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# Measuring Environmental Responsible Behavior Through Experience Quality, Perceived Value, and Tourist Satisfaction From the Perspectives of Tourists in Natural Sites

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## Abstract

This study aims to examine environmentally responsible behavior through experience quality, perceived value, and tourist satisfaction while explaining responsible behavior of tourists towards the environment in the natural sites of Madhya Pradesh, India. The theoretical framework proposed is based on literature. Structural equation modeling (SEM) was employed using partial least squares (PLS) 3.0 software to test the model fit and hypotheses. The data was collected using random sampling from 131 tourists at these natural sites who participated in the survey through a questionnaire. The analysis showed a good fit for the environmentally responsible behavior study model. The results suggested that experience quality and perceived value are significantly associated with tourist satisfaction, and experience quality significantly impacts the perceived value. Furthermore, environmentally responsible behavior depends on the satisfaction of the tourists. India is too large to include all areas, and this study was limited to only four natural sites situated in the Indian state of Madhya Pradesh. The results thus cannot be generalized. Responsible environmental behavior can be promoted through tourist satisfaction with the natural sites. Those people responsible for marketing the natural sites must learn and adopt strategies that effectively help them communicate different dimensions of experience quality and perceived value to the tourists.

**Keywords:** nature tourism, eco-tourism, quantitative research, nature image, destination attraction, India

## Introduction

Air pollution is a significant environmental risk to health, and about 70 Lakh people die globally due to air pollution—while 90% of the population breathe air with high pollutants (World Health Organization, 2021). The developing countries, specifically India, are no exception. As the world's second-highest populated country, India has seen rapid urbanization and a lack of control on pollution in the degrading environment, greenhouse emissions, and many other health issues. Of

287 cities surveyed in India, 231 reported a high level of air pollution (Greenpeace, 2020). This poses a danger to the nation's long-term socioeconomic prosperity. One solution to these issues is found in environmentally responsible behavior. However, those working in tourism and throughout society must become conscious of this to ensure good environmental practices and the preservation of natural resources (Buckley, 2018; Thapa & Lee, 2017). Many researchers have applied responsible environmental behavior to enhance destination sustainability (Carvache-Franco et al., 2020; Handriana & Ambara, 2016; Ma et al., 2018; Su et al., 2018). Park and Park (2020) analyzed tourist environmental perceptions and suggested three categories of images as *Useful*, *Healthy*, and *Spontaneous* in encouraging people's positive environmental perceptions. The previous studies also suggested that an environmentally friendly community develops with the help of adequately managed nature-based tourism (Ma et al., 2018; Su et al., 2018). Despite this, tourists do not follow the guidelines and regulations at natural sites and, consequently, place themselves and others at risk (Randle & Hoye, 2016). The natural sites are degrading rapidly due to improper management of the packed crowds of visitors. This situation is particularly apparent during holidays in India, such as summer vacations or festival vacations. Thus, fostering responsible environmental behavior among natural sites should be encouraged while mitigating the harmful actions of visitors to any destination.

Further, there is no consensus on whether older or younger people are more concerned about the environment. The results from the existing literature are mixed. Some studies consider the younger generation more responsible towards the environment (Xiao & Dunlap, 2007), while others consider the older generation more responsible for the environment (Liu et al., 2014). Apart from these two opinions, other previous studies suggested that age and pro-environment behavior have no significant connection (Leary et al., 2017; Strapko et al., 2016). The existing empirical studies on the hospitality industry reported that the prime focus is on maximum profit with significantly less concern towards the environment by the business organizations (Blackstock et al., 2008; Bramwell et al., 2008). Travelers prefer going to natural sites and, therefore, the demand for these sites is increasing day by day. Increasing the number of visitors has placed more emphasis on the managers maintaining the facilities and biodiversity of these places (Ma et al., 2009; Xu & Fox, 2014) because environmental degradation is often considered man-made (Halpenny, 2010). Therefore, to provide quality experiences to tourists, it is essential to promote environmentally responsible behavior among tourists to minimize the degradation of nature and the environment.

Furthermore, most of the previous studies have focused on place attachment, environmental knowledge (Cheng & Wu, 2015; Ramkissoon & Mavondo, 2017), personality traits (Zhao et al., 2018) and satisfaction (Ramkissoon & Mavondo, 2017) to show the relationships with responsible environmental behavior. The relationship between tourist satisfaction and environmentally responsible behavior is still nascent, ambiguous, and contradictory. Halpenny (2010) suggested that satisfaction has no impact on pro-environmental behavioral, while Ramkissoon and Mavondo (2015) discovered a favorable association between tourist satisfaction and the inclination to behave in an environmentally sustainable manner. These conflicting results raise concerns about the environmental issues endangering natural locations and necessitate a more complete assessment of the environmental behavior of tourists. Therefore, this study answered the following research questions:

- Do experience quality and perceived value impact tourist satisfaction?
- Does experience quality influence the perceived value of the tourists?

- How does tourist satisfaction influence the environmentally responsible behavior (ERB) of tourists?

The article is organized into five sections. Section 2 describes the literature review, Section 3 contains the research methodology, and Section 4 presents the results of the analysis and findings. In Section 5, a final discussion and conclusion is presented followed by a review of the limitations and future scope of the research.

## **Literature Review and Proposed Hypotheses**

The term ERB consists of a broader perspective of activities, and it is most commonly used by different names such as pro-environmental behavior, resource-efficient, and ecologically friendly behavior in the research (Miller et al., 2015). The authors used the term ERB in the present work. Today's time brings the attention of many scholars toward responsible environmental behavior, as shown by the existing studies (Alonso-Vazquez et al., 2019; Cheng et al., 2019; Handriana & Ambara, 2016; Kiatkawsin & Han, 2017; Su et al., 2018). The previous studies suggested that the behavior of tourists depends on the experience quality and can be changed (Chiu et al., 2014; Handriana & Ambara, 2016). Hence the study intends to examine the results of previous studies in the Indian context. The study proposed a conceptual framework based on experience quality, perceived value, satisfaction, and environmentally responsible behavior, as shown in figure 1. In the next section, each construct is described in detail and proposes the hypothesis.

### ***Experience Quality and Satisfaction***

Experience quality is a perceived judgment about the experience of an individual tourist. Experience quality is a multi-dimensional construct used to measure tourists' perceptions of it (Fernandes & Cruz, 2016; Sun et al., 2019; Wu & Li, 2017). There were several previous studies conducted to gain insight regarding experience quality, such as destination environment (Chow et al., 2019; Fernandes & Cruz, 2016), safety & security (Wu et al; 2018) and accommodation (Fakfare & Lee, 2019). Earlier studies have shown that the quality of an experience has a direct impact on perceived value (Habibi & Rasoolimanesh, 2021; Wu et al., 2017). Similarly, past research has shown that consumer satisfaction and perceived value are strongly influenced by the quality of the experience (Wu & Li, 2017). Tourists always travel to a place to have a wonderful time on their trip. Nowadays, many businesses augment their current goods and services by embracing the notion of quality of experience as a critical means of creating unique vacation experiences (Habibi et al., 2018).

- **H1:** Experience quality and perceived value have a significant relationship.

### ***Experience Quality and Satisfaction***

The tourists' satisfaction/dissatisfaction depends on the experience gained from the particular destination and interaction (Cong, 2016; Tosun et al., 2015). It is always possible that tourists may interact with local people, or local people may interact with tourists, and the quality of the experience depends on the behavior of local people. This experience is developed throughout the visit (Wu et al., 2018). It was also found that personal interaction between employees and tourists impacts the tourists' experience (Barnes et al., 2020). The previous studies suggest that good

experience quality always derives satisfaction (Klaus & Maklan, 2013; Wu & Li, 2017). Thus, experience quality is conducive to a satisfactory visit experience. The previous studies found that the tourists feel dissatisfied if the experience is below their perceived expectations.

A cognitive reaction to the service experience is perceived value. According to a prior study, the quality of the trip had a substantial impact on satisfaction and perceived value (Handriana & Ambara, 2016). Furthermore, the quality of the experience has an influence on the visitors' perceived value and contentment (Başarangil, 2018; Habibi & Rasoolimanesh, 2021; Suhartanto et al., 2020; Sun et al., 2019; Wu & Li, 2017). Thus, we propose the following:

- **H2:** Experience quality and satisfaction have a significant relationship.

### ***Perceived Value and Satisfaction***

Perceived value can be defined as *a deal between the anticipated benefits and anticipated cost* (Lovelock & Wirtz, 2011). The perceived value of a service is a difference between benefits and the cost (tangible/intangible) incurred to obtain that service. The marketing literature widely uses perceived value and indicates that high perceived value towards a particular product/service brings higher satisfaction (Li et al., 2012; Vera, 2015; Yoo & Park, 2016). Perceived value is considered a multi-dimensional construct in the literature (Ahn, 2020; Papista et al., 2018). In the case of a young generation, perceived value is measured in terms of status. The previous study suggests that status value is more critical for young customers than older customers. The young generations consider place experiences to represent themselves to others (Ahn, 2020). The existing literature attempted to show the relationship between perceived value and satisfaction (Hallak et al., 2018; Lee et al., 2019; Li, 2021; Prebensen et al., 2016; Suhartanto et al., 2020). The perceived value differs from tourist to tourist. Hallak et al. (2018) presented three items scale to measure the value. The tourists' physical, mental, or emotional engagement with tourism activity makes the experience memorable (Andrades & Dimanche, 2014). The higher the perceived value, the higher the level of contentment with a location. Previous research indicates that customer perceived value influences tourist satisfaction (Hallak et al., 2018; Lee et al., 2019; Prebensen et al., 2016; Sun et al., 2019) and is seen as an important indicator/determinant of satisfaction (Suhartanto et al., 2020; Wu & Li, 2017). Thus, we propose the following:

- **H3:** Perceived value and satisfaction has a significant relationship.

### ***Satisfaction and ERB***

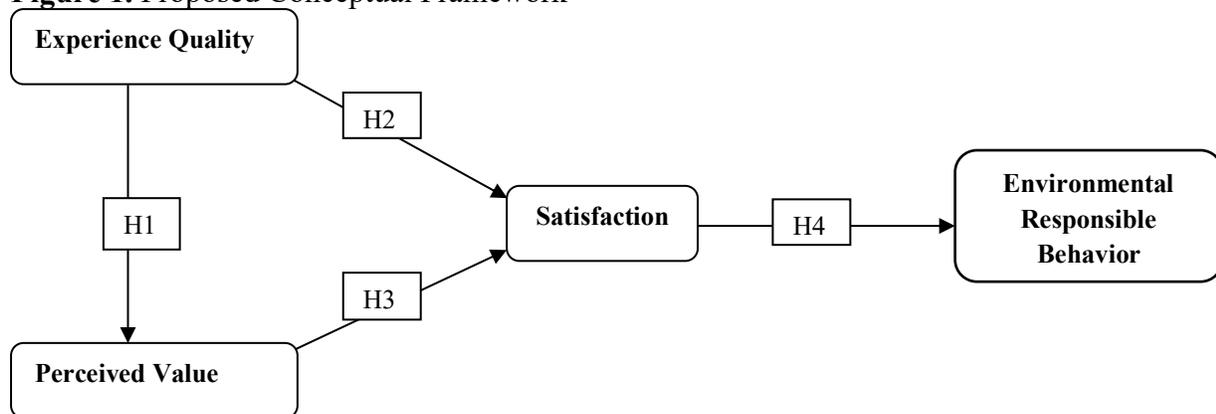
Customer satisfaction has been widely studied in marketing and is well established to influence product performance. Oliver (1993) defines satisfaction as *the cognitive difference between expectations and actual performance after consumer purchases*. Research shows that tourists' loyalty is highly influenced by product satisfaction (Akhoondnejad, 2016; Melo et al., 2017). ERB in tourism is based on an awareness of sustainability of the environment and ethics for all stakeholders. When visitors are happy with their visit, they will have a better knowledge of the value of the environment, which will aid in the promotion of ecologically responsible behavior (Chiu et al., 2014; Mohammed et al., 2018). In environment-friendly behavior, tourists expect that they will be responsible towards nature, maintain cleanliness, not harm any living organisms, fauna, and flora, etc. (Chiu et al., 2014). This keeps tourists attracted to the destination as tourist

gets fascinated to visit if the quality is good (Arora & Lata, 2020; Kumar & Lata, 2021). Moreover, the environment-friendly behavior toward natural sites should attempt to bring a high level of tourist satisfaction (Chow et al., 2019; Handriana & Ambara, 2016). The environment-friendly attitude and behavior positively correlate because a good attitude leads to good behavior (Cheng et al., 2019; Grønhøj & Thøgersen, 2017; Ma et al., 2018). Satisfaction has a positive and significant impact on environment-friendly behavior (Ambara, 2016; Chow et al., 2019; Handriana et al., 2017; Su et al., 2018). Thus, we propose the following:

- **H4:** Tourist satisfaction and ERB has a significant relationship.

Thus, based on the above discussion, the conceptual framework has been proposed, as shown in Figure 1 and recent studies on environmentally responsible behavior presented in Table 1.

**Figure 1.** Proposed Conceptual Framework



**Table 1.** Selected Previous Studies on Environmental Responsible Behavior (ERB) in Tourism

Author(s) & Year	Research Intention	Major Finding	Tool of Analysis	Approach	Respondent
Cheng & Wu, 2015	The objective of the study was to determine the tourists' environmental knowledge, and their sensitivity.	The findings suggest that environment knowledge is positively associated with environmental sensitivity and tourists show more responsible behavior towards environment. Further, it was also found that place attachment and ERB associated significantly.	SEM-AMOS	Survey	Taiwan
Du Preez and Heath, 2016	The study aims to explore the relationship among place attachment, subculture identification and subjective norms with ERB.	The findings indicate that place attachment, subculture identification and subjective norms have significant relationship with ERB. Further, mountain bike spectators displayed higher levels of responsible behavior than road race.	ANCOVA (Analysis of covariance)	Survey	South Africa
Handriana & Ambara, 2016	The study aims to examine the ERB in visiting eco-tourism sites.	The findings suggest that tourists' satisfaction influenced the ERB positively. The quality of trip influenced the satisfaction and perceived value significantly.	SEM	Survey	Indonesia
Kiatkawsin and Han, 2017	The objective of the study attempts to determine the pro-environmental behavior with the help of expectancy theory after merging value belief norm theory.	The findings indicate that variables of the expectancy theory strongly influence pro-environmental personal norms, which in turn influences pro-environmental intentions.	SEM	Survey	South Korea

<b>Author(s) &amp; Year</b>	<b>Research Intention</b>	<b>Major Finding</b>	<b>Tool of Analysis</b>	<b>Approach</b>	<b>Respondent</b>
Poudel & Nyaupane, 2017	The study aims to explore the factors associated with tourists ERB with reasoned action method.	The findings show that environmental attitude, subjective norm, perceived behavioral control impact the ERB with varying degrees.	Regression Analysis	Survey	Nepal
Ramkisson & Mavondo, 2017	The study aims to determine the relationship among place satisfaction, place attachment on ERB in two countries.	The study indicates that place satisfaction and environment responsible behavior associate significantly in both the countries. Further, it was also found that place satisfaction has negative impact on place social bonding.	SEM	Survey	Canada and Australia
Ma et al., 2018	The objective of the study is to determine the relationship between self-determined motivation and ERB and attitude.	The findings indicate that self-determined motivation and ERB and attitude have significant and positive relationship. this shows that more the motivation, more the tourists responsible towards environment	Linear regression	Survey	China
Pan & Liu, 2018	The purpose of this study was to examine the emotional reflection, its antecedents, and its impact on Tourists' ERB.	The findings indicate that satisfaction indirectly influenced the ERB of the tourists. The study shows that when tourists are more satisfied with a destination, they are more responsible towards the environment.	SEM	Survey	China
Su, Huang, & Pearce, 2018	The study aims to develop and examine an integrated theoretical framework and assess the impact of destination social responsibility on satisfaction and positive and negative impact and subsequently on ERB.	The findings indicate that community satisfaction significantly and positively impact the ERB. The study also indicates that perceived positive tourism and ERB have positive and significant relationship.	SEM-AMOS	Survey	China
Alonso-Vazquez et al., 2019	The objective of the study is to determine the impact of place and festival attachment on ERB.	The findings indicate that place attachment strongly impact the ERB on site. Further, the place identity and festival identity have highest impact on ERB.	Multiple linear regression analyses	Mixed method – survey and interviews	Australia
Cheng et al., 2019	The objective of the study was to examine the relationship among community participation, sustainable tourism development attitudes, and ERB.	The findings indicate that more assertive the sustainable tourism development attitude, stronger the responsible behavior towards environment. The study also found that community active participation depends on the attitude of sustainable tourism development.	SEM-AMOS	Survey	Taiwan
Chow et al., 2019	The purpose of the study was to explore the link between tourists' place attachment and their satisfaction and environmentally responsible behavioral intention.	The study found that place dependence and place identity are positively correlated with the satisfaction and environmentally responsible behavioral. The study also indicates that more satisfied tourists show higher responsible behavior towards environment.	Multiple regression	Survey	China

## Methods

This research was carried out between September – October 2019 in four natural sites of Madhya Pradesh (Samardha Jungle Camp, Bedaghat Jabalpur, Pachmarhi and Bhimbetka). The questionnaires were based on a five-point Likert scale ranging from 1 strongly disagree to 5 strongly agree, designed as a data collection tool. The items were taken from the previous studies. The items and their sources are shown in Table 2.

**Table 2.** Constructs, Items, and References

Construct	Item	Reference
Experience Quality (EQ)	EQ1: This natural site is visually appealing	Su et al., 2016
	EQ2: My booking was handled efficiently	Lu & Stepchenkova, 2012
	EQ3: Employees responded promptly to my requests	
	EQ4: This natural site provided a safe environment	
	EQ5: Charges on my account were clearly explained	
	EQ6: The site seeing was very pleasant	
Perceived Value (PV)	PV1: This nature-based travel experience represents <i>value for money</i> .	Chiu, Lee, & Chen, 2014
	PV2: The service fees at this place are reasonable	
	PV3: This natural place has an acceptable standard of quality	
	PV4: The place makes me feel adventurous	
	PV5: The place attraction makes me happy	
	PV6: The place provides an authentic experience	
Satisfaction (S)	S1: I am happy with the maintenance of the natural environment.	Meng et al., 2008
	S2: I am satisfied with the tour guide's interpretation.	Chiu et al., 2014
	S3: The natural sites travel experience is a pleasure.	
	S4: I am satisfied with the wildlife appreciation.	
	S5: I am satisfied with doing recreational activities in the jungle	
	S6: I got the value for my money.	
Environmental Responsible Behavior (ERB)	ERB1: I accept the control policy not to enter the restricted area.	Chiu et al., 2014
	ERB2: I help to maintain the local environmental quality.	
	ERB3: I report to the site administration any environmental pollution or destruction.	
	ERB4: I spend my money in local area of these natural places.	
	ERB5: I help other tourists to learn about the natural sites.	
	ERB6: I try not to disrupt the fauna and flora during my travel.	

The questionnaire was directly administered to the respondents at these natural sites. Before this, the respondents in each location briefly introduced the study. In all four sites, a total of 300 surveys were delivered to various persons, with 140 completed questionnaires returned. Nine surveys were rejected due to missing information. As a result, the ultimate sample size is 131. According to Hair et al. (2014), a PLS model's minimum sample size should be 10 times the most significant number of formative indicators used to quantify one construct. Also, the sample size is justifiable because it is above the 5:1 ratio between sample and number of items as recommended in the previous studies (Hair et al., 1998; Klein, 2011). The data collected have been analyzed through the statistical software SPSS and PLS 3.0. The respondent's profile is shown in Table 3. From Table 3, it is clear that male respondents are more and about double the female respondents. This variation's main reason was that most female tourists hesitated to participate in the survey. Table 3 also shows that about 75% of respondents belong to 15-35 age bracket. It means young people/couples and the children with their families prefer to visit the natural sites for fun/enjoyment.

Similarly, Table 3 shows that most of the respondents have income above 20000/month. This shows that the higher-income people have good disposable income for excursions and the reason to visit. Similarly, the married respondents were more than the unmarried. There are fewer unmarried respondents because they prefer other places (i.e., Cinema, movies) to visit in place of natural sites.

**Table 3.** Demographic Profile of the Respondents

Demographic Characteris	Frequency	Percentage
<b>Gender</b>		
Male	86	65.65
Female	45	34.35
<b>Age</b>		
15-25	39	29.77
26-35	59	45.04
36-45	16	12.21
46-55	12	9.16
Above 55	5	3.82
<b>Educational Level</b>		
Below graduate	37	28.24
Graduate	47	35.88
Post-graduate	27	20.61
Above Post-graduate	20	15.27
<b>Profession</b>		
Students	24	18.32
Government Job	41	31.30
Private Job	36	27.48
Business	30	22.90
<b>Marital Status</b>		
Married	74	56.49
Unmarried	57	43.51
<b>Monthly Income</b>		
Below 10000	27	20.61
10000-20000	38	29.01
Above 20000	66	50.38

## Results, Analysis and Findings

The data was analyzed using partial least squares structural equation modeling (PLS-SEM). PLS-SEM is one of the greatest techniques for survey-based research since it can be used with small sample sizes and data that is not necessary to be normally distributed (Hair et al., 2011). Model testing in PLS is done in two steps (Chin, 2010). The first stage, known as the measurement model, shows the constructs' validity and reliability, while the second stage, known as the structured model, shows the relationship between a theoretical concept and the constructs (Ringle et al., 2010). The authors started with the PLS algorithm to test the factor loadings.

### *Measurement Model*

This model is used to examine the reliability and validity of the model constructs (Hulland, 1999). Initially, factor loadings for each factor were determined by running the PLS algorithm. The accepted factor loading has been decided at .5 for this study, and any factor that is less than .5 has been dropped. The PLS algorithm runs until all the items have loadings above or equal to .5 (Chin, 1998). Once all the item loadings are achieved above or equal to .5, the measurement model is reliable.

Harman's one-factor test was employed in the study to investigate prevalent bias. The outcome indicated no common component. The first component accounted for just 33.6% of the variation, putting an end to typical method bias concerns (Podsakoff et al., 2003). This assessment indicates that there is no major common bias in the study because it is less than 50%.

### ***Convergent Validity***

Convergent validity is tested and verified internal consistency measurements. Cronbach's alpha, composite reliability, and average variance extracted are used to assess convergent validity, which assures that items of constructs that should theoretically be connected are only related to that construct and not to the other construct (Fornell & Larcker, 1981). The composite reliability and Cronbach's alpha threshold values are considered .70, and average variance extracted must be more than .5 (Hair et al., 2011). Table 4 shows that all of the values are based on the threshold values.

**Table 4.** Convergent Validity

Construct	Item	Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Experience Quality	EQ1	.624	.754	.830	.512
	EQ2	.693			
	EQ3	.630			
	EQ4	.743			
	EQ5	.758			
	EQ6	.564			
Environmental Responsible Behavior (ERB)	ERB1	.755	.759	.835	.505
	ERB2	.793			
	ERB3	.695			
	ERB4	.693			
	ERB5	.601			
Perceived Value	PV1	.736	.810	.862	.511
	PV2	.723			
	PV3	.764			
	PV4	.699			
	PV5	.709			
	PV6	.652			
Satisfaction	S1	.585	.751	.834	.503
	S2	.746			
	S3	.720			
	S4	.766			
	S5	.714			

### ***Discriminant Validity***

To assess the model's discriminant validity, the Hetrotrait-Monotrait ratio, which suggests a threshold value of .85, was utilized (Henseler et al., 2015). For a good discriminant value, all values should be less than .85. Table 5 displays the results, which demonstrate discriminant validity.

**Table 5.** Discriminant Validity

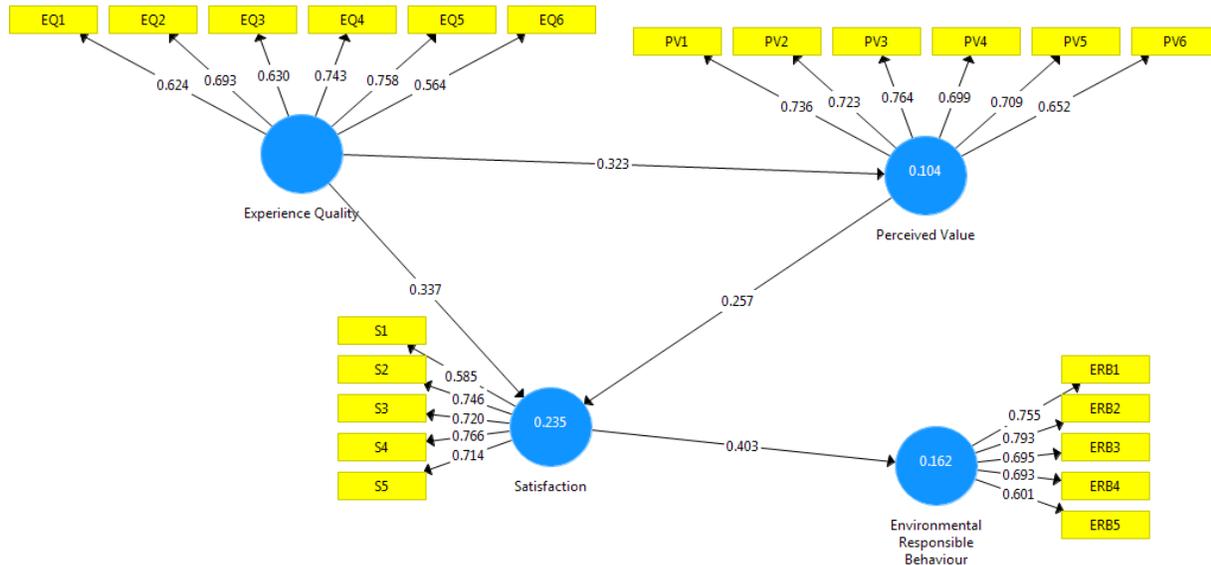
Construct	ERB	Experience Quality	Perceived Value	Satisfaction
Environmental Responsible Behavior (ERB)				
Experience Quality	.400			
Perceived Value	.260	.397		
Satisfaction	.500	.544	.449	

### ***The Structural Model***

The structural model examines the relationship between independent and dependent variables and model validity concerning variance (Hulland, 1999). The model capability is explained by the coefficient of determination ( $R^2$ ) and path coefficient ( $\beta$ ). The independent and dependent variable relationship strength is examined through  $\beta$  values (Chin, 1998). The  $R^2$  shows the percentage of change independent variable due to independent variables. The model is considered substantial =

.75, moderate = .50 and weak = .25 based on the  $R^2$  value of the dependent variable (Hair et al., 2014). The analysis of data shows that the  $R^2$  value for satisfaction is .235. It means the experience quality and perceived value bring 23.5% of the variance in tourists' satisfaction as shown in Figure 2.

**Figure 2. Path Model**

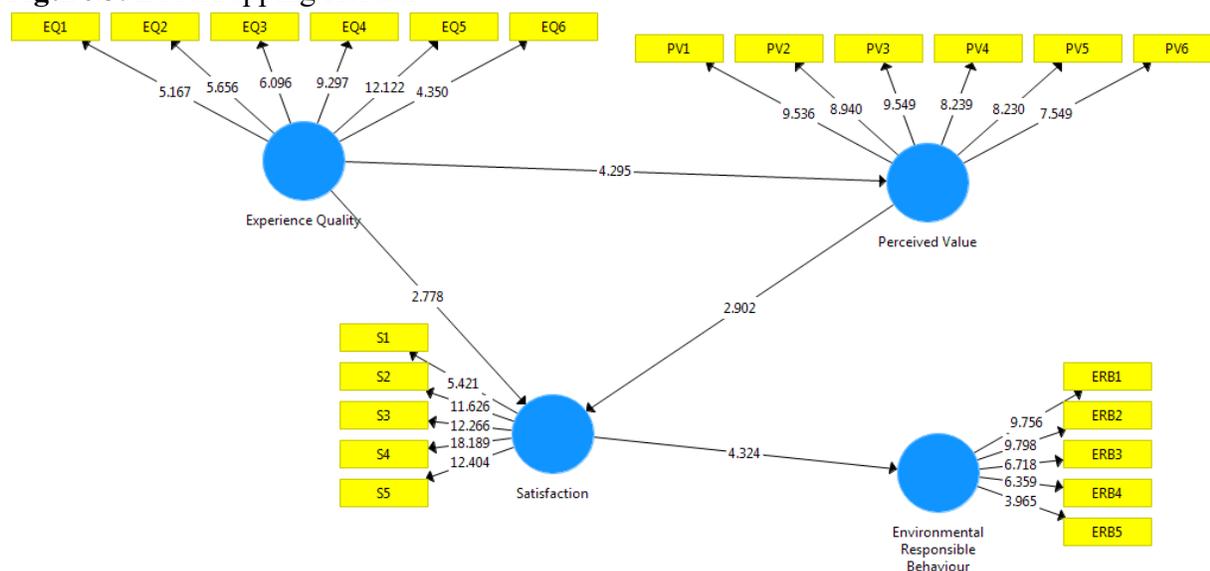


Moreover, the  $R^2$  value for ERB is .162. It means tourists' satisfaction brings a 16.2% variance in environmentally responsible behavior. The  $\beta$  value indicates the strength of the relationship between independent and dependent variables. This signifies that the highest  $\beta$  value suggests a strong relationship between independent and dependent variables, while the lowest value shows a weak relationship. The results are shown in Table 6. Table 6 shows that satisfaction and environmentally responsible behavior have the highest  $\beta$  value while perceived value has the lowest  $\beta$  value. Thus, tourists' satisfaction is the most crucial factor in making tourists responsible for the environment. Experience quality and satisfaction have the highest  $\beta$  value for tourists' satisfaction. This indicates that experience quality is more important than perceived value for the tourist's satisfaction. The  $t$  value and degree of significance were also utilized to assess the hypotheses using PLS bootstrapping findings. Table 6 shows the findings of the hypothesis. Table 6 shows that all of the hypotheses are accepted. Figure 3 depicts the final model created using PLS-bootstrapping.

**Table 6. Path Coefficient & Hypothesis Results**

Hypothesis	Path relationship	Path Coefficient	T Statistic	P - Value	Result
H1	Experience Quality → Perceived Value	.323	4.295	.000	Accepted
H2	Experience Quality → Satisfaction	.337	2.778	.000	Accepted
H3	Perceived Value → Satisfaction	.257	2.902	.004	Accepted
H4	Satisfaction → Environmental Responsible Behavior	.403	4.324	.000	Accepted

**Figure 3. Bootstrapping Results**



## Conclusion

This study attempts to examine how the experience of tourists influenced the perceived value in a natural environmental setting. Further, the study also explores whether satisfaction depends on experience quality and perceived value, and which one is more important for customer satisfaction. Finally, the study analyses the impact of satisfaction on ERB. The findings reveal that when tourists have an excellent experience in tourist locations and higher the perceived value, they feel more satisfied with the tourist locations. This satisfaction directly influences the ERB of the tourists. It means more satisfaction and more significant concern for the environment from tourists. The research contributes to the current body of knowledge on travelers' environmental stewardship. The findings of SEM demonstrate that the quality of the experience has a substantial impact on perceived value ( $t = 4.295$ ;  $p = .00$ ).

Further, the results also prove that satisfaction depends on the experience quality ( $t = 3.867$ ,  $p = .00$ ). Experience quality can be evaluated only after using/utilizing the product or service. The experience quality such as destination environment (Fernandes & Cruz, 2016), safety & security (Wu et al., 2018) and accommodation (Fakfare & Lee, 2019) provide evidence for perceived value and satisfaction. It shows the state of mind of the tourists resulting from the expected gain of the tourism product or service. It is also received through interaction with people who shared their own authentic experiences based on the nature-based activities, the behavior of the service personnel and interaction with other tourists (Lian et al., 2007). It required that the natural sites go beyond the tourists' expectations to ensure satisfaction. For developing countries to provide a quality experience for tourists, it is suggested that the infrastructure at natural sites should be organized and well planned in such a manner so that it preserves its natural and cultural environmental factors (Spenceley, 2012). Previous studies support these findings well (Başarangil, 2018; Handriana & Ambara, 2016; Klaus & Maklan, 2013; Sun et al., 2019; Wu & Li, 2017). Thus, hypotheses H1 and H2 are satisfied.

Furthermore, perceived value has a significant impact on visitor satisfaction ( $t = 2.902$ ;  $p = .004$ ). The findings are backed up by earlier research (Hallak et al., 2018; Prebensen et al., 2016; Sun et al., 2019). It is a universal reality that no company can thrive unless it offers products or services free of client worries. This research is based on the notion that perceived values are an intangible resource that may be used to gain an advantage over rivals due to their distinctive and inimitable character (Liu & Lee, 2015). As a result, hypothesis H3 is met.

Further, the ERB of the tourists was influenced positively by satisfaction ( $t = 4.324$ ;  $p = .00$ ). Thus, hypothesis H4 is accepted. This is an interesting finding of this study because the satisfied tourists will be more responsible for the environment. Since the more satisfied they are, the more they become environment friendly. This is also in line with the findings of previous studies (Ramkissoon & Mavondo, 2017; Su et al., 2018). Site managers should promote this because it is beneficial for tourists who present that good image before their family/friends and the site's reputation. This indicates that the more satisfied tourists were with their decision to visit these natural sites. These findings suggest that ERB should not only be considered a one-dimensional construct but also have different other impacts.

### ***Theoretical Implications***

The research provides several implications for the sustainability purpose for government, tourism managers, and different stakeholders. For many years, the authors attempted to identify the tourists based on their environment-friendly nature. The research study presents that tourist satisfaction is influenced significantly by experience quality and perceived value and further its impact of satisfaction on tourists' ERB. First, the study proposed the theoretical framework that validated the previous studies in the developing country context. The research instrument used in this study thus is valid for future research in different context and settings of the hospitality industry. Second, previous studies were mostly done on place attachment, environmental knowledge (Cheng & Wu, 2015; Ramkissoon & Mavondo, 2017), personality traits (Zhao et al., 2018) and satisfaction (Ramkissoon & Mavondo, 2017) to show the relationship with ERB. However, in order to understand visitor behavior in a natural setting, this study focused on experience quality, perceived value, and satisfaction. Third, the findings are consistent with past research, which shows that if a destination's quality is excellent, travelers will choose to visit it (Li et al., 2019). Fourth, among all the constructs, satisfaction and ERB have the highest  $\beta$  value indicating a strong relationship between the constructs. This shows that satisfaction is a prerequisite for the tourists' pro-environmental behavior in nature-based sites. For tourists' satisfaction, experience quality and satisfaction have the highest  $\beta$  value. This indicates that experience quality is more important than perceived value for the tourist's satisfaction. Thus, local authorities must collaborate with professionals to develop the sites to preserve their natural beauty. Fifth, the study samples also have repeat tourists. It can establish causal relationships. The satisfied tourists of these sites develop environment-friendly behavior. Furthermore, these visitors might spread favorable word-of-mouth and express a desire to return to the location. Finally, this research will bridge the gap between the quality of the experience, perceived value, satisfaction, and environmentally responsible behavior.

### ***Practical Implications***

The study presents several implications for the natural sites' practitioners and managers/caretakers. Thus, the natural site managers must ensure a good ratio between the quality of the services and the cost incurred by tourists visiting these sites since tourists are like brand ambassadors for marketing/promotion of such services through positive word of mouth. The perceived value informs tourism-related businesses about the importance that tourists place on services based on their various characteristics. As a result, managers must increase emotional value by providing novel activities that truly excite tourists and provide new experiences or adventures. As a result, visitors will have a memorable experience. Furthermore, social connection allows you to meet people who share your interests and share your experiences. It's also important to remember that perceived value is a factor that organizations use to establish prices and maintain service quality. As a result, the perceived value of the services given to visitors in terms of (economic and functional value) must be assessed. Customers' perceived values are related to post-consumption behavior and highly correlated with satisfaction. In previous studies, perceived value has been categorized as social, economic, hedonic, and altruistic. All the values tend to higher satisfaction and trust in a product (Papista et al., 2018). In the case of services, customer values bring more trust in service providers (Van Tonder & Petzer, 2018). Thus, it is required that managers try to make the tourists delighted so that the tourists feel satisfied and happy with the experience and plan to revisit. The tourists' experience evaluation is based on their income level and marital status, influencing their behavior. The married tourists with high incomes are more sensible than the unmarried and low-income tourists in natural sites (Bodkin et al., 2016). Thus, customers' perceived value provides insights and helps the site managers clearly understand the customers' attitudes and behaviors toward the natural sites. The site managers/in-charge can proactively maintain the balance between tourists visiting and preserving the sites' resources by promoting environmentally responsible behavior. The experience of natural sites provides an opportunity for tourists to come in direct contact with nature and feel pleasure with satisfaction. This helps understand the beauty of natural sites and changes their behavior towards nature. There is one more scope for further improvement of these natural sites to attract tourists. The site in charge can collect the information about tourists' satisfaction levels and background the tourists and accordingly segment the tourists and make the changes in these natural sites wherever possible. The present study also has important implications for local government and site managers in providing satisfaction and tourists' behavior towards the environment.

### ***Limitations and Further Research Scope***

The study is limited only to four natural sites in the Indian state of Madhya Pradesh. Since India is so huge in terms of populations and 7th in terms of geographical area in the world with many natural tourist destinations, thus, these findings could not be implemented in other countries at their natural attractions; extending it at a significant level may enhance the validity of the model and constructs. The sample size is also small but justifiable. Still, future studies should be focused on large sample size. The new arena for future research can be possible on the role of social marketing initiatives and segmenting the consumers and designing message strategies. The role of gender, education, age, and income as moderating variables can also be the new dimensions for further research. ERB varies across cultures also (Nair & Little, 2016). Thus, it is also suggested to conduct future research by examining the cultural aspects of the tourists. For repeat visitation post-visit positive word of mouth publicity aimed at encouraging tourists to build emotional

attachment and a sense of belonging in their minds of tourists. The marital status and household income also influence the behavior of the tourists; thus, in future, these two factors could be incorporated in extending the research.

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