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The Role of Demographic Factors in Tourists' Sustainability Consciousness, Sustainable Tourism Awareness and Purchasing Behavior

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Abstract

The aim of this research is to investigate the role of demographic factors on tourists' sustainability consciousness, awareness of sustainable tourism and purchasing behavior. The importance of the study is that it examines the subject in a holistic manner and develops suggestions based on study findings. It investigated whether variables such as age, gender, income level, and educational status have an effect on the perspective of tourists, on sustainable tourism practices in accommodation facilities, and on purchasing behaviors. The issue of sustainability, which is evaluated in terms of consumption and waste of natural resources, food, and goods in the literature was investigated within the scope of a tourists' perspective and perception in this study and thus data that can shed light on the sector stakeholders were obtained. In the research, data were collected with the help of questionnaires and 386 valid responses were received to the questionnaires. The obtained data were analyzed with SPSS 26.0 and AMOS programs. The research findings and the literature were compared, and various suggestions are presented. Accordingly, the aging of individuals, in other words their maturation and the increase in education levels raise both sustainability consciousness and sustainable tourism awareness. However, it was determined that these variables do not have a statistically significant effect on the purchasing behavior of tourists.

Keywords

Sustainability, Tourism, Consciousness, Awareness, Purchasing Behavior

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Introduction

Issues such as environmental problems, global warming, and climate change were brought to the agenda by researchers from many different disciplines (Bohdanowicz et. al. 2005; Cooper & Wahap, 2001; the European Commission, 2010; FAO, 2013; Gössling et. al., 2015; IEA, 2012; Ozdemir & Gucer, 2018; Radwan et. al., 2010). Due to the nature of tourist activities, the tourism industry is at the center of environmental problems. Although the tourism industry relies on the environment, it isalso one of the sectors that destroys the natural environment (Sarac, Batman & Kiper, 2019: 166). Since people are exposed to consumption in all areas, they are directed to consume without thinking, correspondingly a consumption culture has become widespread in tourism activities (Çakmak & Sevinç, 2018: 88). The use of various means of transportation by travelers, carbon emissions that result from vehicles, consumption of fossil fuels in the heating and lighting of accommodation facilities, food waste or wasting water for reasons such as tourists taking showers in facilities, the change of the pool water or landscaping & gardening causes various environmental problems. The COVID-19 pandemic can be seen as an alarm and an opportunity; it is a call for both hosts and guests to embrace an awareness movement, highlighting the current problems in the tourism sector and paving a new path towards more considerate and meaningful tourism (Stankov, Filimonau & Vujičić, 2020: 703).

Sustainability was discussed extensively in the 1987 Brundtland report "Our Common Future". After the Rio Earth Summit in 1992, big companies in the world started to adopt the understanding of sustainability as a goal. (Peattie & Charter, 2003: 727). Environmental issues were becoming a major concern for society. The majority of hotels around the world could benefit from this by using green practices in their daily operations (Aragon - Correa et. al., 2015: 499). Sustainable tourism is not solely the means for attracting consumers, but also directly benefits accommodation facilities in the long run. If a hotel manages to implement an energy management system in a correct and consistent way, then the savings it brings will offset the initial costs over time. With the help of such simple system, energy costs can be reduced by 28% (Robleket al., 2021: 16)

Until now, in the literature, issues such as how to take precautions against these environmental problems or what technologies can be used were dealt with and various suggestions were put forward (Jusah et.al. 2018; Olsson et.al. 2019; Ozdemir Uçgun, 2020; Romagosa, 2020; Mihalič, 2016; Romagosa, 2020; Streimikiene et. al., 2020; UNEP, 2004; UNWTO, 2017). However, the people who participate in touristic activities and who take the lead in sustainability management must be understood first. The fact that people who are environmentally consciousand have developed a sustainable tourism awareness will show how strong our profile is in

preventing environmental problems. Public awareness is seen as one of the most crucial factors affecting environmental problems (Chukwuma, 1998; Yahya & Che Ha, 2013), the maintenance of the environment is possible with the conservation of nature by individuals (Jusah et.al., 2018) and the main causes of these problems are related to people's consumption patterns (Aini et al., 2003). Sustainability consciousness is explained as a combination of attitudes, recognition of sustainable development foundations (knowingness), and self-reported behaviors (Olsson et. al., 2019: 185).These three variables; sustainability consciousness, sustainable tourism awareness, and purchasing behavior of tourists was to be used for this research study. The present literature underlined the relation of these variables and environmental problems; however, it did not show which demographic factors had an impact on people's sustainability awareness, environmental consciousness, or purchasing behavior. The need for this study arose from this research gap. Knowing the effects of demographic factors on these variables could guide and inform researchers, the government, tourism marketeers, and all sector stakeholders. Therefore, this paper contributes to the body of literature by underlining how demographic factors affect the variables or remain irrelevant, by stating where individual-based inadequacies related to environmental problems originate and by allowing constructive suggestions to be developed.

Ince (2015: 74) asserted that tourism consciousness can be defined as tourism awareness of tourism stakeholders in general. In addition, tourism consciousness is the environmental, social, and economic contributions of tourism to the country, and the awareness created by both tourists and local people for the protection of natural, historical, and cultural heritage. Makian & Hanifezadeh, (2020: 123) included community awareness and knowledge as one of the challenges facing ecotourism. According to Coertjens et al. (2010: 499), environmental awareness and attitudes towards the environment are shaped by an individuals' community, family, education level, friendship experiences, cultural structure, social relations, and the problems of the geography they live in, in short, being affected by all the factors in their environment. Robbins & Judge (2013: 70) defined attitudes as positive (I like tourism) or negative (I do not find tourism beneficial) evaluative statements about people, objects, or events.

Some scholars take demographic factors into consideration for various tourism topics. For example, in Adabali's research (2020), the Mindfulness Scores of tourists visiting the cultural heritage in the central Anatolia region were compared according to gender, marital status, educational status, nationality, and age range. Koc & Vili (2021) revealed some findings about the role of personality and gender of tourism and hospitality customers in risk perception. P. Ramseook-Munhurrun et al. (2015: 258) asserted that the demographics of tourists were gaining interest in the literature

because the demographics of the travel market differed and influenced the behaviors of tourists. Thus, this study, on suggested the effect of demographic factors on sustainability consciousness, sustainable tourism awareness, and purchasing behavior of tourists.

Conceptual Framework

There have been positive changes in the financial situation of people since industrialization. These changes enabled them to choose different ways of life and identity. Thus, the level of consciousness about individual and social life increased (Guney, 2020: 72). Consumers are becoming more responsible towards the environment day by day, and with the effect of this awareness, they have started to find purchasing behaviors that require environmental friendliness more appropriate (Haanpää, 2007: 480). Awareness is defined in different dimensions, and Beck et al. (2004) considered awareness to be related to the recognition of the emotions of others. Papleontiou-Louca (2003) emphasized that cognitive awareness corresponded to the correct and deep understanding of an individual's perception and thought. Environmental awareness is defined as the degree of awareness of environmental problems and the willingness to make personal efforts to solve them (Dunlap & Jones, 2002: 485).

Individuals who are environmentally aware and concerned about the impact of environmental problems on themselves are expected to act by giving importance to the environment in every activity while continuing their lives (Gadenne, Kennedy & McKeiver, 2009: 48). Sanchez & Lafuente (2010: 732) argued that an ecologically conscious environmental individual is one who engaged in a wide variety of pro-environmental behaviors and had certain attitudes and values associated with such behavior. Another study revealed that when customers had to choose between two equal hotels, they preferred more environmentally friendly accommodation facilities (Chan and Ho, 2006; Manaktola & Jauhari: 2007).

The environmental consciousness and awareness of tourists as consumers will affect or be affected by their attitudes. The attitude is defined by Inceoglu, (2010: 13) as a mental, emotional, and behavioral predisposition that the individual organizes based on experience, knowledge, emotions, and motives (motivation) against himself or any object or subject around him. According to Collins, there is a bidirectional relationship between attitude and behavior. In this respect, knowing a certain attitude provides an understanding of many behaviors related to that attitude (Collins, 1970: 86). After people fully adopt the attitudes, these attitudes can turn into behaviors. Adoption is expressed as a person's belief that the thoughts and behaviors of the group he is a member of are truly correct and that he exhibits conformity behavior accordingly (Guney, 2016: 55).

Chang and Chou (2010) emphasized that factors such as age, income status, or gender were important factors affecting touristic purchasing behavior. They concluded that consumers were willing to pay more during their stay in green hotels and female consumers were willing to pay more than male consumers were. Another factor associated with purchasing behavior is the satisfaction level of consumers. The high level of satisfaction of the tourist with the destination they visit causes them to think positively about the destination and the country. There are academic studies supporting this view (Ozdemir, 2019; Secilmis, 2012; Bulut, 2011; Duman & Ozturk, 2005).

There is some research on the relationship between demographic factors and sustainability studies. A related study on environmental awareness shows that, classes such as women, young people, those with high incomes, and well-educated people living in countries with a high level of development and urban people have a higher environmental awareness (Ozbebek Tunc, Akdemir Omur, G. & Duren, 2012: 230). In addition to this finding Yilmaz, Celik & Yagizer (2009: 2) argued that young people may be more sensitive to environmental concerns, women were more interested than men and education level was positively related to environmental attitudes and behaviors. In another study, which was similar to this research in terms of gender-related findings, it was determined that individuals under the age of 60 were more willing to participate in environmental practices (Baloglu & Millor, 2008). Another study by Yahya et. al. (2015: 102) examined the issue in terms of marital status and underlined that married couples with children had higher public awareness and were more environmentally friendly when compared to married couples with no children. According to the studies by Gam (2011), Phau & Ong, (2007) and Stern & Ander (2008) consumers' willingness to spend more for green products was higher if they were environmentally conscious.

Ozdemir et al. (2004: 117) obtained important findings. According to 301 students included in the study, the three most important environmental problems in the world were air pollution with 37.5%, wastes with 36.2% and reduction of forests with 30.6%. 75.8% of the students stated that they know and pay attention to what should be done for a healthy environment. 17.9% of the students stated that they know what to do but do not pay attention, and 19% stated that they do not know or were not interested in this issue. It was determined that female students were more knowledgeable and careful about the environment. While there was no difference between the first term and sixth (last) term students in terms of environmental sensitivity mean scores, it underlined that the environmental sensitivity mean score of female students and those aged 21 and younger were higher.

Methodology

The primary objective of this study was to examine the effects of consumers' demographic characteristics on their sustainability consciousness in tourism, sustainable tourism awareness, and purchasing behavior in Turkey. The research was created with the aim of explaining the effects of demographic characteristics like gender, marital status, age, education level, and household income on consumers' sustainability consciousness, sustainable tourism awareness, and purchasing behavior. Considering the research type, it is a descriptive research from observational studies. This research is important in terms of examining the issue of sustainability from a consumers' perspective and providing accurate information about the factors that shape sustainability in a way that sector stakeholders can benefit from. The fact that there was no similar study conducted with such a comprehensive approach in this field in Turkey makes this study of paramount interest.

The target group of this study (research universe) was people 18 years old or older who live in Turkey. Since this group tend to be better economically, the research universe of the study was selected from this group of individuals. According to the Turkish Statistical Institute Data (TUIK) as of 2020, there are 79.931.650 people in total who are 18 years old and older (Address Based Population Registration System Results - 2020, TUIK, http://www.tuik.gov.tr). Since the number in the universe were known, the minimum sample size with a sample error of 0.05 was calculated as 384. There are numerous statistical formulas to calculate the sample size for categorical data.

$$n=(N\times t^2\times p\times q)/(d^2\ (N-1)+t^2\times(p\times q))$$

n: Required sample size (?)

N: The research universe (79.931.650)

p: Percentage occurrence of a state or condition (0.05)

q: Percentage of a condition or condition not occurring (0.05)

t: Statistical value corresponding to level of confidence required (1.96)

Since the number in the universe is known, the minimum sample size with a sample error of 0.05 was calculated as 384 by the above formula.

In the study, a questionnaire was selected as the data collection method, and it included four parts. In the first part, there were six questions to determine the demographic characteristics of the participants. In the second part, to understand the participants' knowledge about sustainability, by Michalos et al. (2012) developed,

by Gricke et al. (2018) updated and by Yuksel & Yildiz (2019) adapted into Turkish "Sustainability Consciousness" scale which included 15 statements consisting of three dimensions related to the environment.

In the third part of the questionnaire, the environmental dimension of the "Sustainable Tourism Awareness" (SUS-TAS) scale developed by Choi & Sirakaya (2005) to measure attitudes towards sustainable tourism was used. The environmental dimension in the SUS-TAS scale was considered as Buzlukcu (2020) adapted in his study, however, the statement of "I believe tourism should improve the environment for future generations" in the original scale was added to the "environmental sustainability" sub-dimension. Two sub-dimensions and seven expressions were obtained in total for SUS-TAS.

In the fourth part of the questionnaire, "Purchasing Behavior" scale developed by Lee et al. (2010) and used by Berk & Celep (2020) in their study was included to measure the sustainable touristic purchasing behavior of individuals. The importance levels of the statements in the questionnaire were presented with a 5-point Likert type between (1) "Strongly Disagree" to (5) "Strongly Agree" and the participants were asked to answer the statements. In the research, a convenience sampling method was used because it is known as the most convenient and least time consuming (Taherdost, 2016: 23). The questionnaire consisting of the scale items and demographic questions to be used in the study was applied with an online link via e-mail, WhatsApp or LinkedIn platforms between 20.09.2021 – 10.10.2021 and 407 individuals were reached. However, the answers of the participants who gave inconsistent answers and who were under the age of 18 were eliminated and a total of 386 questionnaires were included in the study. The survey data were analyzed with the help of SPSS 26.0 and AMOS programs. Based on the obtained surveys, a confirmatory factor analysis was applied for the three scales of the questionnaire.

There are two types of factor analysis, Exploratory and Confirmatory. Confirmatory factor analysis (CFA) is a continuation of explanatory factor analysis (EFA). While EFA tries to provide the factor determination function and information to form hypotheses, CFA determines whether there is a sufficient level of relationship between these determined factors, which variables are related to which factors and whether the factors are independent from each other. CFA is also used to assess whether it is sufficient to explain the model (Erkorkmaz, 2013: 211). In order to evaluate the fit of the three scales used in the research, a pre-test was conducted on 58 people. A confirmatory factor analysis was performed with AMOS 24 software for validity analysis of the scales. The results show a good and acceptable fit. To measure the scales' reliability, the Cronbach's alpha (α) values were examined and the reliability values of the scales (Sustainability Conscious=0.782; SUS-TAS=0.940; Purchasing

Behavior=912) were found higher than the recommended value of 0.7. Thus, the measures were confirmed as dependable (Bland and Altman, 1997: 572). Table 1 summarizes the results.

Table 1
Goodness of Fit Values of Scales

Scale	CMIN/DF (< 5)	GFI (>.85)	AGFI (>.80)	CFI (>.90)	NFI (>.90)	RMSEA (< .10)	α
Sustainability Consciousness	2.979	0.911	0.871	0.917	0.900	0.077	0.782
(SUS-TAS)	2.867	0.907	0.867	0.962	0.943	0.080	0.940
Purchasing Behavior	2.159	0.904	0.844	0.941	0.901	0.079	0.912
P = ,000<0,05							

Based on the pre-test data, it was understood that the scales to be used factor analysis was above the acceptable values, so the questionnaires were distributed, and analysis of the research was made on a total of 386 valid responses.

Findings

Six questions were asked to determine the demographic characteristics of the respondents in the survey. Demographic information of the participants is summarized in Table 2. Accordingly, 55.2% of the participants were male and 78% were single. 58.5% of the individuals were in the 18-23 age range, 57.3% were at the associate degree education level. 30.3% of them had a monthly household income of 7501 TL or more and 53.1% of the participants were students.

Table 2
Demographic Characteristics of Respondents

		Frequency	Percent
Gender	**Male**	213	55.2
	Female	173	44.8
	Total	**386**	**100%**
Marital Status	**Married**	85	22
	Single	301	78
	Total	386	100%
Age	**18-23**	226	58.5
	24-29	39	10.1
	30-35	62	16.1
	36-41	18	4.7
	42 and more	41	10.6
	Total	**386**	**100%**
Education Level	**Elementary school**	3	0.8
	High school	28	7.3
	Under graduate	221	57.3
	Graduate	97	25.1
	Post graduate	37	9.6
	Total	**386**	**100%**

	3000 TL and less	64	16.6
	3001-4500 TL	87	22.5
Household Income	**4501-6000 TL**	75	19.4
(Turkish Lira)	**6001-7500 TL**	43	11.1
	7501 TL and more	117	30.3
	Total	**386**	**100%**
	Employee	33	8.5
	Officer	34	8.8
	Retired	9	2.3
	Student	205	53.1
	Academician	16	4.1
Job	**Housewife**	11	2.8
	Small business	4	1
	Tourism employee	8	2.1
	Self-employment	25	6.5
	Other	41	10.6
	Total	**386**	**100%**

In addition to questions to determine demographic characteristics, there were items of three scales in the research questionnaire. Table 3 shows the mean values and standard deviations of the participants' responses to the related statements.

Table 3
Descriptive Statistics of the Scales

Scale	Factors	Items	Mean	Std. Deviation
Sustainability Consciousness	Knowledge	Reducing water consumption is essential for sustainable development.	4.3316	1.04640
		Protecting nature is not necessary for sustainable development.	2.6010	1.21968
		Conserving species diversity in nature is essential for sustainable development.	4.5052	.85050
		Sustainable development requires a switch to renewable sources (renewables resources include wind power, solar panels, ethanol from Bio-waste etc.).	4.3057	1.00120
		For sustainable development, people need to be educated on how to protect themselves against natural disasters.	4.4249	.93465
	Attitude	Using natural resources more than we need does not threaten human health or our future welfare.	1.9197	1.42018
		I think we need stricter laws and regulations to protect the environment.	4.2254	1.04371
		I think it is important that something is done about the problems related to climate change.	4.3212	.97257
		I think it is okay for people to use as much water as they want.	1.8964	1.31905
	Behavior	If possible, I prefer to go somewhere by bike or on foot.	3.5777	1.22545
		I never waste water.	3.8368	1.04536
		I recycle as much as possible.	3.9378	1.03260
		If I see the garbage outside the city, in places such as picnic and recreation areas, I collect it.	3.8472	1.09779
		I do not think about whether the things I do will harm the environment.	1.7876	1.27776
		Whenever possible, I separate household waste as separate garbage.	3.8394	1.13737

SUS-TAS	Environmental Sustainability	We should value the diversity of nature and protect nature in the regions where accommodation establishments are located.	4.5829	.77602
		Tourism should protect the environment we live in.	4.6140	.73411
		A suitable accommodation business should always protect the natural habitat.	4.5907	.73028
		I believe that tourism should improve the environment for future generations.	4.5466	.76559
	Visitor Satisfaction	Accommodation businesses should take responsibility for the satisfaction of visitors.	4.4870	.79354
		The tourism industry should offer excellent quality tourist experiences to visitors to accommodation establishments.	4.4611	.79596
		It is the responsibility of the touristic enterprises to meet the needs of the tourists coming to the accommodation establishments.	4.2435	.91610
Purchasing Behavior	WOM	When my friends and relatives travel, I encourage them to stay in accommodation that considers sustainable elements.	2.8834	1.26915
		In general, I would recommend an accommodation facility that considers sustainable elements in case my close circle seeks a good catering service.	2.4491	1.25950
		I give positive advice about an environmentally friendly accommodation facility.	2.8337	1.30619
	Overpayment Wish	It is reasonable to overcharge to stay at an accommodation facility that operates in sustainable practices.	3.2876	1.26397
		I am willing to pay more to stay in a sustainability-sensitive accommodation.	3.4223	1.15564
		I am willing to spend the extra to stay in an eco-friendly accommodation facility.	3.3938	1.16010
	Revisit	I am willing to stay at an accommodation facility that takes sustainable considerations into account when traveling.	4.0415	.93328
		Hotels that consider sustainable elements are in the first place in my travel plans.	3.8964	.96679
		My next accommodation preference will be for accommodation facilities that take sustainability into account.	4.0699	.92738

In the application of parametric tests, it was necessary that the data show normal or near-normal distribution. There are many analytical and visual methods to determine if the data represents a normally distributed population. One of them is the measure of Skewness and Kurtosis. According to this analytical method, the Skewness and Kurtosis coefficients are divided by their standard errors if the resulting values are between -1.96 and +1.96, the distribution is considered normal at the 5% significance level (Yavuz, 2019: 616). The scales used in the research were assessed for normality distribution and it is understood that they were normally distributed. Table 4 summarizes the results.

Table 4
Normality Test's Values of the Scales

Scales	Skewness		Kurtosis	
	Statistical Value	Sd.	Statistical Value	Sd.
Sustainability Consciousness	-1.369	0.124	1.836	0.248
(SUS-TAS)	-1.911	0.124	1.846	0.248
Purchasing Behavior	-0.526	0.124	0.561	0.248

Both an ANOVA (Analysis of Variance) and a t-test are statistical tests that compare the mean scores for certain groups (Emerson, 2017:194). Significance level is given for both, and it is expected less than 0.05 ($p<0.05$). A T-test was used to evaluate the relationship between gender and marital status and other variables. According to t-test results, it is understood that while there is a relationship ($p<0.05$) between gender and sustainability consciousness (Female X=4.1645; Male X=3.9809), there is no relationship between gender, SUS-TAS and purchasing behavior ($p>0.05$). On the other hand, according to t-test results, there is a relationship ($p<0.05$) between marital status and sustainability consciousness (Married X=4.2392; Single X=4.0135); SUS-TAS (Married X=4.6370; Single X=4.4661) but there is no relationship between marital status and purchasing behavior ($p>0.05$). Table 5 summarizes the related results.

Table 5
Values of T-tests

Levene's Test for Equality of Variances				t-test for Equality of Means		
(Gender)		**F**	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
Sustainability Consciousness	Equal variances assumed	2.077	.150	-3.146	384	**.002**
	Equal variances not assumed			-3.195	382.686	**.002**
SUS-TAS	Equal variances assumed	5.071	.025	-.929	384	.354
	Equal variances not assumed			-.957	381.087	.339
Purchasing Behavior	Equal variances assumed	7.355	.007	-.544	384	.587
	Equal variances not assumed			-.555	383.865	.579
(Marital Status)		**F**	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
Sustainability Consciousness	Equal variances assumed	.895	.345	3.224	384	**.001**
	Equal variances not assumed			3.006	123.324	**.003**
SUS-TAS	Equal variances assumed	11.013	.001	2.064	384	**.040**
	Equal variances not assumed			2.776	244.037	**.006**
Purchasing Behavior	Equal variances assumed	.532	.466	-.591	384	.555
	Equal variances not assumed			-.586	133.680	.559

The ANOVA test was applied to evaluate the relationship between the research variables according to the demographic characteristics of the participants; age, household income, and education level. One of the criteria for ANOVA tests is the homogeneity of variables. With the use of Levene test, the variables might be homogeneous, if the significance level is more than 0.05 ($p>0.05$) and there is no requirement for doing the ANOVA test. However, if the significance level is less

than 0.05 (p<0.05), it is understood that the variables are not homogeneous and, in this case, instead of the ANOVA test, the Welch and Brown-Forsythe tests could be implemented.

According to the significance levels of the Levene test results, while the ANOVA test cannot be implemented (sig.<0.05), for "SUS-TAS" variable in age and education level characteristics, the test could be applied in household income characteristic. On the other hand, it is understood that the ANOVA test can be implemented (sig.>0.05) for "Sustainability Consciousness" and "Purchasing Behavior" variables in age, education level, and household income characteristics.

Table 6
ANOVA Tests

(Age)		Sum of Squares	df	Mean Square	F	Sig.
Sustainability Consciousness	Between Groups	7.178	4	1.794	5.653	**.000**
	Within Groups	120.942	381	.317		
	Total	128.120	385			
Purchasing Behavior	Between Groups	.585	4	.146	.233	.920
	Within Groups	239.580	381	.629		
	Total	240.165	385			
(Education Level)		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Sustainability Consciousness	Between Groups	7.211	4	1.803	5.681	**.000**
	Within Groups	120.909	381	.317		
	Total	128.120	385			
Purchasing Behavior	Between Groups	5.667	4	1.417	2.302	.058
	Within Groups	234.498	381	.615		
	Total	240.165	385			
(Household Income)		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Sustainability Consciousness	Between Groups	2.368	4	.592	1.793	.129
	Within Groups	125.752	381	.330		
	Total	128.120	385			
SUS-TAS	Between Groups	1.463	4	.366	.796	.528
	Within Groups	175.073	381	.460		
	Total	176.536	385			
Purchasing Behavior	Between Groups	4.101	4	1.025	1.655	.160
	Within Groups	236.064	381	.620		
	Total	240.165	385			

When Table 6 is examined, it is understood that sustainability consciousness shows a significant difference depending on the age and education level of the participants, since only the significance level of the sustainability awareness variable in the variables of age and education level is less than 0.05 (P=0.000 <0.05). Therefore, it was seen that the answers given by at least one of the participants' age and education levels group were different from the others. To determine from which age groups this difference arose, a Post-Hoc test was applied. The Post-Hoc tests to be applied for ANOVA test included the LSD, Scheffe, and Tukey tests.

Table 7
Scheffe Tests

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.
18-23	24-29	-.21896	.09769	.287
	30-35	-.22158	.08077	.113
	36-41	-.27224	.13798	.422
	42 and more	-.36826*	.09564	**.006**
(I) Education Level	**(J) Education Level**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Under graduate	Elementary school	.72217	.32744	.303
	High school	.01265	.11300	1.000
	Graduate	-.19535	.06861	.090
	Post graduate	-.33188*	.10006	**.028**

Table 8
Descriptive Statistics of Age and Education Level (Scheffe)

(Age)	N	Mean	Std. Deviation	Std. Error
18-23	226	3.9537	.58865	.03916
24-29	39	4.1726	.59936	.09597
30-35	62	4.1753	.51374	.06525
36-41	18	4.2259	.44111	.10397
42 and more	41	4.3220	.49797	.07777
Total	386	4.0632	.57687	.02936
(Education Level)	**N**	**Mean**	**Std. Deviation**	**Std. Error**
Elementary school	3	3.2667	.99555	.57478
High school	28	3.9762	.49797	.09411
Under graduate	221	3.9888	.59657	.04013
Graduate	97	4.1842	.55292	.05614
Post graduate	37	4.3207	.35689	.05867
Total	386	4.0632	.57687	.02936

According to the Scheffe test results given in Table 7, there is a difference between the sustainability consciousness of the participants in the age group of 42 and above compared to the participants in other age groups. In addition, there is a difference between the sustainability consciousness of the participant group with a postgraduate education level compared to the groups with other education levels. When Table 8, which shows the average values of age and education groups, was examined, it was pointed out that as the age and education level increases, the sustainability consciousness of the participants is raised.

Table 9
Welch and Browne-Forsythe Tests

(Age)	Statistic[a]	df1	df2	Sig.
Welch	7.620	4	88.733	**.000**
Brown-Forsythe	7.494	4	173.915	**.000**
(Education Level)	**Statistic[a]**	**df1**	**df2**	**Sig.**
Welch	5.423	4	14.488	**.007**
Brown-Forsythe	2.884	4	5.635	**.025**

a. Asymptotically F distributed.

Table 10
Descriptive Statistics of Age and Education Level (Welch and Browne-Forsythe)

(Age)	N	Mean	Std. Deviation	Std. Error
18-23	226	4.3976	.77958	.05186
24-29	39	4.5788	.66277	.10613
30-35	62	4.6014	.41560	.05278
36-41	18	4.7857	.28676	.06759
42 and more	41	4.7456	.31544	.04926
Total	386	4.5037	.67715	.03447

(Education Level)	N	Mean	Std. Deviation	Std. Error
Elementary school	3	4.3333	1.15470	.66667
High school	28	4.5102	.67279	.12715
Under graduate	221	4.4034	.77938	.05243
Graduate	97	4.6406	.43503	.04417
Post graduate	37	4.7529	.30796	.05063
Total	386	4.5037	.67715	.03447

According to the Welch and Browne-Forsythe test results given in Table 9, the significance level of the SUS-TAS variable in the variables of age and education level was less than 0.05 (P=0.000 <0.05). Therefore, it underlined that the answers given by at least one of the participants' age and education level groups were different from the others. To determine from which age and education level groups this difference arose, the descriptive results were examined. When Table 10, which shows the average values of age and education groups, was examined, it was understood that as the age and education level increases, the sustainability awareness of the participants gets higher.

A regression analysis was performed to examine the effects of age, education level, and monthly household income of the individuals participating in the research on their sustainability consciousness, sustainable tourism awareness, and purchasing behavior. To determine the effect of categorical variables on non-categorical variables, dummy variables were created in the regression analysis to be applied. Artificial variables, called dummy variables, were used to transform only categorical data into numeric data, which were not actually present in the original data. Although there was no obligation to use the values "0" and "1" in coding dummy variables, it was preferred because it provides convenience when interpreting. In addition, the use of dummy variables in the model established in the regression analyzes does not poseany additional difficulty in the analysis (Keskin, 2018: 20).

Several processes were followed to present categorical variables as numeric variables and enter them into regression analysis. For example, to examine the effect of age groups on the research main variables, five dummy variables (n-1) were created for a total of six age groups and were included in the regression analysis. For the education level variable, "n-1" dummy variables were created as well. The results

of the multiple linear regression analysis applied separately for the variables of sustainable consciousness and SUS-TAS are given below. However, for the purchase behavior variable, since there was no correlation between demographic characteristics and purchase behavior, regression analysis did not apply. In addition, since household income of the participants did not correlate with any variables, household income was not included in the regression analysis.

Table 12
Regression Analyzes

Model		Unstandard. Coeffic.		Standard. Coeffic.	t	Sig.	Collinearity Statistics	
		B	Std. Er.	Beta			Tolerance	VIF
Age	(Constant)	3.954	.037		105.495	**.000**		
	24-29	.219	.098	.115	2.241	**.026**	.949	1.054
	30-35	.222	.081	.141	2.743	**.006**	.935	1.070
	36-41	.272	.138	.100	1.973	**.049**	.972	1.029
	42 and more	.368	.096	.197	3.851	**.000**	.947	1.056
a. Dependent Variable: **Sustainable Consciousness**							**R=.056 - R^2=.046**	

Model		Unstandard. Coeffic.		Standard. Coeffic.	t	Sig.	Collinearity Statistics	
		B	Std. Er.	Beta			Tolerance	VIF
Age	(Constant)	4.398	.044		99.161	**.000**		
	24-29	.181	.116	.081	1.567	**.018**	.949	1.054
	30-35	.204	.096	.111	2.132	**.034**	.935	1.070
	36-41	.388	.163	.121	2.377	**.018**	.972	1.029
	42 and more	.348	.113	.159	3.075	**.002**	.947	1.056
a. Dependent Variable: **SUS-TAS**							**R=.041 - R^2=.031**	

Model		Unstandard. Coeffic.		Standard. Coeffic.	t	Sig.	Collinearity Statistics	
		B	Std. Er.	Beta			Tolerance	VIF
Education Level	(Constant)	3.979	.036		111.705	**.000**		
	Graduate	.205	.068	.155	3.039	**.003**	.964	1.037
	Post graduate	.342	.100	.175	3.434	**.001**	.964	1.037
a. Dependent Variable: **Sustainable Consciousness**							**R=.044 - R^2=.039**	

Model		Unstandard. Coeffic.		Standard. Coeffic.	t	Sig.	Collinearity Statistics	
		B	Std. Er.	Beta			Tolerance	VIF
Education Level	(Constant)	4.414	.042		105.057	.000		
	Graduate	.226	.080	.145	2.839	**.005**	.964	1.037
	Post graduate	.338	.117	.147	2.882	**.004**	.964	1.037
a. Dependent Variable: **SUS-TAS**							**R=.035 - R^2=.030**	

In the regression analysis, it should be checked whether there is multicollinearity and the VIF (variance inflation factor) values in the analysis. If there is a correlation between independent variables, it is understood that multicollinearity exists. In other words, if the VIF value is above 10, it indicates multicollinearity (Tascioglu & Yener, 2019: 364). According to the ANOVA tests results for the regression models, it was understood that the significance levels were less than 5% (sig. = .000 <.05) and according to the regression analysis results in Table 12, VIF values were not above 10. Therefore, it was understood that statistically there was no problem in applying regression analysis.

The regression analyzes in which age groups were considered as the independent variable, the age of 18-23 was considered as the reference (constant) group, since the individuals participating in the study were mostly between the ages of 18-23 (226 people). According to the sustainable consciousness regression analysis result, the R^2 value that expresses as an explanatory power of the model was .046, so independent variables in the model explained 4.6% of the variance of the dependent variable. According to the sustainable tourism awareness (SUS-TAS) regression analysis result, the R^2 value that expresses as explanatory power of the model was .031, so independent variables in the model explained 3.1% of the variance of the dependent variable. In the regression analysis, the Beta values showed the contribution of independent variables to explain the dependent variable. Other age groups had a positive contribution to the sustainable consciousness and sustainable tourism awareness (SUS-TAS) according to reference age group (18-23). Therefore, it can be concluded that if the age of the participants increases, then sustainable consciousness and sustainable tourism awareness (SUS-TAS) increase as well.

In the regression analyzes in which education level groups were considered as the independent variable, the education level of under graduate was considered as the reference (constant) group, since the individuals participating in the study were mostly in under graduate education level (221 people). According to the sustainable consciousness regression analysis result, the R^2 value that expresses as explanatory power of the model was .039, so independent variables in the model explained 3.9% of the variance of the dependent variable. According to the sustainable tourism awareness (SUS-TAS) regression analysis result, the R^2 value that expresses as explanatory power of the model was .030, so independent variables in the model explained 3% of the variance of the dependent variable. In the regression analysis, Beta values showed the contribution of independent variables to explain the dependent variable. Graduate and post graduate education level groups had positive contribution to sustainable consciousness and sustainable tourism awareness (SUS-TAS) according to reference education level group (under graduate). Therefore, it was understood that if the education level increases, then sustainable consciousness and sustainable tourism awareness (SUS-TAS) increases as well.

Discussion and Conclusions

The main aim of this study was to examine the effects of consumers' demographic characteristics like gender, marital status, age, education level, and household income on their sustainability consciousness, sustainable tourism awareness, and purchasing behavior in Turkey. People 18 years old and older living in Turkey were targeted and data collection was provided via a questionnaire including the scale items and demographic questions in four parts. The first part determined the demographic characteristics of the participants, the second part examined the participants' knowledge about sustainability and the third part measured attitudes towards sustainable tourism by way of SUS-TAS scale. The last part was to understand sustainable touristic purchasing behavior of individuals. Totally 386 questionnaires were included in the study and the collected data were analyzed with the help of SPSS 26.0 and AMOS programs.

Statistical analyzes were used throughout the research and these were presented in the relevant tables. However, it was also important to interpret this information and compare the data with previous research. According to t-test results, sustainability consciousness of females is higher than the male participants. This finding is parallel to the study of Ozdemir et al. (2004) Yilmaz, as well as the research of Celik & Yagizer (2009) who asserted that women were more interested than men were in environmental issues. However, there was no relationship between gender, sustainable tourism awareness and purchasing behavior. If this information is to be explained according to the scale sections in Table 3, the following judgment can be made; women have a higher awareness of sustainability in their individual activities in terms of behavior, attitude and knowledge than men. However, there is no gender difference in the environmental awareness scale, which consists of more general concepts. Similarly, there is no gender-based difference in participants' willingness to pay more for sustainable practices, their intention to revisit these accommodation establishments, and their positive recommendations of eco-friendly accommodations to others.

When it comes to marital status, t-test results point out a relationship between marital status and sustainability consciousness. Married participants are found to have higher sustainability consciousness as well as sustainable tourism awareness compared to single participants. By combining this data with the previous findings on gender, it can be inferred that women who are more conscious of environmental issues teach their spouses by developing an awareness after marriage as they share life together and make their accommodation choices. Coertjens et al. (2010) also underlined that environmental awareness and attitudes towards the environment were shaped by the individuals' family and social relations. No relationship between marital status and purchasing behavior was observed according to test results.

When examining how the age variable affects related issues, it was determined that the age factor has a significant effect on sustainability consciousness and sustainable tourism awareness. Accordingly, individuals aged 18 and over were included in the research, and as the age of the participants increases, the consciousness of sustainability also increases. In addition, with the increase in age, sustainable tourism awareness is also increasing, except for the last category, the slight decrease in individuals aged 42 and over. The findings regarding this last age group are similar to Baloglu & Millor's, (2008) study, which pointed out that individuals under the age of 60 are more willing to take part in environmental practices. This last age group is probably composed of retired participants who may have been away from information on technological developments and environmental issues, as these findings are different from previous studies. For example, Ozdemir et al. (2004) underlined that the environmental sensitivity mean score of those aged 21 and younger were higher, Ozbebek Tunc, while Akdemir Omur & Duren, (2012) argued that young people have higher environmental awareness and again Yilmaz, Celik & Yagizer (2009) asserted that young people might be more sensitive to environmental issues. Therefore, this study does not classify the population who have developed environmental consciousness and high awareness of sustainable tourism as youth but argues that it gradually increases from 18 to 42 years of age. It is observed that the age variable has no effect on purchasing behavior, and it is understood that as people get older, they are not willing to pay more to stay in accommodation establishments with sustainable practices, or there is no increase in the probable recommendations of these facilities to their friends or relatives.

It can be assumed that as the education level of people increases, they will acquire a positive perspective by gaining knowledge on issues of concern to society and environmental concerns. The study findings also confirmed the general prediction and previous literature. Since, as the education level of the participants increases, both their sustainability consciousness increases, and the awareness of sustainable tourism is found to be higher. However, no difference is detected in the purchasing behavior of individuals based on their education level. At this point, it should be noted that there is no significant relationship between the income level of the participants and their purchasing behavior, nor between sustainability consciousness or SUSTAS. There is no difference between people with a monthly household income of 3000 TL or less and those with a monthly income of minimum 7500 TL, in terms of being willing to overspend to stay at an accommodation facility that operates in sustainable practices.

None of the demographic variables considered in the study, such as gender, marital status, age, education, or income level, have a statistically significant effect on purchasing behavior. The data leads researchers to the conclusion that although

individuals prefer sustainable accommodation facilities in theory according to various demographic variables and are aware of environmental issues, they do not intend to undertake the economic burden of this in practice. In addition, these people do not differ according to any demographic factor in recommending or revisiting environmentally friendly accommodation facilities. In this case, the importance of dividing the economic burden required by environmental practices between individuals in the society and tourism businesses should be effectively explained in tourism education, starting from high school to graduate level. All conscious consumers, especially high-income individuals, should prefer environmentally friendly accommodation facilities, should undertake the economic cost of staying in these establishments, and recommend these accommodations to other potential tourists.

The research contains some limitations. The first one is that the participants of the research were 18 years old or older. Another limitation is the consumers' perception, which can change over time, and cannot be fully measured, as the participants answered the online survey only once.

In the light of the information obtained, which demographic factor groups are weaker in terms of developing sustainability consciousness or sustainable tourism awareness, how this segment can be positively educated should be investigated in future research, and the question of how tourism curriculum can be improved on environmental issues should be sought. In addition, this research on sustainable tourism practices in accommodation facilities could similarly be replicated by travel agencies, tour operators, or transportation companies, and state-supported proactive strategies could be developed by presenting all the results to the Ministry of Culture and Tourism in a holistic manner.

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