülü Canyon. Thus, there is significant potential to help educate multigenerational families about the importance of protecting the environment. Plans to develop family-oriented outdoor activities might be a useful way of building awareness and enhancing local economies. Thus, the private sector has an important duty to introduce individuals to their natural surroundings.

Sound research is needed to inform public and private-sector organizations about developing green policies and implementing them. Many studies have noted the important role of individuals' environmental awareness in protecting natural resources. However, there is a need to understand certain variables, including the locations and characteristics of a natural site, the time of day when people recreate, and how frequently people participate in certain activities. Self-reported questionnaires may be a limitation in this and other such studies. People might not want to appear to embrace negative attitudes or behaviors on surveys and therefore might say what they think the researcher wants to hear. This issue could be resolved by using implicit association tests (IATs), which have recently been used successfully in field studies [108]. This tool may be a way of acquiring more truthful information about real behaviors rather than reported behaviors.

More longitudinal studies are needed where participants can be observed for long periods of time, rather than many studies undertaken in a short time via questionnaires only on certain days and during certain periods of time. Furthermore, research should be designed to allow more generalizations by choosing diverse recreational activities in various nature-based destinations with different natural resources and markets.

Many social movements in support of nature protection exist across the globe, including #NatureForLife, #Naturelover, #Nature, #BeautyofNature, and #NatureForAll. These sorts of movements should be encouraged to serve environmental health, education, protection, technology, and tourism. Sharing positive experiences in nature-based destinations with others via social media should also enable more people to connect with nature. Technology can be used to explore new and innovative applications that favor activities in nature. Protecting the environment and passing it on to future generations can only happen if all stakeholders are united in purpose.

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References

1. Grübler, A. *Technology and Global Change*; Cambridge University Press: Cambridge, UK, 2015.
2. Koc, T.; Teker, S. Industrial revolutions and its effects on quality of life. *Press Acad. Procedia* **2019**, *9*, 304–311. [CrossRef]
3. Satrovic, E.; Muslija, A. The empirical evidence on tourism-urbanization-co2 emissions nexus. *Adv. Hosp. Tour. Res.* **2019**, *7*, 85–105. [CrossRef]
4. Subramanian, K.R. Technology and transformation in communication. *J. Adv. Res. Electr. Electron. Eng.* **2018**, *5*, 1–13.
5. WHO. Delivering Quality Health Services a Global Imperative for Universal Health Coverage. Available online: https://openknowledge.worldbank.org/server/api/core/bitstreams/7de246aa-c175-5610-b86e-972c6108ae83/content (accessed on 19 November 2020).
6. Azarmi, S.; Vaziri, R.; Oladipo, A. Environmental impact of the ugly face of tourism—Pollution and management perspectives. In *The Routledge Handbook of Tourism Impacts*; Gursoy, D., Nunkoo, R., Eds.; Routledge: London, UK, 2019; pp. 312–326.
7. MaldonadoOre, E.; Custodio, M. Visitor environmental impact on protected natural areas: An evaluation of the Huaytapallana Regional Conservation Area in Peru. *J. Outdoor Recreat. Tourism* **2020**, *31*, 100298. [CrossRef]
8. Tosun, C. Roots of unsustainable tourism development at the local level: The case of Urgup in Turkey. *Tour. Manag.* **1998**, *19*, 595–610. [CrossRef]
9. Eryılmaz, G.; Akgündüz, Y. Bireyleri rekreatif faaliyetlere yönelten motive edici faktörler. *J. Recreat. Tour. Res.* **2017**, *4*, 13–26.
10. Jensen, C.; Naylor, J. *Opportunities in Recreation and Leisure Careers*; Contemporary Publishing Company: New York, NY, USA, 1999.
11. FuiYeng, W.; Yazdanifard, R. Green marketing: A study of consumers' buying behaviour in relation to green products. *Glob. J. Manag. Bus. Res. E-Mark.* **2015**, *15*, 17–23.
12. Ng, M.; Law, M. Encouraging green purchase behaviours of hong kong consumers. *Asian J. Bus. Res.* **2015**, *5*, 1–17. [CrossRef]
13. Özdemir, E.G.; Tabak, G. Turistlerin cevre dostu tutumlarinin cevreye duyarli turistik ürün satin alma niyeti üzerine etkisi: Nevsehir ilinde bir arastirma. *J. Tour. Gastron. Stud.* **2019**, *7*, 1753–1787.
14. Finnessey, L. The Negative Effects of Tourism on National Parks in the United States. Bachelor's Thesis, Johson and Wales University, Charlotte, NC, USA, 2012.
15. Dorwart, C.E.; Moore, R.L.; Leung, Y.-F. Visitors perceptions of a trail environment and effects on experiences: A model for nature-based recreation experiences. *Leis. Sci.* **2009**, *32*, 33–54. [CrossRef]
16. Sayan, S.; Karagüzel, O. Problems of outdoor recreation: The effect of visitors' demographics on the perceptions of Termessos National Park, Turkey. *Environ. Manag.* **2010**, *45*, 1257–1270. [CrossRef] [PubMed]
17. Brownlee, M.T.J.; Hallo Jeffrey, C.; Moore Dewayne, D.; Powel Robert, B.; Wright Brett, A. *Attitudes toward Water Conservation: The Influence of SiteSpecific Factors and Beliefs in Climate Change, Society and Natural Resources*; Taylor & Francis Group: Abingdon, UK, 2014; Volume 27, pp. 964–982.
18. Brownlee, M.T.J.; Hallo, J.C.; Jodice, L.W.; Moore, D.D.; Powel, R.B.; Wright, B.A. Place attachment and marine recreationists' attitudes toward offshore wind energy development. *J. Leis. Res.* **2015**, *47*, 263–284. [CrossRef]
19. O'Riordan, T. Environmentalism and education. *J. Geogr. High. Educ.* **1981**, *5*, 3–17. [CrossRef]
20. Ghazvini, S.A.M.; Timothy, D.J.; Sarmento, J. Environmental concerns and attitudes of tourists towards national park uses and services. *J. Outdoor Recreat. Tour.* **2020**, *31*, 100296. [CrossRef]
21. Chiu, H.Y.T.; Lee, W.I.; Chen, T.H. Environmentally responsible behavior in ecotourism: Antecedents and implications. *Tour. Manag.* **2014**, *40*, 321–329. [CrossRef]
22. Crouch, G.I.; Devinney, T.M.; Dolnicar, S.; Huybers, T.; Louviere, J.; Oppewal, H. New Horses for Old Courses: Questioning the Limitations of Sustainable Tourism to Supply-Driven Measures and the Nature-Based Context. In Proceedings of the ANZMAC, 2005 (CD) Conference, Fremantle, WA, USA, 5–7 December 2005.
23. Lee, T.H.; Jan, F.H.; Yang, C.C. Conceptualizing and measuring environmentally responsible behaviors from the perspective of community-based tourists. *Tour. Manag.* **2013**, *36*, 454–468. [CrossRef]
24. Song, H.J.; Lee, C.K.; Kang, S.K.; Boo, S.J. The effect of environmentally friendly perceptions on festival visitors' decision-making processusing an extended model of goal-directed behavior. *Tour. Manag.* **2012**, *33*, 1417–1428. [CrossRef]
25. Dolnicar, S. Nature-conserving tourists: The need for a broader perspective. *Anatolia* **2006**, *17*, 235–255. [CrossRef]
26. Vaske, J.J.; Kobrin, K.C. Place attachment and environmentally responsible behavior. *J. Environ. Educ.* **2001**, *32*, 16–21. [CrossRef]
27. Bilynets, I.; Cvelbar, K.L. Tourist pro-environmental behaviour: The role of environmental image of destination and daily behaviour. *Ann. Tour. Res. Empir. Insights* **2022**, *3*, 100070. [CrossRef]
28. Tosunoğlu, C. A Study on the Dimension and Determinants of Environmental Attitudes. Ph.D. Thesis, Middle East Technical University, Ankara, Turkey, 1993.
29. Stern, P.C. Toward a coherent theory of environmentally significant behavior. *J. Soc. Issues* **2000**, *56*, 407–424. [CrossRef]
30. Hungerford, H.R.; Volk, T.L. Changing Learner Behavior through Environmental Education. 1990. Available online: http://www.elkhornsloughctp.org/uploads/files/1374624954Changing%20learner%20behavior%20-%20H%20and%20V.pdf (accessed on 15 November 2020).
31. Mostafa, M.M. Gender differences in Egyptian consumers' green purchase behaviour: The effects of environmental knowledge, concern and attitude. *Int. J. Consum. Stud.* **2007**, *31*, 220–229. [CrossRef]
32. Mostafa, M.M. Shades of green: A psychographic segmentation of the green consumer in Kuwait using self-organizing maps. *Expert Syst. Appl.* **2009**, *36*, 11030–11038. [CrossRef]

33. Iwata, O. Coping style and three psychological measures associated with environmentally responsible behavior. *Soc. Behav. Personal.* **2002**, *30*, 661–670. [CrossRef]
34. Schwartz, S.H. Awareness of consequences and the influence of moral norms on interpersonal behavior. *Sociometry* **1968**, *31*, 355–369. [CrossRef]
35. Schwartz, S.H. Normative Influences on Altruism. 1977. Available online: https://www.researchgate.net/publication/319507233_NORMATIVE_INFLUENCES_ON_ALTRUISM/link/59b005cf458515563dd2faf6/download (accessed on 20 November 2020).
36. Minton, A.P.; Rose, R.L. The effects of environmental concern on environmentally friendly consumer behavior: An exploratory study. *J. Bus. Res.* **1997**, *40*, 37–48. [CrossRef]
37. Chen, L.; Wu, Q.; Jiang, L. Impact of Environmental Concern on Ecological Purchasing Behavior: The Moderating Effect of Prosociality. *Sustainability* **2022**, *14*, 3004. [CrossRef]
38. Lee, Y.K.; Kim, S.; Kim, M.S.; Choi, J.G. Antecedents and inter relationships of three types of pro-environmental behavior. *J. Bus. Res.* **2014**, *67*, 2097–2105. [CrossRef]
39. Arısal, İ.; Atalar, T. The exploring relationships between environmental concern, collectivism and ecological purchase intention. *Procedia-Soc. Behav. Sci.* **2016**, *235*, 514–521. [CrossRef]
40. Kumar, A.; Pandey, M. Social media and impact of altruistic motivation, egoistic motivation, subjective norms, and ewom toward green consumption behavior: An empirical investigation. *Sustainability* **2023**, *15*, 4222. [CrossRef]
41. Knetsch, J.L.; Var, T. The impacts of tourism and recreational facility development. *Tour. Rev.* **1976**, *31*, 5–10. [CrossRef]
42. Davis, J.L.; Le, B.; Coy, A.E. Building a model of commitment to the natural environment to predict ecological behavior and willingness to sacrifice. *J. Environ. Psychol.* **2011**, *30*, 257–265. [CrossRef]
43. Iwata, O. Attitudinal determinants of environmentally responsible behavior. *Soc. Behav. Personal.* **2001**, *29*, 183–190. [CrossRef]
44. Guiao, B.G.; Lacap, J.P. Effects of Environmental Sustainability Awareness and Altruism on Green Purchase Intention and Brand Evangelism. *Asian J. Bus. Res.* **2022**, *12*, 43–62. [CrossRef]
45. Kollmus, A.; Agyeman, J. Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environ. Educ. Res.* **2002**, *8*, 239–260. [CrossRef]
46. Papaoikonomou, K.; Latinopoulos, D.; Emmanouil, C.; Kungolos, A. A Survey on Factors Influencing Recycling Behavior for Waste of Electrical and Electronic Equipment in the Municipality of Volos. *Greece. Environ. Process.* **2020**, *7*, 321–339. [CrossRef]
47. Kirk, J.L. Sustainable Environments and Pro-Environmental Behavior. Master's Thesis, University of Nebraska, Lincoln, NE, USA, 2010.
48. Geiger, N. Perceptions of self-motives and environmental activists' motives for pro-environmental behavior. *Sustainability* **2022**, *14*, 10656. [CrossRef]
49. Neuner, M. Collective prototyping: A consumer policy strategy to encourage ecological marketing. *J. Consum. Policy* **2000**, *23*, 153–175. [CrossRef]
50. Varinli, İ. *Pazarlamada Yeni Yaklaşimlar*; Detay Yayıncılık: Ankara, Turkey, 2008.
51. Joshi, Y.; Rahman, Z. Factors affecting green purchase behaviour and future research directions. *Int. Strateg. Manag. Rev.* **2015**, *3*, 128–143. [CrossRef]
52. Laroche, M.; Bergeron, J.; Barbaro-Forleo, G. Targeting consumers who are willing to pay more for environmentally friendly products. *J. Consum. Mark.* **2001**, *18*, 503–520. [CrossRef]
53. Doran, R.; Hanss, D.; Larsen, S. Intentions to make sustainable tourism choices: Do value orientations, time perspective, and efficacy beliefs explain individual differences? *Scand. J. Hosp. Tour.* **2016**, *17*, 223–238. [CrossRef]
54. Hedlund, T. The impact of values, environmental concern, and willingness to accept economic sacrifices to protect the environment on tourists' intentions to buy ecologically sustainable tourism alternatives. *Tour. Hosp. Res.* **2011**, *11*, 278–288. [CrossRef]
55. Wells, N.M.; Lekies, K.S. Nature and the life course: Pathways from childhood nature experiences to adult environmentalism. *Child. Youth Environ.* **2006**, *16*, 1–24. [CrossRef]
56. Tarrant, M.A.; Green, G.T. Outdoor recreation and the predictive validity of environmental attitudes. *Leis. Sci.* **1999**, *21*, 17–30.
57. Atalay, İ. *Türkiye'nin Ekolojik Bölgeleri (Ecological Regions of Turkey)*; Orman Bakanlığı Yayınları (Ministry of Forestry Publications): Ankara, Turkey, 2002; Volume 163.
58. Eceoğlu, A. Development of eco-tourism as an ecological movement in Kazdağları and Edremit region. In *International Kazdagları and Edremit Symposium, Proceedings and Abstracts*; Efe, R., ve Atalay, İ., Öztürk, M., Eds.; Edremit Belediyesi Kültür Yayınları (Edremit Municipality Cultural Publications): Ankara, Turkey, 2011; pp. 285–292.
59. Arı, Y.; Soykan, A. Kazdağı Milli Park'ında Kültürel Ekoloji ve Doğa Koruma. *Türk. Coğrafya Dergisi.* **2006**, *44*, 11–32.
60. Öztura, E. Truva Tarihi Milli Parkı, Kazdağı Milli Parkı ve Spil Dağı Milli Parkı Ziyaretçilerinin Türkiye'de "Milli Park" Kavramı ve Eğitimi Üzerine Görüşleri (The Points of Wiew of the Visitors about the Concept of National Park? and National Park Education? Related to Historical Park of Troy, National Park of Kazdağı and National Park of Mount Spil). Master's Thesis, Çanakkale Onsekiz Mart University Social Sciences Institute, Çanakkale, Turkey, 2010.
61. Yılmaz, H.M.; Yakar, M.; Mutluoğlu, Ö.; Kavurmacı, M.; Yurt, K. Investigation of soil erosion in the Cappadocia region. In Proceedings of the TMMOB Chamber of Surveying and Cadastre Engineers, 12th Turkish Scientific and Technical Mapping Congress, Ankara, Turkey, 11–15 May 2009.
62. Erdogan, N.; Tosun, C. Environmental performance of tourism accommodations in the protected areas: Case of goreme historical national park. *Int. J. Hosp. Manag.* **2009**, *28*, 406–414. [CrossRef]

63. Sağdıç, M.; Bozyiğit, R. Köprü çayi havzasi'nda alternatif turizm olanakları. *Uşak Üniversitesi Sos. Bilim. Derg.* **2008**, *1*, 19–41.
64. Dunlap, R.E.; Liere, K.D.V.; Mertig, A.G.; Jones, R.E. Measuring endorsement of the new ecological paradigm: A revised NEP scale. *J. Soc. Issues* **2000**, *56*, 425–444. [CrossRef]
65. Miller, D.; Merrilees, B.; Coghlan, A. Sustainable urban tourism: Understanding and developing visitor pro-environmental behaviors. *J. Sustain. Tour.* **2015**, *23*, 26–46. [CrossRef]
66. Rubright, H.L. Consumer Purchasing in Sustainable Tourism: Attraction Sustainability and Its Impact on Decision-Making. Master's Thesis, East Carolina University, Greenville, NC, USA, 2014.
67. Yadav, R.; Pathak, G.S. Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *J. Clean. Prod.* **2016**, *135*, 732–739. [CrossRef]
68. Ringle, C.; Wende, S.; Becker, J. SmartPLS3. Available online: https://www.smartpls.com/ (accessed on 20 December 2019).
69. Rezaei, S.; Ghodsi, S.S. Does value matters in playing online game? An empirical study among massively multiplayer online role-playing games (MMORPGs). *Comput. Hum. Behav.* **2014**, *35*, 252–266. [CrossRef]
70. Hair, J.F.; Ringle, C.M.; Sarstedt, M. PLS-SEM: Indeed a silver bullet. *J. Mark. Theory Pract.* **2011**, *19*, 139–152. [CrossRef]
71. Henseler, J.; Ringle, C.M.; Sinkovics, R. The use of partial least squares path modeling in international marketing. *Adv. Int. Mark.* **2009**, *20*, 277–319.
72. Hair, J.F.; Sarstedt, M.; Hopkins, L.; Kuppelwieser, V.G. Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *Eur. Bus. Rev.* **2014**, *26*, 106–121. [CrossRef]
73. Jarvis, C.B.; MacKenzie, S.B.; Podsakoff, P.M. A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *J. Consum. Res.* **2003**, *30*, 199–218. [CrossRef]
74. Bagozzi, R.P.; Yi, Y. On the evaluation of structural equation models. *J. Acad. Mark. Sci.* **1988**, *16*, 74–94. [CrossRef]
75. Hulland, J. Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strateg. Manag. J.* **1999**, *20*, 195–204. [CrossRef]
76. Atay, L.; Soylu, Y.; Gökdemir, S. Çevre endişesi, çevresel fedakârlik, normlar ve yer tutumunun çevre dostu davranisa etkisi: Kapadokya/Göreme Milli Parki Örneği. *Seyahat Ve Otel İşletmeciliği Derg./J. Travel Hosp. Manag.* **2019**, *16*, 398–417. [CrossRef]
77. Atay, L.; Soylu, Y.; Gökdemir, S.; Susniene, D. Environmentally friendly behavior of the tourists who uses hot air balloon and their attitude towards air pollution. *Appl. Res. Stud. Pract.* **2019**, *15*, 24–31.
78. Carranza, R.; Diaz, E.; Martin, D. The influence of quality on satisfaction and customer loyalty with an importance-performance map analysis: Exploring the mediating role of trust. *J. Hosp. Tour. Technol.* **2018**, *9*, 380–396. [CrossRef]
79. Fahmy, R.; Bachtiar, N.; Rahim, R.; Malik, M. Measuring student perceptions to personal characters building in education: An Indonesian case in implementing new curriculum in high school. *Procedia-Soc. Behav. Sci.* **2015**, *211*, 851–858. [CrossRef]
80. Memon, A.H.; Rahman, I.A. SEM-PLS analysis of inhibiting factors of cost performance for large construction projects in Malaysia: Perspective of clients and consultants. *Sci. World J.* **2014**, *2014*, 165158. [CrossRef] [PubMed]
81. Molina, M.; Francez, D.S.; Morena, F.A.; Saura, I.G. Development and validation of a formative scale of technological advancement in hotels from the guest perspective. *J. Hosp. Tour. Technol.* **2018**, *9*, 280–294.
82. Rivera, M.A.; Murphy, K.S.; Khalilzadeh, J. Globalization of workforce: PLS approach to higher-order value construct in a study abroad context. *J. Hosp. Tour. Technol.* **2018**, *9*, 314–337. [CrossRef]
83. Sapihis, M.; Loh, S.Y.; Roslani, A.C.; Chinna, K. Participation restriction in cancer survivors: A cross-cultural adaptation and psychometric evaluation of occupational gap questionnaire. *J. Teknol. (Sci. Eng.)* **2015**, *77*, 49–57.
84. Sie, L.; Phelan, K.V.; Pegg, S. The inter relationships between self-determined motivations, memorable experiences and overall satisfaction: A case of older Australian educational tourists. *J. Hosp. Tour. Technol.* **2018**, *9*, 354–379.
85. Ursachi, G.; Horodnic, A.I.; Zait, A. How reliable are measurement scales? External factors with indirect influence on reliability estimators. *Procedia Econ. Financ.* **2015**, *20*, 679–686. [CrossRef]
86. Ali, F.; Ryu, K.; Hussain, K. Influence of experience, memories, satisfaction and behavioral intentions: A study of creative tourism. *J. Travel Tour. Mark.* **2016**, *33*, 85–100. [CrossRef]
87. Fornell, G.C.; Larcker, F.D. Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **1981**, *18*, 39–50. [CrossRef]
88. Ali, F.; Amin, M.; Cobanoglu, C. An integrated model of service experience, emotions, satisfaction, and price acceptance: An empirical analysis in the Chinese hospitality industry. *J. Hosp. Mark. Manag.* **2015**, *25*, 449–475. [CrossRef]
89. Henseler, J.; Ringle, C.M.; Sarstedt, M. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Mark. Sci.* **2015**, *43*, 115–135. [CrossRef]
90. Henseler, J.; Hubona, G.; Ray, P.A. Using PLS path modeling in new technology research: Updated guidelines. *Ind. Manag. Data Syst.* **2016**, *116*, 2–20. [CrossRef]
91. Chin, W.W.; Peterson, R.A.; Brown, S.P. Structural equation modeling in marketing: Some practical reminders. *J. Mark. Theory Pract.* **2008**, *16*, 287–298. [CrossRef]
92. Tenenhaus, M.; Vinzi, V.; Chatelin, Y.M.; Lauro, C. PLS path modelling. *Comput. Stat. Data Anal.* **2005**, *48*, 159–205. [CrossRef]
93. Hoffmann, A.; Birnbrich, C. The impact of fraud prevention on bank-customer relationships: An empirical investigation in retail banking. *Int. J. Bank Mark.* **2012**, *30*, 390–407. [CrossRef]
94. Manzo, L.C.; Perkins, D.D. Finding common ground: The importance of place attachment to community participation and planning. *J. Plan. Lit.* **2006**, *20*, 335–350. [CrossRef]

95. Devine-Wright, P.; Howes, Y. Disruption to place attachment and the protection of restorative environments: A wind energy case study. *J. Environ. Psychol.* **2010**, *30*, 271–280. [CrossRef]
96. Akın, M.H.; Öztürk, Y.; Karamustafa, K. Destination competitiveness analysis: The case of cappadocia region. *Anatolia* **2020**, *31*, 161–171.
97. Çanakçı, S.; Birdir, K. Kapadokya'yı ziyaret eden yabanci turistlerin yiyeceklere karşi çeşitlilik arayişlarinin incelenmesi. *J. Travel Hosp. Manag.* **2018**, *15*, 226–239.
98. Al Mamun, A.; Fazal, S.A.; Ahmad, G.B.; Yaacob, M.R.; Mohamad, M.R. Willingness to pay for environmentally friendly products among low-income households along Coastal Peninsular Malaysia. *Sustainability* **2018**, *10*, 1316. [CrossRef]
99. Plavsiz, S. *An İnvestigation of Gender Differences in Pro-Environmental Attitudes and Behaviors*; University of Connecticut: Storrs, CT, USA, 2013.
100. Roberts, J.A.; Bacon, D.R. Exploring the subtle relationships between environmental concern and ecological conscious consumer behavior. *J. Bus. Res.* **1997**, *40*, 79–89. [CrossRef]
101. Hammitt, W.E.; Kyle, G.T.; Oh, C.-O. Comparison of place bonding models in recreation resource management. *J. Leis. Res.* **2009**, *41*, 57–72. [CrossRef]
102. OvalıKısa, P. Kitle turizmi ve ekolojik turizmin kavram, mimari ve çevresel etkiler bakimindan karsilastirilmasi. *YTÜ Mimar. Fakültesi E-Derg.* **2007**, *2*, 64–79.
103. Kim, K.; Wang, Y.; Shi, J.; Guo, W.; Zhou, Z.; Liu, Z. Structural relationship between ecotourism motivation, satisfaction, place attachment, and environmentally responsible behavior intention in nature-based camping. *Sustainability* **2023**, *15*, 8668. [CrossRef]
104. Brownlee, M.T.J. Nature-Based Recreationists' Perceptions of Climate Change and Attitudes towards Climate Change Mitigation in Natural Environments. Ph.D. Thesis, Clemson University, Clemson, SC, USA, 2012.
105. Örki, A.; Ağırseven, N. Sustainable environment in tourism policies: The case of turkey. *Uluslararası Türk Dünyası Tur. Araştırmaları Dergisi.* **2016**, *1*, 97–106.
106. Van, L.; Paul, A.M.; Agnew, C.R.; Harinck, F.; Steemers, G.E.M. From game theory to real life: How social value orientation affects willingness to sacrifice in on going close relationships. *J. Personal. Soc. Psychol.* **1997**, *73*, 1330–1344.
107. Munoz, M.C.; Valle, M.; White, R.L.; Jaffe, R. How can we all help conserve nature? *Front. Young Minds* **2019**, *7*, 84. [CrossRef]
108. Tse, W.T.S.; Tung, V.W.S. Assessing explicit and implicit stereotypes in tourism: Self-reports and implicit association test. *J. Sustain. Tour.* **2023**, *31*, 460–482. [CrossRef]