

## Article

# The Effect of Environmental Management Practices and Knowledge in Strengthening Responsible Behavior: The Moderator Role of Environmental Commitment

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**Abstract:** This study examines the effects of environmental management practices on environmental knowledge and environmentally responsible behavior by means of an environmental commitment moderator variable regarding the hotel employees in Manavgat–Türkiye. The existing literature on the relevant concepts has provided the theoretical basis of the research. Using the stratified convenience sampling method, a sample of 403 hotel employees from various hotels in the region participated in the survey. First of all, data screening analysis was used for the analysis of research data and the results obtained were analyzed through the AMOS program to test the structural model. According to the research results, it has been determined that environmental management practices are considered to be an important variable in terms of environmental knowledge and environmental knowledge positively affects the level of responsible behavior. In addition, it has been concluded that environmental commitment strengthens the relationship between these variables. In future research, it is predicted that the implementation of this study, which has been applied to hotel employees, in other areas of the tourism sector by taking into account the variables such as organizational commitment, business attachment, organizational performance, and employee attitude will enrich the literature.

**Keywords:** environmental management practices; environmental commitment; environmental knowledge; environmentally responsible behavior; hotel employees



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## 1. Introduction

The issues of climate change and being sensitive to the environment for the sake of protecting the environment globally have become a matter of great importance and debate for academic researchers, policy makers, and practitioners for the last 20 years. The importance of accountability for being environmentally sensitive and sustainable for international and local businesses may motivate them to adopt environmental management practices (EMP). All industries will need to consider EMP in their business activities in order to implement the philosophy of sustainable development along with the initiatives of governments. In this context, the ISO 14001 EMP comprised 113 items under five headings. While the number of businesses having ISO 14001 certificates worldwide was 22,897 in 2000 [1], this number reached approximately 420,433 businesses in 2021 [2]. Considering this situation on the basis of hotel and restaurant businesses, it was determined that while only 66 hotels and restaurants had ISO-14001 certificates in 2000 [1], this number reached 3186 businesses by 2021 [2]. The moral, ethical, social, and political arguments for taking action on environmental issues are becoming more persuasive and more widely accepted.

The hotel industry is also taking various initiatives for the sake of the environment, for economic reasons, or to build a positive image. Some hotels have gone one step further and adopted the internationally-recognized ISO 14001 Environmental Management Standard (EMS) [1]. Some leading companies are using environmental pressure to improve their operational efficiency, raise their corporate image, develop new products and opportunities, and thus gain a competitive edge [3]. It is suggested that implementing EMS can bring benefits to a company not only in financial terms through a reduction in energy costs and other resources, but also in terms of improving the company's image with the general public and other stakeholders [4]. What is more, from the consumer point of view, the contributions of the businesses applying environmentally friendly practices regarding sustainability and environmental protection have positively affected satisfaction [5,6], loyalty [7], and repurchase intention [8,9]. It is observed that the first studies on climate change and tourism were conducted in the early 1990s [10–12]. In terms of the tourism industry, sustainability practices have been negatively affected in comparison with tourism development [13,14]. Lenzen et al. (2018) [15] stated that the global carbon footprint resulting from tourism activities increased significantly between 2009 and 2013, and that tourism activities are considered to be responsible for a significant portion of global greenhouse gas emissions, as they constitute approximately 8% of global CO<sub>2</sub> emissions [16]. In addition to these, according to the United Nations Environment Program report [17], tourism is predicted to cause an increase of 154% in energy consumption, 131% in greenhouse gas emissions, 152% in water consumption, and 251% in solid waste disposal by 2050 [17]. Therefore, tourism, which is believed to be one of the sectors that need sustainable environment and nature the most, has to implement EMP correctly and effectively.

The opinions of hotel employees about the EMP for the protection of environment and nature [18–21], their knowledge on the environment [18,22], their responsible behavior [23,24], and their commitment [19,21] have been extensively discussed in many studies. Most of the studies on EMP have addressed the issue within the framework of the tourists thus [23,25–27]; the effect of EMP on environmental knowledge and responsible behavior, in terms of hotel employees, is one of the gaps in literature. In addition, when designing environmental management practices, it is of great importance for hotel managers to analyze the impact of them not only on corporate strategy, finance, and reputation but also on staff [28]. Further research is required to determine the premises, ideas, and thoughts pertaining to commitment, environmentally responsible behavior, knowledge, and EMP in order to encourage the hotel employees to protect the nature.

Farrukh et al. [18] have stated that various environmental education studies are necessary to promote strong environmental practices at all stages of a business. The primary reason for this is based on the need to develop the environmental knowledge levels of employees because it is likely that the employees with environmental knowledge will feel themselves responsible towards the business and society and they may be eager to continue their social duties [18]. Therefore, businesses should first determine the main lines of EMP. Moreover, it has been concluded in the studies that successful EMP have an impact on organizational commitment and job satisfaction [29] by increasing environmental efficiency in terms of employees [30].

Environmental knowledge is considered an important cognitive factor that directs people to reduce negative environmental impacts and engage in environmentally responsible behaviors [31]. Developing knowledge is accepted as a part of environmental education [32,33], and environmental knowledge can strengthen the responsible behavior awareness of employees [34,35]. Through the help of in-service training programs, the activities that aim at protecting the environment and perceiving the natural problems can help improve environmental knowledge [33]. Therefore, it is important to determine the effects of knowledge on responsible behavior as environmental knowledge is one of the key variables that researchers mainly deal with in the studies on EMP and environmentally responsible behavior [18,31,36]. In various studies, it has been emphasized that the higher level of knowledge the employees have, the more concerned and responsible towards the

environment and nature they are [37–39]. For this reason, improving the environmental knowledge of employees can help businesses to successfully implement EMP.

The high environmental commitment of hotel employees may have a positive effect on the overall satisfaction of tourists, so it is possible that they will implement EMP based on their commitment [23]. In addition, there is a high level of correlation between commitment and environmentally responsible behavior [40]. If employees have feelings of interest, sympathy, and attachment to their working environment and the destination they live in, it is more likely that they will exhibit stronger environmentally responsible behavior. A positive change in environmental attitude and behavior within the scope of environmentally responsible behavior depends on EMP.

This study has been carried out in the destination of Manavgat, Türkiye, which is rich in natural, cultural, and historical assets and hosted approximately 6.2 million visitors (90% international, 10% domestic) before the pandemic period [41]. This quantitative data constitutes 14.5% of the number of foreign tourists visiting Türkiye. As of 2019, there are 248 businesses that have the investment and Ministry of Tourism certificates, and 138 of these businesses are five-star hotels. When the statistics of the Ministry of Tourism have been examined, it can be determined that the tourist demand and facility investments for Manavgat as a destination have increased, and this situation creates various difficulties in terms of EMP for the use of natural resources. This type of mass tourism movement can have negative effects on the sustainability of a destination, such as damage to vegetation, waste accumulation, and physical erosion [42]. Establishing the balance between regional economic development and sustainable tourism, which is an inseparable part of the local economy, is considered an important issue for tourism businesses, local people, and public institutions and organizations. As a matter of fact, although there are studies expressing that tourism is an important subject in terms of economic development, the damage caused by tourism to nature is severely criticized by local stakeholders [42–46]. EMP of tourism enterprises and employees in Manavgat, in the context of sustainable tourism and economic development, started with the green star application in Türkiye and have continued with the effects of the COVID-19 pandemic and also enabled the development of environmental knowledge and environmentally responsible behavior. It is within the realms of possibility that tourism, which is the locomotive sector of the Manavgat economy, will adversely affect the natural environment, especially in the face of new tourism investments and the ever-increasing intense tourist demand for the destination, along with other sectors that are directly or indirectly affected by tourism [47,48]. Due to these reasons, environmental management, knowledge, and responsible behaviors that are aimed at reducing the negative impacts, within the framework of hotel employees, are essential to the attitudes and behaviors of tourism enterprises in terms of ensuring sustainability by protecting the natural environment.

This study aims to make a basic assessment on EMP and the knowledge, responsible behavior, and commitment of hospitality business employees. The findings, though specifically about the Manavgat destination, can be applicable to destinations that receive intense tourist demand. Previous studies have focused on different outcomes of EMP. For example, in the study by [29], it was stated that EMP have a positive effect on the job satisfaction and organizational commitment of the employees so the EMP in this study have to be examined closely by the businesses. On the other hand, this study aims to determine the direct effects of EMP on hotel businesses on knowledge and responsible behavior because it is thought that the increase in the levels of environmental knowledge and environmentally responsible behavior is considered to be critical to support sustainable tourism. Moreover, individual environmental awareness is of great importance for environmental management and individuals' understanding of environmental problems, processes, and solutions can increase their thoughts and awareness of the need to take a role in environmental protection [18]. In this study, unlike other studies, the moderator role of environmental commitment in the effect of knowledge on responsible behavior has been investigated. Accordingly, this article has been summarized as follows: literature review

(theoretical background, dimensions, and research hypothesis development); methods (research model, population and sampling, data collection, and findings); discussion and implications; limitations and future research directions; and conclusion.

## 2. Conceptual Model

### 2.1. Environmental Management Practices and Environmental Knowledge

There are a great many studies investigating EMP in hotel businesses, e.g., [49–54]. The authors analyzing EMP have used different labels such as green practices, sustainable practices, sustainable development practices, environmentally friendly practices, sustainability management tools, and sustainability initiatives [55]. Gil et al. [56] dimensioned EMP under seven categories: 1—measuring environmental costs and savings; 2—environmental education programs; 3—implementing green purchasing policies; 4—using green arguments in marketing campaigns; 5—customer collaboration requests in environmental protection programs; 6—adopting energy and water-saving actions; and 7—collecting paper, oil, glass, and other materials separately. Mensah [49] emphasized that waste management and waste recycling, as EMP in hotels are of vital importance in terms of reducing natural resource consumption and costs, and he stated that much more information is needed on this issue. On the other hand, according to Samdin et al. [52], it was identified that the main dimensions of sustainable tourism practices in hotel businesses as energy management, waste management, and water saving, and thus they mentioned training, regulation and management practices related to these dimensions. According to the study carried out by Kim et al. (2015) [54], the environmental management capability of hotel businesses was defined as employee training, communicating environmental initiatives to guests, knowledge and skills to implement environmental practices, capital to invest in environmental management, and support from employees. When the results of the above-mentioned studies have been examined, it can be stated that the dimensions discussed in terms of EMP are rather similar, and as a common deduction, there is a lack of knowledge in terms of EMP or training programs that are important in terms of development.

Environmental knowledge has been defined as knowledge and understanding of environmental and natural problems and their solutions [57,58]. According to another definition, environmental knowledge is explained as an individual's ability to recognize environmental concepts, symbols, and behaviors associated with pro-environmental goods and services [59]. As Chan et al. [58] stated, people tend to keep away from situations where there is not enough information to guide their behavior and where the probability of uncertainty is higher. In this context, businesses should reconsider and update the existing knowledge of their employees; otherwise they may have difficulty changing business procedures and routines [60]. The creation of environmental knowledge might enable the reactivation and development of new knowledge, which initially allows learning before transferring new knowledge to organizational members [61]. The study of Ahmed et al., (2020) [59] shows that hotel managers should invest in raising awareness of employees about green behavior by organizing environmental training to improve knowledge and awareness. The insight and awareness gained from environmental training programs, through which new knowledge will be transferred, can make employees more considerate about environmental degradation and prevention procedures [22]. In this regard, it is thought that the trainings and activities involving the EMP of enterprises may affect the environmental knowledge capacity of their employees.

Therefore, the following hypothesis has been proposed:

**Hypothesis 1 (H1).** *There is an effect of environmental management practices on environmental knowledge.*

**H1a.** *There is a positive and significant relationship between energy and water saving (EWS) and noise pollution reduction practices and environmental knowledge.*

**H1b.** *There is a positive and significant relationship between education/behavior modification practices and environmental knowledge.*

**H1c.** *There is a positive and significant relationship between environment and community stewardship (CS) practices and environmental knowledge.*

## 2.2. Environmental Knowledge and Environmentally Responsible Behavior

Understanding the procedures, environmental problems, and solutions or practices for the protection of a sensitive environment and nature can solely be possible with environmental knowledge. Making sense of this situation can enable people to develop protective and corrective behaviors concerning the environment. Therefore, the main reason that leads to the correct behavior is the knowledge itself. In many studies on environmental knowledge and behavior, the relationship between these variables has been found to be strong, and the employees having knowledge both participate in EMP [37,57,58] and differentiate in environmental behavior [24,31,33,35] compared to other employees.

Farrukh et al. [18] concluded that the individuals who are aware of environmental concerns are more likely to exhibit ecological behavior. Safari et al. [35] found that environmental knowledge and awareness had a direct and significant impact on green behavior. Moreover, they also concluded that knowledge and awareness have a significant indirect effect on managers' green behavior through behavioral intentions, environmental attitudes, and green commitment. In the study carried out by Cheng and Wu [31] on tourists, they determined that knowledge and awareness can increase loyalty to the destination and strengthen environmental behavior. Carmi et al. [36], on the other hand, revealed that the most important way to achieve environmental behavior change is through environmental knowledge and although knowledge is not a direct predictor of behavior, its moderator effects should be taken into consideration.

In the light of this information the second hypothesis of the paper has been proposed as:

**Hypothesis 2 (H2).** *Environmental knowledge has a strong effect on environmentally responsible behavior.*

## 2.3. The Moderator Effect of Environmental Commitment on the Relationship between Knowledge and Responsible Behavior

When the tourism literature has been examined, there are very few studies investigating the relationship between environmental commitment and responsible behavior or knowledge. Yayla et al. [62] concluded that environmental commitment has a positive effect on responsible behavior and employees with high environmental commitment should exhibit environmentally responsible behavior in a positive way. In the study conducted by Lee [63] it was stated that place attachment and protection commitment critically affects environmentally responsible behavior. Therefore, the business attachment of the employees and their interest and curiosity about the protection of the environment can positively affect their responsible behaviors. Patwary [64] tried to reveal the effect of planned behavior theory and environmental beliefs and protection commitment on the development of environmentally responsible behavior by analyzing the knowledge of tourists before and after their travel experience. According to the results of the research, he determined that the environmental responsibility of the tourists continued during and after the travel experience. Thus, the knowledge and responsible behavior that tourists gain through their travel experiences can positively affect their environmental commitment.

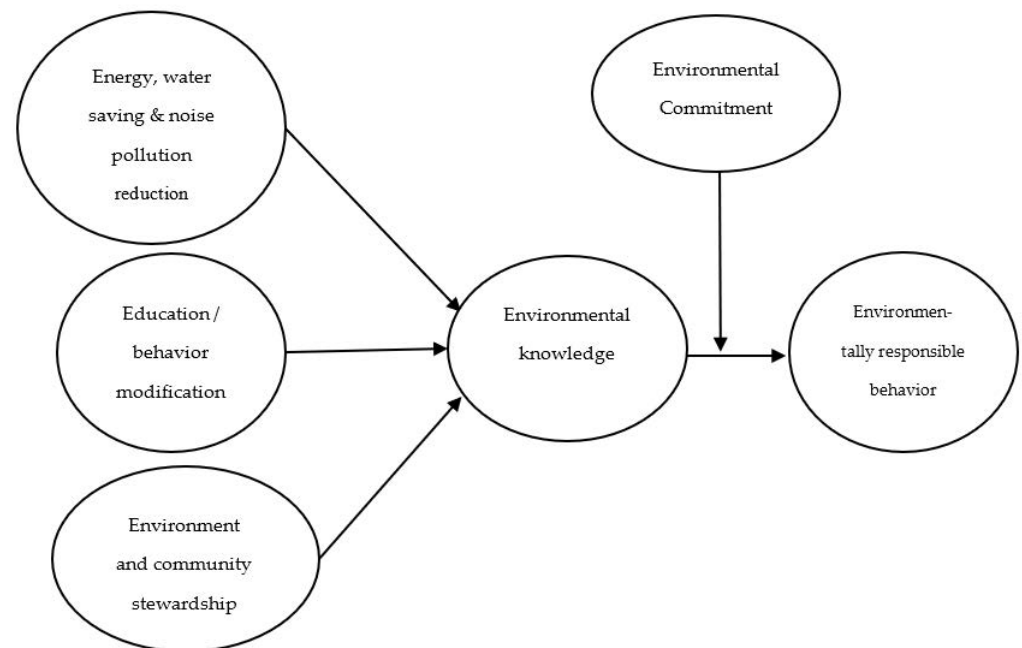
He et al. [23] determined that the service quality of hotel employees positively affects the responsible behavior of tourists with the influence of environmental commitment. Therefore, we can state that EMP and employees providing environmentally responsible behavior and service and showing commitment positively affects the formation of environmentally responsible behavior in tourists. Tariq et al. [65] concluded that the environmental



attitudes of employees affect their environmental behavior and performance, and that environmental commitment strengthens the relationship between attitudes and behavior. In addition to this, it has been determined in this study that the employees with high environmental knowledge, awareness, and sensitivity contribute more to environmental performance. When the literature has been examined, although it can be seen that there are separate studies on the relations between responsible behavior, knowledge, and commitment, no research examining the moderating effect of environmental commitment has been found. In this sense, determining how commitment moderates the relation between knowledge and responsible behavior will contribute to the originality of the study. Based on the literature review, in order to contribute to the gap in literature, it was decided to examine the moderator role of environmental commitment in the effect of knowledge on environmentally responsible behavior and hypothesis 3 was formed.

**Hypothesis 3 (H3).** *Environmental commitment has a moderator role in the relation between environmental knowledge and environmentally responsible behavior.*

The research model, proposed in the light of the above-mentioned literature review, conceptual basis, and hypotheses, is presented in Figure 1.



**Figure 1.** Proposed model.

### 3. Methodology

#### 3.1. Research Instrument

The scales used which depended on the purpose of the research were formed as a result of a comprehensive literature review on the subject. In this context, the scale consisting of three dimensions and 11 statements regarding EMP was developed from the study conducted by Oriade et al. [55]. In addition, 4 statements about environmental knowledge were taken from the study of Haron et al. [66]. As for the statements for environmentally responsible behavior scale, these statements were determined based on the studies of Smith-Sebasto and D'Costa (1995) [67] and Cheng and Wu (2015) [31]. Finally, the scale that was developed by Raineri and Paille [68] consisting of 8 statements regarding environmental commitment was used in this research. As the scales were originally formed in English, two different language experts were used to apply a back-to-translation method [69]. First of all, all the expressions were translated from English into Turkish, then the same expressions were translated into English by the second language specialist and a double-sided

control was ensured. All of the scales used in the research were rated by means of 5-point Likert scale.

### 3.2. Sampling and Data Collection

The research was carried out in Manavgat, one of the most important tourism destinations of Türkiye, in the province of Antalya. Manavgat has been accepted as one of the most precious destinations in the Mediterranean Region. Manavgat, which is located at a distance of 75 km from Antalya and whose economy is largely dependent on sea, sand, and sun tourism, hosts millions of tourists every year thanks to its attractiveness and is known as the destination with the highest tourist density among the touristic districts of Antalya [70]. As a matter of fact, it hosts more than 4 million tourists every year [71]. All of these data indicate that one out of every three tourists coming to Antalya visits Manavgat. In parallel to this result, the destination has developed quite a lot in terms of accommodation industry. Manavgat, which hosts 215 hotels with tourism operation certificates [70], constitutes one of the most important employment areas for the people living in the destination. For these reasons Manavgat was chosen as the research population.

The employees of 11 5-star hotels that agreed to participate in this research constitute the research sample. Initially, a pilot study was conducted in the second week of April 2022 for 37 people employed in two of the first selected hotels. Subsequent to the pilot study, the reliability values and construct comprehensibility of the scales were checked and, as no problems were encountered, the stage of collecting the actual research data was started.

The actual research data were obtained by means of the convenience sampling method via adopting the principle of randomness. Due to the high risk of common method bias in social science research [72], the data were collected in three stages in a four-day cycle as suggested by Podsakoff et al. [73]. In the first stage, the scale of EMP was applied to the participants on the first day and each participant was given a specific number. On the fifth day, the environmental knowledge and environmental responsibility behaviors of the participants were measured. On the ninth day, the research was completed by measuring the environmental commitments of the research participants. The employees that could not participate in the survey due to their workload or days off were included in the research one day after and answered the survey questions. In order to minimize the common method bias, a number of response enhancing techniques were applied and a cover page was prepared for each survey tool bearing the information such as "Participation is optional", "Any information collected during this research will be kept confidential", "There are no right or wrong answers in this survey" [74]. As a result, a total of 415 questionnaires were obtained in the third and fourth weeks of April 2022. After identifying and eliminating the incorrectly filled and incomplete questionnaires, the research analyses were carried out with the remaining 403 questionnaires.

### 3.3. Data Analysis

First of all, the obtained data were transferred to the SPSS Statistics Base v23 program and a data screening process was applied prior to determining the relationships among the variables. The data screening process was determined in three stages. In this context, initially, the data scanning process was performed and in order to determine the extreme values Mahalanobis distance was analyzed. As a consequence of the scanning process, 7 questionnaire forms were excluded from the analysis since they contained extreme values (Mahalanobis'  $D(27) > 0.001$ ).

In the second stage, the problem of multicollinearity was evaluated. As a result of the analysis, it was determined that the VIF values were below 5 and the tolerance values were above 0.10. In the light of these findings, it was concluded that there is no multicollinearity problem [75]. In the final stage, the normality distributions of the data were tested and it was determined that the kurtosis and skewness values of the statements were between  $-1.5$  and  $+1.5$ . Based on these results, it was decided that the research data presented a normal distribution [76]. Depending on this finding, in order to test the structural model

developed for the purpose of the research, AMOS program was used. Furthermore, Process macro ([77] model 1) was preferred with the aim of determining the moderator effects.

### 3.4. Findings

#### 3.4.1. Demographic Profile

In total, 71.5% of the employees that answered the survey questionnaire were male ( $n = 298$ ). The considerably higher number of male employees than female employees can be explained by the fact that the employees in the tourism sector in Türkiye are mostly males. In a study conducted by Çiçek et al. [78], the rate of female employment in hotels in Türkiye was determined to be 21.7%. Another finding obtained in the research is that 43.4% ( $n = 172$ ) of the participants were in the 35–44 age range. The research results showed that 60.4% ( $n = 239$ ) of the employees were associate degree or bachelor graduates. The professional experience of the employees in the sector was evaluated and it was concluded that 63.1% ( $n = 250$ ) of them had 11–15 years of professional experience. Finally, when the working periods of the participants in the current hotel were analyzed, it was determined that 26.5% ( $n = 105$ ) were in the range of 6–10 years.

#### 3.4.2. Confirmatory Factor Analysis Regarding the Structural Model

In the study, the two-stage approach suggested in the literature was adopted [79]. In this sense, before calculating the path coefficients of the relations between the variables, confirmatory factor analysis was carried out. The results obtained have been presented in Table 1. The first values examined in the evaluation are the factor loads because Hair et al. [75] claim that the factor load in each structure should be minimum 0.50. In this context, it was determined that the factor load of a statement concerning the environmental commitment (I really care about the environmental concern of my hotel) remained below 0.50 and that statement was excluded from the analysis. The factor loadings of all the remaining statements in each constructs varied between 0.657–0.901 and the calculated  $t$  values have been found to be significant at  $p \leq 0.001$  level. On the other hand, the goodness of fit values attained are at acceptable levels ( $\chi^2 = 582.218$ ,  $df = 280$ ,  $\chi^2/df = 2.079$ ,  $NFI = 0.921$ ,  $IFI = 0.957$ ,  $TLI = 0.955$ ,  $RMR = 0.030$ ,  $RMSEA = 0.052$ ,  $CFI = 0.957$ ). Depending upon these results, it has been determined that the collected research data support the structural model.

**Table 1.** Confirmatory Factor Analysis Results of the Structural Model.

Factors/Statements	Standard Loads	$t$ -Value	R <sup>2</sup>	CR	AVE	CA
Management practice						
Energy and water saving and Noise pollution reduction (EWS)				0.954	0.697	0.912
The hotel where I work uses water saving techniques.	0.791	20.55 *	0.63			
The hotel has noise control system in place, e.g., soundproof system in guest room.	0.891	25.90 *	0.79			
The hotel uses thermostat to control guest room temperature.	0.846	23.32 *	0.71			
The hotel uses energy efficient lighting fixtures	0.901		0.81			
Education/behaviour modification (BM)				0.891	0.736	0.749
The hotel offers options to reuse towels for guest staying more than one nights.	0.832	14.00 *	0.69			
The hotel use refillable amenities in bathroom.	0.657	10.35 *	0.32			
The hotel you work for contribute to and get involved in community programmes.	0.779		0.60			
Environment and community stewardship (CS)				0.855	0.684	0.896



Table 1. Cont.

Factors/Statements	Standard Loads	t-Value	R <sup>2</sup>	CR	AVE	CA
The hotel purchases locally grown food.	0.776	17.24 *	0.60			
The hotel have in place environmental protection programme for staff.	0.844	19.34 *	0.71			
The hotel have in place environmental disclosure/accounting policies.	0.869	20.14 *	0.75			
The hotel promotes environmental activities for guests.	0.817		0.67			
Environmental knowledge (EK)				0.812	0.631	0.871
I know that the maintenance of ecological balance will enhance the sustainable development of Manavgat	0.781		0.61			
I know that for the next generation, we should protect the natural resources of Manavgat.	0.827	17.11 *	0.68			
I know that the maintenance of diversity of species in Manavgat will balance the ecology.	0.821	16.96 *	0.67			
I know that extensive development of tourism will deplete natural resources of Manavgat.	0.748	15.27 *	0.56			
Environmentally responsible behavior (ERB)				0.851	0.679	0.893
I try to solve the environmental problems in Manavgat.	0.771		0.59			
I read the reports, advertising, and books related to the environments of Manavgat.	0.846	17.68 *	0.71			
I discuss with others the environmental protection of Manavgat.	0.848	17.73 *	0.72			
I try to convince companions to adopt positive behaviors in the natural environments of Manavgat	0.829	17.27 *	0.68			
Environmental Commitment (EC)				0.926	0.643	0.930
I would feel guilty about not supporting the environmental efforts of my hotel.	0.751	15.92 *	0.56			
The environmental concern of my hotel means a lot to me.	0.760	16.03 *	0.58			
I feel a sense of duty to support the environmental efforts of my hotel.	0.788	16.60 *	0.62			
I really feel as if my hotel's environmental problems are my own.	0.847	18.09 *	0.72			
I feel personally attached to the environmental concern of my hotel.	0.868	18.42 *	0.75			
I feel an obligation to support the environmental efforts of my hotel.	0.813	17.56 *	0.66			
I strongly value the environmental efforts of my hotel.	0.781		0.61			

\*  $p < 0.001$ .

Cronbach's alpha values have been examined regarding the reliability of the scales and it has been observed that the relevant values are minimum 0.749. This value is above the limit determined by the studies in the literature and indicates that the reliability of the research scales has been ensured [80]. What is more, it has been determined that the CR value is minimum 0.812 and the AVE value is minimum 0.631. These findings are within acceptable limits [81]. Herewith, the findings have shown that the convergent validity and composite reliability values of the study are provided.

In Table 2, the discriminant validity of the model has been examined. According to the table results, it has been determined that the AVE value's square root of each structure is higher than all the values in the related row. In the light of these results, it has been concluded that the construct provides the discriminant validity [82].

**Table 2.** Discriminant Validity Results.

Factor	1	2	3	4	5	6
1. EWS	0.834 <sup>a</sup>					
2. BM	0.372	0.857 <sup>a</sup>				
3. CS	0.612	0.494	0.827 <sup>a</sup>			
4. EK	0.059	0.130	0.024	0.794 <sup>a</sup>		
5. ERP	0.026	0.015	0.078	0.667	0.824 <sup>a</sup>	
6. EC	0.006	0.126	0.058	0.084	0.085	0.801 <sup>a</sup>

EWS: Energy and water saving and noise pollution reduction; BM: Education/behavior modification; CS: Environment and community stewardship; EK: Environmental knowledge; ERP: Environmental responsible behavior; EC: Environmental commitment. <sup>a</sup> Square root of the AVE.

### 3.4.3. Hypothesis Tests

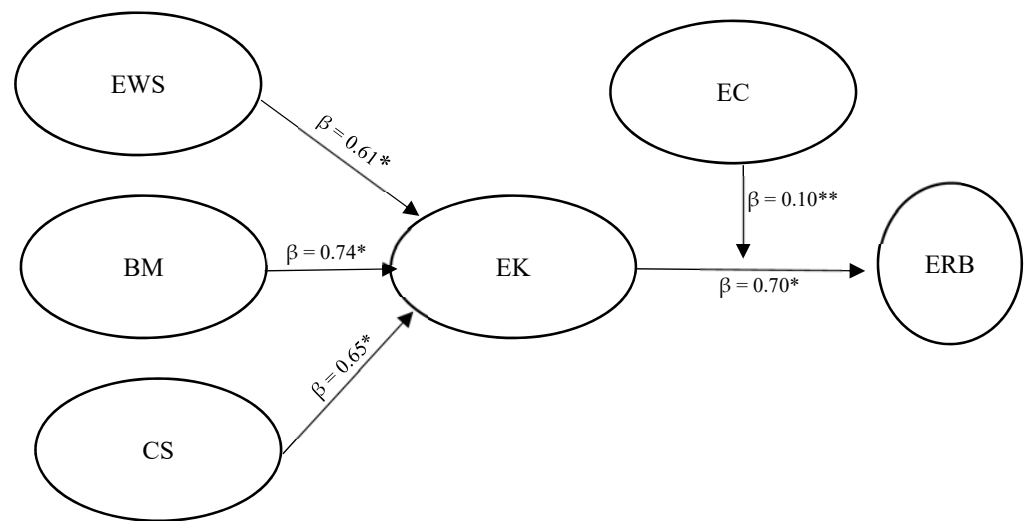
After obtaining meaningful results in the confirmatory factor analysis, the second stage of the research, the process of determining the path coefficients, was started. The goodness of fit values determined in the path analysis were also found to be within acceptable limits ( $\chi^2 = 338.240$ ,  $df = 143$ ,  $\chi^2/df = 2.365$ ,  $NFI = 0.934$ ,  $IFI = 0.961$ ,  $TLI = 0.957$ ,  $RMR = 0.038$ ,  $RMSEA = 0.059$ ,  $CFI = 0.960$ ). When the results of the path analysis were examined, it was determined that energy and water saving ( $\beta = 0.61$ ,  $t = 10.812$ ,  $p < 0.001$ ), education/behavior modification ( $\beta = 0.74$ ,  $t = 19.371$ ,  $p < 0.001$ ), and environment and community stewardship ( $\beta = 0.65$ ,  $t = 11.233$ ,  $p < 0.001$ ) positively and significantly affected environmental knowledge. When the Squared Multiple Correlations ( $R^2$ ) values obtained from the model were analyzed, it was determined that 26% ( $R^2 = 0.260$ ) of environmental knowledge and 52% ( $R^2 = 0.516$ ) of environmental responsible behavior were explained. In the light of these results, H1a, H1b, and H1c have been accepted. Similarly, it has been determined that responsible behavior is strongly influenced by knowledge ( $\beta = 0.70$ ,  $t = 11.673$ ,  $p < 0.001$ ). Accordingly, H2 has been accepted, as well.

The results of the regression model developed to determine the moderator effect have been given in Table 3. When the table has been examined, it can be determined that the moderator role of environmental commitment is significant in the effect of environmental knowledge on environmentally responsible behavior ( $\beta = 0.10$ , 95% CI [0.009, 0.195],  $p < 0.05$ ). In addition, when the details of the moderator variable have been analyzed, while the effect of knowledge on responsible behavior is lower in employees with low environmental commitment ( $\beta = 0.55$ , 95% CI [0.440, 0.670]), it is higher in employees with high environmental commitment ( $\beta = 0.73$ , 95% CI [0.617, 0.858]). According to the model results, the H3 hypothesis has been supported. In the light of the findings obtained, the coefficients related to the structural model have been presented in Figure 2.

**Table 3.** Moderated Effect Result.

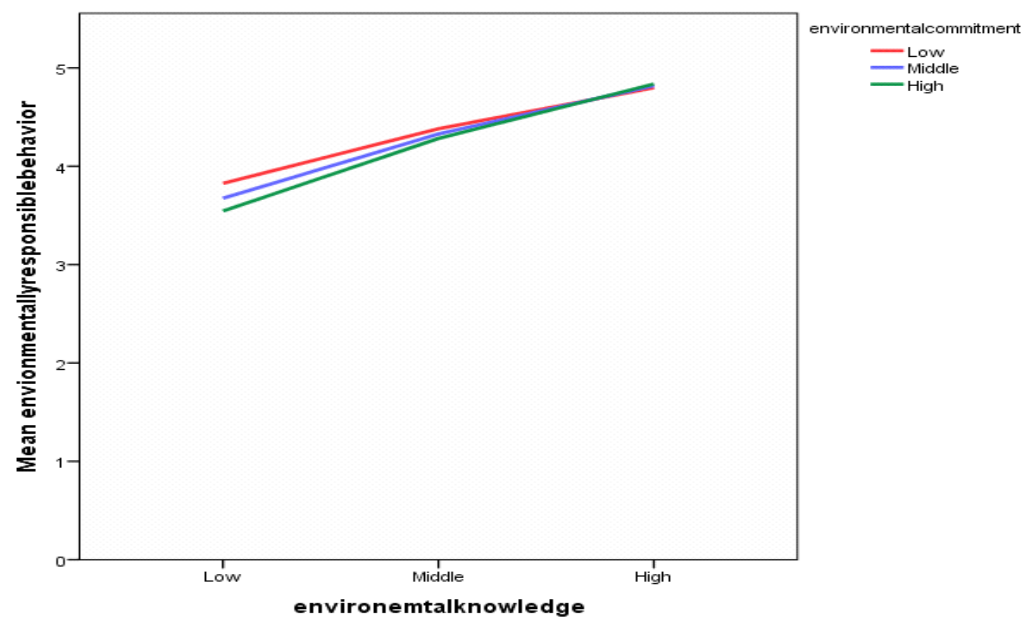
		Environmentally Responsible Behavior			
		$\beta$	Confidence Interval		
H3a			Min.	Max.	
Environmental knowledge (X)		0.26 *	0.126	0.646	
Environmental commitment (W)		0.47 **	0.062	0.880	
X.W (Interaction)		0.10 **	0.009	0.195	
$R^2$		0.42			
Environmental commitment	$\beta$	S.E.	t	LLCI	ULCI
Low:	0.55 *	0.05	9.49	0.440	0.670
Middle:	0.65 *	0.03	16.82	0.577	0.730
High:	0.73 *	0.06	12.08	0.617	0.858

\*  $p < 0.001$ , \*\*  $p < 0.05$ .



**Figure 2.** Structural Model Coefficients. \*  $p < 0.001$ , \*\*  $p < 0.05$ .

The results regarding the details of the moderator effect have been presented in Figure 3.



**Figure 3.** EC moderator to EK-ERB.

#### 4. Discussion and Implications

The primary objective of this study is to evaluate and analyze the effect of the EMP on the environmental knowledge and environmentally responsible behavior of the hospitality industry employees in accordance with the moderating effect of their attitudes regarding environmental commitment. In order to ascertain the relations between these variables, the data were collected from the individuals currently employed in hotels in Manavgat, which is one of the most worldwide popular tourism destinations in Türkiye. In this section, the obtained results of the research have been discussed extensively and, subsequently, based on the results of the analyses a number of practical and theoretical implications have been put forward.

Environmental management systems (EMS) seem to be instrumental in bringing about a variety of impacts. The studies indicate that EMS implementation and certification do help companies to integrate their environmental, health, and safety management systems and, in some cases, their environmental and quality management systems as well [83–88]. ISO 14001 certified companies state that they provide environmental performance improvements, specifically in the fields of waste recycling, the reduction of air and waste emissions, the reuse of materials, energy and water savings, and the reduction of environmental incidents. Since EMS requires strong employee participation and the application of environmental training programs, many firms report increased employee awareness of the environmental aspects of their jobs and responsibilities for reducing negative impacts. In addition to these, it requires employees to develop environmental behavior in terms of being more sensitive to the environment and reducing negative effects while carrying out their duties.

Hospitality businesses have been regarded as one of the most important economic industries around the world by means of creating employment and providing financial facilities as an important branch of the tourism sector. Therefore, in order to support the implementations of EMP, to increase the environmental knowledge of employees, and to encourage the employees' environmentally responsible behaviors, this study is of great importance because it has been determined that the application of EMP in businesses increases the knowledge of employees. Considering the findings obtained in the context of H1, EMP such as energy and water saving, education/behavioral change, and environmental and community management positively affect the environmental knowledge capacity of employees. Therefore, if hotel businesses increase their EMP, particularly within the framework of ISO 14001 certification, they can contribute to the awareness of employees against positive and negative situations to protect the environment and nature. For this reason, the businesses should include their employees in EMP and they should provide their employees with training to increase their environmental knowledge. For example, according to the research conducted by Chan (2009) [83], electricity consumption constitutes 70% of the energy consumption of hotel businesses and, in this regard, it is necessary to increase the environmental knowledge and behavior of employees.

The sector representatives should reconsider that if the environmental knowledge of employees is increased, they will become more environmentally aware and they will definitely show more environmentally responsible behavior. Such a practice will contribute to the decrease in the expenditures of a business. Moreover, the application of EMP will lead to an increase in demand from the customers and the customers will be satisfied to accommodate businesses that are concerned and responsible about the environment. According to the research, it has been observed that the environmental knowledge levels of the employees are low. Accordingly, businesses need to do in-service trainings or get the necessary trainings and seminars from educational institutions in order to increase the knowledge levels of their employees and to gain them environmental commitment and responsible behavior towards the environment. This is because the results of H2, which was developed in line with the purpose, indicate that environmentally responsible behavior changes positively depending on an increase in environmental knowledge. In addition, when hiring new employees or promoting existing employees to senior positions, hotel businesses should evaluate their environmental knowledge, environmental commitment, and environmentally responsible behaviors.

As the results of this study have indicated, it is also a clear fact that the hotels will gain a competitive advantage by means of decreasing their cost with the application of EMP. Furthermore, in the literature there are some studies showing that the environmental awareness levels of tourists are on the rise and currently tourists are more willing to pay more for accommodation in the hotels that are concerned about the environment [89,90]. Such a finding indicates that hotel enterprises should adopt EMP and employ environmentally aware individuals.

A great number of studies have focused on the EMP of hotels and the environmental knowledge and environmentally responsible behavior of employees [18,23,31,36–38,65]. As for the current study, it has presented a different perspective by examining a specific issue: the moderator role of environmental commitment. In this sense, knowledge that is increased by means of environmental commitment helps in the creation of positive environmentally responsible behavior. Such a finding shows that the service quality of hospitality businesses will increase. Therefore, not only will the sustainability of the business be ensured but also a sustainable environment will be developed. In this context, this study could be considered as a unique research that examines the moderator role of commitment. According to the H3 results developed in the light of this purpose, when the environmental commitment level of employees is low, the effect of knowledge on responsible behavior shows a decline. At the same time, when the employees become more committed to their businesses and environment, the likelihood of their showing environmentally responsible behavior is rather high. This finding is considered to be a clear fact for academics to do more research on the subject. For this reason, taking this fact into account, it is important for researchers to examine the subject in depth with different variables and in different sectors.

According to the research findings, the EMP of the hotel businesses positively affect the knowledge and responsible behavior of the employees. Therefore, first of all, businesses should create a culture and principles of environmentally responsible behavior, include employees voluntarily in a system, and adopt an environmental management philosophy. It can be ensured that the employees of the enterprises perform their EMP with the expected level of effort and care by means of internal and external motivation tools. Considering EMP, environmental knowledge and responsible behavior as a prerequisite for the promotion of business managers and employees or new hires can help the integration of employees. What is more, the voluntary participation of employees in EMP can be encouraged with incentives such as various awards, gifts, holidays, or an employee of the month system based on fair and realistic grounds.

## 5. Limitations and Future Research Directions

The current study, besides its considerable contributions, has a number of limitations. Due to the fact that the research data were collected targeting a sole tourism destination in Türkiye, the consequences of the study might not be generalized for other destinations in other countries. Therefore, it is of the utmost importance to carry out some similar studies in order to ascertain the external validity of the research results. Much more research needs to be done on a broader sample of companies to determine whether or not the motivations for adopting environmental management systems are fulfilled by the benefits and impacts of doing so. Besides employees, similar studies could be carried out by focusing on the hotel managers and guests. The data regarding the research variables were collected by means of questionnaires, so the use of both quantitative and qualitative techniques in further studies is recommended to the academics working in the field since it may yield different findings. Furthermore, the same research model could be applied in other sectors of the tourism industry other than the hospitality sector. Other than these, a comparative study featuring both employees and tourists with a general perspective may bring a new insight to the subject.

## 6. Conclusions

The hospitality industry is one of the most labor intensive sectors in the world. In this sector, the hotels need to invest in the development and education of their employees with the purpose of attaining the core objective of sustainable environmental management. The implementation of EMP within the organizations of the hospitality industry to achieve sustainable environmental performance [44,91] and bring up environmentally aware and responsible individuals [92,93] is of vital importance. Hereby, the sector will also provide innovation and customer satisfaction as well [94].



Individuals being comprehensively educated about environmental issues is considered to be a necessary element in directing their pro-environmental attitudes. The crucial role of knowledge in shaping the beliefs, attitudes, and behaviors of an individual cannot be underestimated. The term “environmental knowledge” stands for the level of competency of an individual concerning environmental conservation practices [31]. In a study carried out by Gilal et al. [95], it is alleged that when the individuals become more knowledgeable about the environment, their concerns about environmental problems increases as well. Kitzmuller [96] states that the theoretical and practical environmental knowledge level of an individual makes that person much more concerned about the problems regarding the environment. As a matter of fact, the engagement of individuals with pro-environmental behaviors and attitudes is affected by environmental knowledge either indirectly [96] or directly [97].

Although this field is highly significant and popular [98] and the relations between EMP, environmental knowledge, and environmentally responsible behavior have been extensively studied in a number of studies in tourism and hospitality literature [23,99–107], this study, along with previously studied variables, has sought to reveal the moderator effect of environmental commitment as well. Based on the findings and the results obtained at the end of the analyses, the research has provided informative consequences not only for tourism academicians and sector representatives but for individuals as well. As the outcomes of the research indicate, all of the hypotheses developed have been supported and in this sense the current study has presented logical parallelism with the previous studies in literature in terms of the relationships between the variables. In the context of the first hypothesis, EMP have a significant and direct effect on knowledge as in the studies conducted by Boiral [61], Fawehinmi et al. [22], Chan et al. [58], and Farrukh et al. [18]. The current study has revealed that environmental knowledge has a meaningful effect on the environmentally responsible behavior of the employees. In this regard, our study shows parallelism with the studies carried out in literature [18,31,36–38]. According to the result obtained regarding the third hypothesis of this research, environmental commitment has a moderator role in the effect of knowledge on responsible behavior. This finding differentiates the study from other studies in the literature since it is considered to contribute to fill the gap in literature because any similar study, which examines the moderator role of environmental commitment in the relations between research variables, has not been encountered so far. However, in literature there are a number of studies that analyzes the moderator role of environmental commitment in the relations of different dependent and independent variables [23,65].

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## References

1. Chan, E.S.; Wong, S.C. Motivations for ISO 14001 in the Hotel Industry. *Tour. Manag.* **2006**, *27*, 481–492. [CrossRef]
2. ISO-SURVEY. Explanatory Note and Overview on ISO Survey 2021 Results. 2021. Available online: <https://isotc.iso.org/livelink/livelink?func=ll&objId=18808772&objAction=browse&viewType=1> (accessed on 12 December 2022).
3. Taylor, S.R. Green Management: The next Competitive Weapon. *Futures* **1992**, *24*, 669–680. [CrossRef]
4. Hemenway, C.G.; Hale, G.J. Are You Ready for ISO 14000? *Quality* **1995**, *34*, 26.
5. Onditi, A. Green Marketing and Consumer Satisfaction. *J. Mark. Consum. Res.* **2016**, *29*, 37–45.
6. Perera, H.L.N.; Pushpanathan, A. Green Marketing Practices and Customer Satisfaction: A Study of Hotels Industry in Wennapuwa Divisional Secretariat. *Tour. Leis. Glob. Chang.* **2015**, *2*, 13–29.
7. Ham, S.; Han, H. Role of Perceived Fit with Hotels' Green Practices in the Formation of Customer Loyalty: Impact of Environmental Concerns. *Asia Pac. J. Tour. Res.* **2013**, *18*, 731–748. [CrossRef]
8. Dubihlela, J.; Ngxukumeshe, T. Eco-Friendly Retail Product Attributes, Customer Attributes and the Repurchase Intentions of South African Consumers. *Int. Bus. Econ. Res. J. IBER* **2016**, *15*, 163–174. [CrossRef]
9. Sinambela, E.A.; Azizah, E.I.; Putra, A.R. The Effect of Green Product, Green Price, and Distribution Channel on The Intention to Repurchasing Simple Face Wash. *J. Bus. Econ. Res. JBE* **2022**, *3*, 156–162.
10. Smith, K. Tourism and Climate Change. *Land Use Policy* **1990**, *7*, 176–180. [CrossRef]
11. Wall, G.; Badke, C. Tourism and Climate Change: An International Perspective. *J. Sustain. Tour.* **1994**, *2*, 193–203. [CrossRef]
12. Wall, G. Implications of Global Climate Change for Tourism and Recreation in Wetland Areas. *Clim. Chang.* **1998**, *40*, 371–389. [CrossRef]
13. Katircioglu, S.; Gokmenoglu, K.K.; Eren, B.M. Testing the Role of Tourism Development in Ecological Footprint Quality: Evidence from Top 10 Tourist Destinations. *Environ. Sci. Pollut. Res.* **2018**, *25*, 33611–33619. [CrossRef] [PubMed]
14. Eslami, S.; Khalifah, Z.; Mardani, A.; Streimikiene, D.; Han, H. Community Attachment, Tourism Impacts, Quality of Life and Residents' Support for Sustainable Tourism Development. *J. Travel Tour. Mark.* **2019**, *36*, 1061–1079. [CrossRef]
15. Lenzen, M.; Sun, Y.-Y.; Faturay, F.; Ting, Y.-P.; Geschke, A.; Malik, A. The Carbon Footprint of Global Tourism. *Nat. Clim. Chang.* **2018**, *8*, 522–528. [CrossRef]
16. Campos, C.; Laso, J.; Cristóbal, J.; Albertí, J.; Bala, A.; Fullana, M.; Fullana-i-Palmer, P.; Margallo, M.; Aldaco, R. Towards More Sustainable Tourism under a Carbon Footprint Approach: The Camino Lebaniego Case Study. *J. Clean. Prod.* **2022**, *369*, 133222. [CrossRef]
17. UNEP. United Nations Environment Program Report. 2018. Available online: <https://www.unenvironment.org/explore-topics/resource-efficiency/what-we-do/responsible-industry/tourism> (accessed on 10 October 2022).
18. Farrukh, M.; Ansari, N.; Raza, A.; Wu, Y.; Wang, H. Fostering Employee's pro-Environmental Behavior through Green Transformational Leadership, Green Human Resource Management and Environmental Knowledge. *Technol. Forecast. Soc. Chang.* **2022**, *179*, 121643. [CrossRef]
19. Nath, P.; Ramanathan, R. Environmental Management Practices, Environmental Technology Portfolio, and Environmental Commitment: A Content Analytic Approach for UK Manufacturing Firms. *Int. J. Prod. Econ.* **2016**, *171*, 427–437. [CrossRef]
20. Babiak, K.; Trendafilova, S. CSR and Environmental Responsibility: Motives and Pressures to Adopt Green Management Practices. *Corp. Soc. Responsib. Environ. Manag.* **2011**, *18*, 11–24. [CrossRef]
21. Wang, S.; Li, J.; Zhao, D. Institutional Pressures and Environmental Management Practices: The Moderating Effects of Environmental Commitment and Resource Availability. *Bus. Strategy Environ.* **2018**, *27*, 52–69. [CrossRef]
22. Fawehinmi, O.; Yusliza, M.Y.; Mohamad, Z.; Faezah, J.N.; Muhammad, Z. Assessing the Green Behaviour of Academics: The Role of Green Human Resource Management and Environmental Knowledge. *Int. J. Manpow.* **2020**, *41*, 879–900. [CrossRef]
23. He, X.; Cheng, J.; Swanson, S.R.; Su, L.; Hu, D. The Effect of Destination Employee Service Quality on Tourist Environmentally Responsible Behavior: A Moderated Mediation Model Incorporating Environmental Commitment, Destination Social Responsibility and Motive Attributions. *Tour. Manag.* **2022**, *90*, 104470. [CrossRef]
24. Ribeiro, N.; Gomes, D.R.; Ortega, E.; Gomes, G.P.; Semedo, A.S. The Impact of Green HRM on Employees' Eco-Friendly Behavior: The Mediator Role of Organizational Identification. *Sustainability* **2022**, *14*, 2897. [CrossRef]
25. Kim, A.; Kim, K.P.; Nguyen, T.H.D. The Green Accommodation Management Practices: The Role of Environmentally Responsible Tourist Markets in Understanding Tourists' pro-Environmental Behaviour. *Sustainability* **2021**, *13*, 2326. [CrossRef]
26. Han, H. Travelers' pro-Environmental Behavior in a Green Lodging Context: Converging Value-Belief-Norm Theory and the Theory of Planned Behavior. *Tour. Manag.* **2015**, *47*, 164–177. [CrossRef]
27. Kiatkawsin, K.; Han, H. Young Travelers' Intention to Behave pro-Environmentally: Merging the Value-Belief-Norm Theory and the Expectancy Theory. *Tour. Manag.* **2017**, *59*, 76–88. [CrossRef]
28. Sourvinou, A.; Filimonau, V. Planning for an Environmental Management Programme in a Luxury Hotel and Its Perceived Impact on Staff: An Exploratory Case Study. *J. Sustain. Tour.* **2018**, *26*, 649–667. [CrossRef]
29. Yen, C.-H.; Chen, C.-Y.; Teng, H.-Y. Perceptions of Environmental Management and Employee Job Attitudes in Hotel Firms. *J. Hum. Resour. Hosp. Tour.* **2013**, *12*, 155–174. [CrossRef]
30. Baughn, C.C.; Bodie, N.L.; McIntosh, J.C. Corporate Social and Environmental Responsibility in Asian Countries and Other Geographical Regions. *Corp. Soc. Responsib. Environ. Manag.* **2007**, *14*, 189–205. [CrossRef]

31. Cheng, T.-M.; Wu, H.C. How Do Environmental Knowledge, Environmental Sensitivity, and Place Attachment Affect Environmentally Responsible Behavior? An Integrated Approach for Sustainable Island Tourism. *J. Sustain. Tour.* **2015**, *23*, 557–576. [[CrossRef](#)]
32. Farmer, J.; Knapp, D.; Benton, G.M. An Elementary School Environmental Education Field Trip: Long-Term Effects on Ecological and Environmental Knowledge and Attitude Development. *J. Environ. Educ.* **2007**, *38*, 33–42. [[CrossRef](#)]
33. Otto, S.; Pensini, P. Nature-Based Environmental Education of Children: Environmental Knowledge and Connectedness to Nature, Together, Are Related to Ecological Behaviour. *Glob. Environ. Chang.* **2017**, *47*, 88–94. [[CrossRef](#)]
34. Afsar, B.; Maqsoom, A.; Shahjehan, A.; Afridi, S.A.; Nawaz, A.; Fazliani, H. Responsible Leadership and Employee's Proenvironmental Behavior: The Role of Organizational Commitment, Green Shared Vision, and Internal Environmental Locus of Control. *Corp. Soc. Responsib. Environ. Manag.* **2020**, *27*, 297–312. [[CrossRef](#)]
35. Safari, A.; Salehzadeh, R.; Panahi, R.; Abolghasemian, S. Multiple Pathways Linking Environmental Knowledge and Awareness to Employees' Green Behavior. *Corp. Gov. Int. J. Bus. Soc.* **2018**, *18*, 81–103. [[CrossRef](#)]
36. Carmi, N.; Arnon, S.; Orion, N. Transforming Environmental Knowledge into Behavior: The Mediating Role of Environmental Emotions. *J. Environ. Educ.* **2015**, *46*, 183–201. [[CrossRef](#)]
37. Munawar, S.; Yousaf, H.Q.; Ahmed, M.; Rehman, S. Effects of Green Human Resource Management on Green Innovation through Green Human Capital, Environmental Knowledge, and Managerial Environmental Concern. *J. Hosp. Tour. Manag.* **2022**, *52*, 141–150. [[CrossRef](#)]
38. Bashirun, S.N.; Noranee, S. Influence of Environmental Knowledge and Attitude on Employee Green Behaviour. *Int. J. Acad. Res. Bus. Soc. Sci.* **2020**, *10*, 937–946. [[CrossRef](#)]
39. Martínez-Martínez, A.; Navarro, J.G.C.; García-Pérez, A.; Moreno-Ponce, A. Environmental Knowledge Strategy: Driving Success of the Hospitality Industry. *Manag. Res. Rev.* **2019**, *42*, 662–680. [[CrossRef](#)]
40. Vaske, J.J.; Kobrin, K.C. Place Attachment and Environmentally Responsible Behavior. *J. Environ. Educ.* **2001**, *32*, 16–21. [[CrossRef](#)]
41. Ministry of Culture and Tourism. Accommodation Statistics. 2019. Available online: <https://yigm.ktb.gov.tr/TR-201120/konaklamaistatistikleri.html> (accessed on 10 October 2022).
42. Martín, J.M.M.; Aguilera, J.D.D.J.; Moreno, V.M. Impacts of Seasonality on Environmental Sustainability in the Tourism Sector Based on Destination Type: An Application to Spain's Andalusia Region. *Tour. Econ.* **2014**, *20*, 123–142. [[CrossRef](#)]
43. Keleş, H. Turizmin Yerel Halkın Yaşam Kalitesi, Memnuniyeti ve Turizme Desteği Üzerindeki Etkileri: Manavgat Örneği. Ph.D. Dissertation, Necmettin Erbakan University, Institute of Social Sciences, Tourism Management, Konya, Turkey, 2021.
44. Choi, H.C.; Murray, I. Resident Attitudes toward Sustainable Community Tourism. *J. Sustain. Tour.* **2010**, *18*, 575–594. [[CrossRef](#)]
45. Liu, H.; Wu, P.; Li, G. Do Crises Affect the Sustainability of the Economic Effects of Tourism? A Case Study of Hong Kong. *J. Sustain. Tour.* **2021**, 1–19. Available online: <https://www.tandfonline.com/doi/epdf/10.1080/09669582.2021.1966018?needAccess=true&role=button> (accessed on 13 October 2022).
46. Burbano, D.V.; Valdivieso, J.C.; Izurieta, J.C.; Meredith, T.C.; Ferri, D.Q. "Rethink and Reset" Tourism in the Galapagos Islands: Stakeholders' Views on the Sustainability of Tourism Development. *Ann. Tour. Res. Empir. Insights* **2022**, *3*, 100057. [[CrossRef](#)]
47. Hernandez-Maskivker, G.; Fornells, A.; Teixido-Navarro, F.; Pulido, J. Exploring Mass Tourism Impacts on Locals: A Comparative Analysis between Barcelona and Sevilla. *Eur. J. Tour. Res.* **2021**, *29*, 2908. [[CrossRef](#)]
48. Obrador, P. The End of Sustainability? A Note on the Changing Politics of Mass Tourism in the Balearic Islands. *J. Policy Res. Tour. Leis. Events* **2017**, *9*, 205–208. [[CrossRef](#)]
49. Mensah, I. Environmental Management Practices among Hotels in the Greater Accra Region. *Int. J. Hosp. Manag.* **2006**, *25*, 414–431. [[CrossRef](#)]
50. Tang, Y.H.; Amran, A.; Goh, Y.N. Environmental Management Practices of Hotels in Malaysia: Stakeholder Perspective. *Int. J. Tour. Res.* **2014**, *16*, 586–595. [[CrossRef](#)]
51. Tritto, A. Environmental Management Practices in Hotels at World Heritage Sites. *J. Sustain. Tour.* **2020**, *28*, 1911–1931. [[CrossRef](#)]
52. Samdin, Z.; Bakori, K.A.; Hassan, H. Factors Influencing Environmental Management Practices among Hotels in Malaysia. *Int. J. Humanit. Soc. Sci.* **2012**, *6*, 889–892.
53. Sánchez-Medina, P.S.; Díaz-Pichardo, R.; Cruz-Bautista, M. Stakeholder Influence on the Implementation of Environmental Management Practices in the Hotel Industry. *Int. J. Tour. Res.* **2016**, *18*, 387–398. [[CrossRef](#)]
54. Kim, H.J.; Park, J.; Wen, J. General Managers' Environmental Commitment and Environmental Involvement of Lodging Companies: The Mediating Role of Environmental Management Capabilities. *Int. J. Contemp. Hosp. Manag.* **2015**, *27*, 1499–1519. [[CrossRef](#)]
55. Oriade, A.; Osinaike, A.; Aduhene, K.; Wang, Y. Sustainability Awareness, Management Practices and Organisational Culture in Hotels: Evidence from Developing Countries. *Int. J. Hosp. Manag.* **2021**, *92*, 102699. [[CrossRef](#)]
56. Gil, M.A.; Jiménez, J.B.; Lorente, J.C. An Analysis of Environmental Management, Organizational Context and Performance of Spanish Hotels. *Omega* **2001**, *29*, 457–471.
57. Wu, M.-H.; Thongma, W.; Leelapattana, W.; Huang, M.-L. Impact of Hotel Employee's Green Awareness, Knowledge, and Skill on Hotel's Overall Performance. In *Advances in Hospitality and Leisure*; Emerald Group Publishing Limited: Bingley, UK, 2016.
58. Chan, E.S.; Hon, A.H.; Chan, W.; Okumus, F. What Drives Employees' Intentions to Implement Green Practices in Hotels? The Role of Knowledge, Awareness, Concern and Ecological Behaviour. *Int. J. Hosp. Manag.* **2014**, *40*, 20–28. [[CrossRef](#)]

59. Ahmad, A.; Thyagaraj, K.S. Consumer's Intention to Purchase Green Brands: The Roles of Environmental Concern, Environmental Knowledge and Self Expressive Benefits. *Curr. World Environ.* **2015**, *10*, 879–889. [CrossRef]
60. Cegarra-Navarro, J.-G.; Eldridge, S.; Martinez-Martinez, A. Managing Environmental Knowledge through Unlearning in Spanish Hospitality Companies. *J. Environ. Psychol.* **2010**, *30*, 249–257. [CrossRef]
61. Boiral, O. Tacit Knowledge and Environmental Management. *Long Range Plan.* **2002**, *35*, 291–317. [CrossRef]
62. Yayla, Ö.; Kendir, H.; Arslan, E. Moderator Role of Gender in the Effect of Environmental Commitment on Environmental Responsibility Behaviour in Hotel Employees. *Bus. Manag. Stud. Int. J.* **2020**, *8*, 3971–3990. [CrossRef]
63. Lee, T.H. How Recreation Involvement, Place Attachment and Conservation Commitment Affect Environmentally Responsible Behavior. *J. Sustain. Tour.* **2011**, *19*, 895–915. [CrossRef]
64. Patwary, A.K.; Rasoolimanesh, S.M.; Rabiul, M.K.; Aziz, R.C.; Hanafiah, M.H. Linking Environmental Knowledge, Environmental Responsibility, Altruism, and Intention toward Green Hotels through Ecocentric and Anthropocentric Attitudes. *Int. J. Contemp. Hosp. Manag.* **2022**, *34*, 4653–4673. [CrossRef]
65. Tariq, M.; Yasir, M.; Majid, A. Promoting Employees' Environmental Performance in Hospitality Industry through Environmental Attitude and Ecological Behavior: Moderating Role of Managers' Environmental Commitment. *Corp. Soc. Responsib. Environ. Manag.* **2020**, *27*, 3006–3017. [CrossRef]
66. Haron, S.A.; Paim, L.; Yahaya, N. Towards Sustainable Consumption: An Examination of Environmental Knowledge among Malaysians. *Int. J. Consum. Stud.* **2005**, *29*, 426–436. [CrossRef]
67. Smith-Sebasto, N.J.; D'Costa, A. Designing a Likert-Type Scale to Predict Environmentally Responsible Behavior in Undergraduate Students: A Multistep Process. *J. Environ. Educ.* **1995**, *27*, 14–20. [CrossRef]
68. Raineri, N.; Paillé, P. Linking Corporate Policy and Supervisory Support with Environmental Citizenship Behaviors: The Role of Employee Environmental Beliefs and Commitment. *J. Bus. Ethics* **2016**, *137*, 129–148. [CrossRef]
69. Brislin, R.W. Comparative Research Methodology: Cross-Cultural Studies. *Int. J. Psychol.* **1976**, *11*, 215–229. [CrossRef]
70. Culture and Tourism Ministry. Tourism Operation Licensed Facilities. 2022. Available online: <https://yigm.ktb.gov.tr/genel/turizmtesisleri.aspx> (accessed on 5 October 2022).
71. Turkish Statistical Institute. Visitor Numbers. 2022. Available online: <https://data.tuik.gov.tr/Bulten/Index?p=Turizm-Istatistikleri-IV.Ceyrek:-Ekim-Aralik-ve-Yillik,-2021-45785> (accessed on 5 October 2022).
72. Cooper, B.; Eva, N.; Fazlelahi, F.Z.; Newman, A.; Lee, A.; Obschonka, M. Addressing Common Method Variance and Endogeneity in Vocational Behavior Research: A Review of the Literature and Suggestions for Future Research. *J. Vocat. Behav.* **2020**, *121*, 103472. [CrossRef]
73. Podsakoff, N.P.; MacKenzie, S.B.; Lee, J.-Y.; Podsakoff, N.P. Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *J. Appl. Psychol.* **2003**, *88*, 879–903. [CrossRef] [PubMed]
74. Ozturk, A.; Karatepe, O.M. Frontline Hotel Employees' Psychological Capital, Trust in Organization, and Their Effects on Nonattendance Intentions, Absenteeism, and Creative Performance. *J. Hosp. Mark. Manag.* **2019**, *28*, 217–239. [CrossRef]
75. Hair, J.F.; Black, W.C.; Babin, B.J.; Anderson, R.E.; Tatham, R.L. *Multivariate Data Analysis*, 5th ed.; Prentice-Hall: Upper Saddle River, NJ, USA, 1998; Volume 5, pp. 207–219.
76. Kline, R.B. *Principles and Practice of Structural Equation Modeling*; Guilford publications: New York, NY, USA, 2015.
77. Hayes, A.F. PROCESS: A Versatile Computational Tool for Observed Variable Mediation, Moderation, and Conditional Process Modeling. 2012. Available online: <http://www.afhayes.com/public/process2012.pdf> (accessed on 10 October 2022).
78. Çiçek, D.; Zencir, E.; Kozak, N. Women in Turkish Tourism. *J. Hosp. Tour. Manag.* **2017**, *31*, 228–234. [CrossRef]
79. Anderson, J.C.; Gerbing, D.W. Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychol. Bull.* **1988**, *103*, 411. [CrossRef]
80. Nunnally, J.C. *Psychometric Theory*, 2nd ed.; McGraw: New York, NY, USA, 1978.
81. Hair, J.F., Jr.; Matthews, L.M.; Matthews, R.L.; Sarstedt, M. PLS-SEM or CB-SEM: Updated Guidelines on Which Method to Use. *Int. J. Multivar. Data Anal.* **2017**, *1*, 107–123. [CrossRef]
82. Fornell, C.; Larcker, D.F. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *J. Mark. Res.* **1981**, *18*, 39–50. [CrossRef]
83. Chan, W.W. Environmental Measures for Hotels' Environmental Management Systems: ISO 14001. *Int. J. Contemp. Hosp. Manag.* **2009**, *21*, 542–560. [CrossRef]
84. Van der Duim, R.; Van Marwijk, R. The Implementation of an Environmental Management System for Dutch Tour Operators: An Actor-Network Perspective. *J. Sustain. Tour.* **2006**, *14*, 449–472. [CrossRef]
85. Chan, W.W.; Ho, K. Hotels' Environmental Management Systems (ISO 14001): Creative Financing Strategy. *Int. J. Contemp. Hosp. Manag.* **2006**, *18*, 302–316. [CrossRef]
86. Hsiao, T.-Y.; Chuang, C.-M.; Kuo, N.-W.; Yu, S.M.-F. Establishing Attributes of an Environmental Management System for Green Hotel Evaluation. *Int. J. Hosp. Manag.* **2014**, *36*, 197–208. [CrossRef]
87. Jovicic, D. The Environmental Management Systems and Contemporary Tourism Development. *Tourismos* **2011**, *6*, 377–391.
88. Fuentes-Moraleda, L.; Lafuente-Ibáñez, C.; Muñoz-Mazón, A.; Villacé-Molinero, T. Willingness to Pay More to Stay at a Boutique Hotel with an Environmental Management System. A Preliminary Study in Spain. *Sustainability* **2019**, *11*, 5134. [CrossRef]
89. Kang, K.H.; Stein, L.; Heo, C.Y.H.; Lee, S. Views on Environmentalism and Consumers' Willingness to Pay for Environmental Sustainability in the Hotel Industry. *Int. J. Hosp. Manag.* **2012**, *31*, 564–572. [CrossRef]



90. Tasci, A.D.; Khalilzadeh, J.; Pizam, A.; Wang, Y. Network Analysis of the Sensory Capital of a Destination Brand. *J. Destin. Mark. Manag.* **2018**, *9*, 112–125. [[CrossRef](#)]
91. Pham, N.T.; Tučková, Z.; Jabbour, C.J.C. Greening the Hospitality Industry: How Do Green Human Resource Management Practices Influence Organizational Citizenship Behavior in Hotels? A Mixed-Methods Study. *Tour. Manag.* **2019**, *72*, 386–399. [[CrossRef](#)]
92. Barboza, L.G.A.; Vethaak, A.D.; Lavorante, B.R.; Lundebye, A.-K.; Guilhermino, L. Marine Microplastic Debris: An Emerging Issue for Food Security, Food Safety and Human Health. *Mar. Pollut. Bull.* **2018**, *133*, 336–348. [[CrossRef](#)]
93. Neto, J.G.B.; Rodrigues, F.L.; Ortega, I.; Rodrigues, L.d.S.; Lacerda, A.L.; Coletto, J.L.; Kessler, F.; Cardoso, L.G.; Madureira, L.; Proietti, M.C. Ingestion of Plastic Debris by Commercially Important Marine Fish in Southeast-South Brazil. *Environ. Pollut.* **2020**, *267*, 115508. [[CrossRef](#)] [[PubMed](#)]
94. Wikhamn, W. Innovation, Sustainable HRM and Customer Satisfaction. *Int. J. Hosp. Manag.* **2019**, *76*, 102–110. [[CrossRef](#)]
95. Gilal, F.G.; Ashraf, Z.; Gilal, N.G.; Gilal, R.G.; Channa, N.A. Promoting environmental performance through green human resource management practices in higher education institutions: A moderated mediation model. *Corp. Soc. Responsib. Environ. Manag.* **2019**, *26*, 1579–1590. [[CrossRef](#)]
96. Kitzmüller, C. Environmental Knowledge and Willingness to Change Personal Behaviour. An American-Austrian Comparison of Energy Use. *University of Salzburg*. 2009. Available online: <https://www.uni-muenster.de/imperia/md/content/transpose/publikationen/kitzmueller.pdf> (accessed on 13 October 2022).
97. Liobikienė, G.; Poškus, M.S. The Importance of Environmental Knowledge for Private and Public Sphere Pro-Environmental Behavior: Modifying the Value-Belief-Norm Theory. *Sustainability* **2019**, *11*, 3324. [[CrossRef](#)]
98. Daily, B.F.; Huang, S. Achieving Sustainability through Attention to Human Resource Factors in Environmental Management. *Int. J. Oper. Prod. Manag.* **2001**, *21*, 1539–1552. [[CrossRef](#)]
99. Lin, M.-T.B.; Zhu, D.; Liu, C.; Kim, P.B. A Systematic Review of Empirical Studies of Pro-Environmental Behavior in Hospitality and Tourism Contexts. *Int. J. Contemp. Hosp. Manag.* **2022**, *34*, 3982–4006.
100. Tuan, L.T. Promoting Employee Green Behavior in the Chinese and Vietnamese Hospitality Contexts: The Roles of Green Human Resource Management Practices and Responsible Leadership. *Int. J. Hosp. Manag.* **2022**, *105*, 103253. [[CrossRef](#)]
101. Dlamini, S.; Tesfamichael, S.G.; Mokhele, T. Socio-Demographic Determinants of Environmental Attitudes, Perceptions, Place Attachment, and Environmentally Responsible Behaviour in Gauteng Province, South Africa. *Sci. Afr.* **2021**, *12*, e00772. [[CrossRef](#)]
102. Cabral, C.; Jabbour, C.J.C. Understanding the Human Side of Green Hospitality Management. *Int. J. Hosp. Manag.* **2020**, *88*, 102389. [[CrossRef](#)]
103. Stylos, N.; Koroneos, C.; Roset, J.; González-Sánchez, C.; Xydīs, G.; Muñoz, F.S. Exergy as an Indicator for Enhancing Evaluation of Environmental Management Performance in the Hospitality Industry. *J. Clean. Prod.* **2018**, *198*, 1503–1514. [[CrossRef](#)]
104. Arshad, M.; Abid, G.; Contreras, F.; Elahi, N.S.; Ahmed, S. Greening the Hospitality Sector: Employees' Environmental and Job Attitudes Predict Ecological Behavior and Satisfaction. *Int. J. Hosp. Manag.* **2022**, *102*, 103173. [[CrossRef](#)]
105. Fenitra, R.M.; Premananto, G.C.; Sedera, R.M.H.; Abbas, A.; Laila, N. Environmentally Responsible Behavior and Knowledge-Belief-Norm in the Tourism Context: The Moderating Role of Types of Destinations. *Int. J. Geoherit. Park.* **2022**, *10*, 273–288. [[CrossRef](#)]
106. Nisar, Q.A.; Haider, S.; Ali, F.; Jamshed, S.; Ryu, K.; Gill, S.S. Green Human Resource Management Practices and Environmental Performance in Malaysian Green Hotels: The Role of Green Intellectual Capital and pro-Environmental Behavior. *J. Clean. Prod.* **2021**, *311*, 127504. [[CrossRef](#)]
107. Legrand, W. Hospitality Industry Environmental Management Systems and Strategies. In *Sustainability in the Hospitality Industry*; Routledge: Oxfordshire, UK, 2010; pp. 159–172.

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