

## Eco-Tourism Attitudes as Drivers of Environmentally Sustainable Tourism Development: A Mediation Study

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### Abstract

This study aims to analyze the relationship between tourism involvement and attitudes toward eco-tourism and identify how these attitudes influence sustainable practices in Rajasthan's tourism sector. A comprehensive model is developed and tested using primary data collected from eco-tourists, local communities, and tourism stakeholders. The study employs a mix of stratified random sampling and purposive sampling to ensure representative data. Structural equation modelling (SEM) was utilized to validate the proposed hypotheses and analyze the relationships among key variables. The results reveal that eco-tourism attitudes directly and significantly impact sustainable tourism development. Tourism involvement partially mediates the relationship between eco-tourism attitudes and sustainable tourism development, amplifying its influence. By focusing on Rajasthan's unique eco-tourism landscape, this study provides valuable insights into sustainability dynamics in tourism. The findings highlight the importance of fostering eco-tourism attitudes and directly supporting sustainable practices while encouraging active tourism involvement to achieve long-term sustainable tourism development. The research offers practical recommendations for policymakers, tourism planners, and local communities seeking to integrate sustainability into their tourism strategies.

**Keywords:** Eco-tourism Attitude, Tourism Involvement, Sustainable Tourism Development

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### 1. INTRODUCTION

Residents' attitudes toward tourism—whether positive or negative—are shaped by their perceptions of its potential impacts (Eusébio et al., 2018; Gursoy et al., 2010; Nunkoo et al., 2013). When local populations perceive tourism as beneficial, they are more likely to adopt favorable attitudes and actively support sustainable tourism initiatives (Andereck et al., 2005).

Rajasthan, known as the "Land of Kings," is renowned for its vibrant cultural heritage, majestic palaces, historic forts, and dynamic traditions (Khera, 2013). As one of India's most prominent tourist destinations, it attracts millions of domestic and international visitors annually, significantly contributing to the state's economy. Beyond its architectural marvels and cultural assets, Rajasthan boasts diverse

natural attractions, including the vast Thar Desert, the rugged Aravalli Hills, and wildlife sanctuaries such as Ranthambore National Park and Keoladeo Ghana Bird Sanctuary (<https://rising.rajasthan.gov.in/tourism>). These unique features position Rajasthan as a prime destination for eco-tourism, a sustainable form of tourism that emphasizes environmental conservation and community welfare. Recognizing ecotourism's potential, Rajasthan increasingly adopts environmentally friendly practices to safeguard its ecosystems and cultural heritage while promoting socio-economic development, especially in rural and tribal areas (Ranwa, 2022).

Globally, eco-tourism has emerged as an alternative to conventional mass tourism, often leading to environmental degradation, cultural erosion, and uneven economic benefits (Kumawat & Kumar, 2021). Eco-tourism focuses on balancing environmental preservation, social well-being, and economic growth. As defined by the United Nations World Tourism Organization (UNWTO), eco-tourism involves responsible travel to natural areas, promoting environmental conservation, and enhancing the well-being of local communities (<https://www.unwto.org/sustainable-development/ecotourism-and-protected-areas>).

Furthermore, limited awareness and understanding of eco-tourism among tourists and stakeholders impede the broader adoption of sustainable practices. For example, while destinations like Jaisalmer promote desert safaris as eco-tourism activities, overexploitation of resources, such as water, and degradation of delicate desert ecosystems reveal a disconnect between policy intentions and practical outcomes (Singh & Kumar, 2022).

This research explores the interconnections between eco-tourism attitudes and sustainable practices in Rajasthan (Martín et al., 2018; Streimikiene et al., 2021). Attitudes toward eco-tourism play a pivotal role in shaping the behaviors and decisions of tourists, residents, and policymakers concerning sustainable practices (Castellanos-Verdugo et al., 2016). Additionally, tourism involvement—the degree of individual engagement and interest in tourism activities—is a key factor influencing these attitudes. This study seeks to understand how tourism involvement shapes perceptions of sustainability and encourages adopting eco-friendly practices. Given Rajasthan's dependence on tourism as a significant economic driver, developing a robust framework for sustainable tourism is essential to mitigate the adverse effects of mass tourism (Gupta et al., 2024).

This research aims to analyze the relationship between tourism involvement toward eco-tourism and determine how these attitudes influence sustainable practices within Rajasthan's tourism sector. Focusing on the behavioral and psychological dimensions of tourists and stakeholders, the study aspires to provide actionable insights for policymakers to design effective eco-tourism strategies. Moreover, this research contributes to the global discourse on sustainable tourism by presenting Rajasthan as a case study in balancing economic growth, cultural preservation, and environmental conservation.

In recent years, sustainable tourism has become critical for advancing the United Nations Sustainable Development Goals (SDGs) (Spenceley & Rylance, 2019). Rajasthan's eco-tourism initiatives align with several SDGs, including Goal 8 (Decent Work and Economic Growth), Goal 11 (Sustainable Cities and Communities), and Goal 15 (Life on Land) (<https://sdgs.un.org/goals>). For instance, restoring forts and palaces to promote heritage tourism not only conserves cultural assets but also creates employment for local artisans. Similarly, eco-tourism activities in wildlife sanctuaries contribute to biodiversity conservation while supporting the livelihoods of tribal communities (Ranwa, 2022). However, to realize these benefits fully, it is essential to address challenges related to implementation, awareness, and community participation.

## 2. LITERATURE REVIEW

### 2.1 Overview of the Construct

#### *Eco-Tourism Attitudes*

The eco-tourism attitude reflects the beliefs, values, and behaviors of tourists, local communities, and stakeholders toward tourism practices emphasizing environmental conservation, cultural preservation, and socio-economic benefits for local populations (Castellanos-Verdugo et al., 2016). Positive attitudes towards eco-tourism encourage environmentally responsible behaviors, reduce ecological footprints, and support local communities. Studies highlight the role of environmental education and awareness

campaigns in fostering such attitudes (Adetola&Adediran, 2014). For instance, Eusébio et al. (2018) emphasized that positive eco-tourism attitudes can significantly contribute to sustainable practices. Similarly, Chiu et al. (2014) demonstrated how these attitudes influence pro-environmental behaviors among tourists, ultimately benefiting both ecological systems and host communities. Gursoy et al. (2019) underscored the importance of stakeholder collaboration in fostering eco-tourism attitudes, which are vital for long-term conservation efforts. Ecotourism offers a sustainable economic opportunity for local communities in ecotourism destinations. Residents can engage directly by managing chalets, hotels, and restaurants, while their practical local knowledge positions them as highly effective nature guides once they receive proper training (Gabriel Brida et al., 2011). Community organizations, with adequate administrative preparation, can take on the role of managing tourism services. Authentic human development extends beyond increasing socioeconomic wealth and income; it emphasizes empowering individuals to preserve and sustainably utilize their environment, natural resources, and ecosystems, enabling them to play meaningful roles in their development (Castellanos-Verdugo et al., 2016).

### **Tourism Involvement**

Tourism involvement pertains to the extent of engagement, participation, and emotional connection individuals or communities have with tourism activities. Higher involvement levels often increase satisfaction, loyalty, and advocacy for sustainable tourism. Hwang et al. (2005) emphasized that community involvement in tourism planning and decision-making fosters a sense of ownership, enhancing the likelihood of sustainable outcomes.

### **Sustainable Tourism Development**

Sustainable tourism development involves the comprehensive management of tourism activities to harmonize environmental, social, and economic objectives, ensuring the lasting welfare of all stakeholders. This approach demands integration through local community involvement, policy formulation, and the conservation of cultural and natural assets. Hall (1994) emphasized that collaboration among stakeholders is crucial for attaining sustainable tourism objectives. Other researchers suggested a comprehensive planning framework that addresses environmental, economic, and social aspects. Saarinen (2006) introduced resilience planning as a strategy to handle environmental and economic shocks while maintaining sustainability.

### **Environmental Sustainability:**

Environmental sustainability in tourism focuses on minimizing resource use, protecting ecosystems, and addressing climate change impacts. Inskeep (1991) emphasized the role of integrated planning to balance tourism growth with environmental conservation. Gössling (2002) highlighted tourism's contributions to greenhouse gas emissions and the need for mitigation measures, such as carbon offsetting and green transportation. Saarinen (2006) proposed adaptive approaches to enhance resilience against environmental shocks.

### **Socio-cultural Sustainability**

Socio-cultural sustainability involves preserving cultural heritage, fostering mutual respect between tourists and host communities, and supporting social cohesion. Doxey (1975) proposed the "Irritation Index," which shows how unchecked tourism can lead to social tensions. McKercher and Du Cros (2002) emphasized cultural resource management as key to maintaining authenticity in tourist experiences. Moscardo (2008) highlighted how sustainable tourism can empower local communities by promoting capacity building and cultural exchange.

## **2.2 Hypotheses development**

### **Eco-tourism Attitudes and Sustainable Tourism Development**

As society increasingly recognizes the importance of environmental protection, efforts to encourage pro-environmental behavior have grown by promoting awareness and fostering positive attitudes. Ecotourism emphasizes preserving natural resources at tourist destinations, relying on tourists' environmental consciousness (Chiu et al., 2014). Understanding the knowledge and attitudes of individuals provides insights into the factors influencing the perceived value and appeal of ecotourism sites. Environmental knowledge pertains to a person's awareness and understanding of environmental problems and possible solutions (Zsóka et al., 2013). It involves recognizing symbols, concepts, and behaviors associated with

environmental conservation (Laroche et al., 2001). In ecotourism, tourists' evaluation of their experiences is shaped by their emotional connection to the eco-site and the quality of services offered (Chan & Baum, 2007; Senarathna et al., 2021). Emotions are integral to consumer experiences (Chiu et al., 2014), while attitudes represent beliefs and feelings about an object that drive consistent behavior towards it (Nunkoo et al., 2013).

Martín et al. (2018) noted that sustainable tourism incorporates many core principles of sustainable development. The concept of sustainable development in tourism gained prominence in the late 19th century, with scholars emphasizing the importance of balancing environmental and social responsibilities in tourism growth (Butler, 1991; Hall, 1998). Factors influencing residents' attitudes and support for tourism development include the personal benefits they derive—directly or indirectly—and their relationship with the tourism sector. Residents employed in tourism are often more supportive, as their livelihoods depend on it (Batoool et al., 2024; Chen & Chen, 2010; Martín et al., 2018; Nunkoo et al., 2013; Sardanou et al., 2015). However, while local community benefits can secure short-term acceptance of tourism, a broader focus beyond immediate gains is essential for sustaining positive attitudes in the long term (Aniqoh et al., 2022; Lepp, 2008). Additionally, residents' awareness of local tourism development plans (Andereck et al., 2005; Sirakaya et al., 2002) and their commitment to their community (Chen & Chen, 2010) significantly influence their attitudes and support for tourism development. Informed and engaged residents tend to favor such initiatives more favorably (Tarinc et al., 2023). Ajzen's Theory of Planned Behavior highlights that attitudes toward ecotourism influence intentions and actions, where favorable attitudes often lead to greater adherence to sustainability principles (Ajzen, 1991). For instance, tourists with strong pro-environmental attitudes are more willing to participate in eco-friendly activities, comply with ecological guidelines, and financially support conservation initiatives. This behavioral alignment significantly contributes to the economic and environmental goals of STD (Karytsas et al., 2019). Studies suggest that local support for ecotourism strengthens when economic benefits, such as job creation and income generation, are evident (Gursoy et al., 2010). Conversely, negative attitudes arising from unfulfilled expectations or inequitable distribution of benefits can lead to resistance, thereby hindering sustainable efforts. Similarly, policymakers with positive attitudes toward ecotourism are more likely to develop and enforce supportive policies, invest in infrastructure, and ensure training programs for stakeholders, thereby reinforcing the foundations of STD (Adetola&Adediran, 2014; Senarathna et al., 2021). Positive ecotourism attitudes among stakeholders encourage conservation initiatives, such as habitat protection and biodiversity restoration, which are cornerstones of STD. Economically, these attitudes promote practices that generate long-term financial benefits while minimizing ecological harm, with revenue often reinvested into local development. Socially, supportive attitudes facilitate respectful cultural exchanges and heritage preservation, enriching the visitor experience and community well-being (Dey et al., 2020; Paul & Roy, 2023). From the above literature, the following hypothesis has been derived.

***H<sub>7</sub>***: Eco-tourism attitudes significantly influence sustainable tourism development.

#### ***Mediating impact of tourism involvement between Eco-tourism attitude and sustainable tourism development***

Understanding the attitudes and support of local communities toward tourism development requires analyzing a range of interconnected factors (Gursoy et al., 2010). Local community support is crucial for the successful implementation of sustainable tourism development and should be considered by stakeholders from the earliest stages of the process (Chen & Chen, 2010; Nunkoo&Ramkissoon, 2010; Tovar & Lockwood, 2008). A fundamental principle of ecotourism is the active involvement of local communities (Senko et al., 2011). This involvement carries an ethical obligation, as local communities should benefit from their participation in ecotourism initiatives (Abdullah et al., 2011). To enhance the positive effects of ecotourism, it is essential to involve residents in the planning and development phases from the outset (Batoool et al., 2024). Full participation in these processes requires that residents be informed about the impacts of tourism and supportive of its development. Moreover, local communities must possess a foundational understanding of the potential benefits and drawbacks of tourism to effectively contribute to the planning process (Aniqoh et al., 2022; Nunkoo et al., 2013). The awareness of ecotourism impacts can be gauged by examining how the host community perceives its environmental,

economic, and social effects, both positive and negative. Sustainable tourism development utilizes resources in a way that addresses economic, social, and environmental demands while preserving cultural integrity, essential ecological processes, biodiversity, and life support systems (Prayag & Ryan, 2012; Senarathna et al., 2021). Residents' attitudes toward tourism development are shaped by their perceptions of its impacts (Huttasin, 2008; Rudež & Vodeb, 2010). Positive impacts often outweigh negative ones, fostering greater support for tourism development (Chen & Chen, 2010; Dey et al., 2020; Kitnuntaviwat & Tang, 2008; Ribeiro et al., 2016). However, recognizing negative impacts does not automatically lead to opposition (Vargas-Sánchez et al., 2009). Prior perceptions also play a role, influencing both residents' expectations and their willingness to support planned tourism projects (Huh & Vogt, 2008).

**H<sub>2</sub>:** Tourism involvement significantly mediated the relationship between Eco-tourism attitudes and sustainable tourism development

### 3. RESEARCH METHODOLOGY

#### *3.1 Sampling and Procedure of Data Collection*

The study targets eco-tourists, local communities, and stakeholders involved in tourism development in eco-tourism destinations, including tourists visiting eco-tourism sites, residents living nearby, and tourism operators or authorities. A combination of stratified random sampling and purposive sampling techniques is employed. Stratified random sampling ensures the sample division into distinct groups, such as tourists, residents, and tourism stakeholders. In contrast, purposive sampling is used by stakeholders and authorities to ensure that the respondents have direct involvement in eco-tourism activities and decision-making. The sample size includes a minimum of 230 respondents, with equal representation from tourists (120), residents (70), and tourism operators or stakeholders (40).

Using a standardized questionnaire, responses were acquired in six important cities of Rajasthan, Udaipur, Jodhpur, Jaipur, Mount Abu, Kumbhalgarh, and Jaisalmer, representing the country's north-western region. The structured questionnaire is designed to capture demographic information, attitudes towards eco-tourism, perceptions of sustainable tourism practices, and levels of involvement in tourism activities. On-site surveys are conducted at popular eco-tourism destinations, such as national parks and heritage sites, to collect responses from tourists and local communities. Additionally, online surveys are distributed to tourism operators and stakeholders to ensure broader participation from industry professionals. The surveys are conducted over four months, from April 2023 to July 2023, with on-site data collection timed to cover peak tourist seasons for diverse responses and online surveys administered via platforms like Google Forms or Survey Monkey.

There were 290 replies received, of which 230 were considered usable (completed fully). Of the 290 requested replies, 255 responses—representing a response rate of 79%—were kept after invalid responses were eliminated. 48% of respondents were male. Respondent's age ranged from 18 to 25 years. In terms of marital status, 44% of the respondents are male. In terms of education, 28% of respondents had undergraduate degrees. Most of the respondent's annual income ranged from 5 lakh to 10 lakh (33%). 33% of the respondent belong to Jaipur and their nearby areas. Their traveling frequency is around once a year (32%). Regarding tourism destinations in Rajasthan, they visited Mount Abu Wildlife Sanctuary and Desert National Park (40%).

#### *3.2 Measure*

The substance of the questionnaire was modified to fit the requirements of the investigation from past research. The questionnaire for this study was created using multi-factor instruments linked to several aspects of sustainable tourism. These factors include ETA, TI, and STD. The Eco-tourism attitudes scale was adopted from (Castellanos-Verdugo et al., 2016). A nine-item measure developed by (Suhartanto et al., 2018; Lee, 2013) for tourism involvement was considered to be taken initially. Environmental sustainability scales were adopted from (Lee et al., 2013), and the socio-cultural sustainability scale was adopted from (Nicholas et al., 2009).

### 4. ANALYSIS AND RESULTS

A confirmatory factor analysis (CFA) using AMOS 23 was conducted to test the construct's validity, reliability, and discriminant validity. Three latent variables, including ETA, TI, and STD, are considered

in this CFA model. One latent constructs is higher-order, and two are first-order constructs. The CFA findings confirmed a satisfactory model fit, which means the data were well-suited to the model. The CFA findings are described as follows:

ETA: The first-order construct comprised four items. Each item made a substantial contribution to its relevant aspect. The value for CMIN/DF = 0.123, CFI = 1.000, GFI = 0.999, AGFI = 0.997, NFI = 0.999, TLI = 1.000, RMSEA = 0.000 all suggest very good model fit.

TI: The value for CMIN/DF = 1.663, CFI = 0.981, GFI = 0.959, AGFI = 0.931, NFI = 0.954, TLI = 0.974, RMSEA = 0.054, reflecting excellent fit of the model.

STDwas a second-order construct comprising two factors, ES and SS. The value for CMIN/DF = 1.662, CFI = 0.982, GFI = 0.921, AGFI = 0.999, NFI = 0.910, TLI = 0.923, RMSEA = 0.024, reflecting an excellent fit of the model (Table 1).

**Table 1 Model Fit Indices**

	CMIN/df	GFI	AGFI	CFI	NFI	TLI	RMSEA
Eco-tourism attitudes	0.123	0.999	0.997	1.000	0.999	1.000	0.000
Sustainable Practice	1.000	0.934	0.917	0.999	0.918	0.999	0.006
Tourism Involvement	1.663	0.959	0.931	0.981	0.954	0.974	0.054
Sustainable Tourism Development	1.662	0.982	0.921	0.999	0.910	0.923	0.024

#### **4.1 Validity and Reliability of the Measurement Model**

Regarding the model's adequate fit, the study assessed the measurement model by examining standardized factor loadings, reliability, and validity. The results from the CFA, as shown in Table 2, reveal that all standardized factor loadings exceeded the recommended threshold of 0.50 (Hair et al., 2014). Reliability was assessed using Cronbach's alpha ( $\alpha$ ), with all constructs showing alpha values greater than 0.8, indicating strong internal consistency. Furthermore, convergent validity was evaluated through Composite Reliability (CR) and Average Variance Extracted (AVE) values. CR values exceeded 0.7, and AVE values for each construct were either above or close to 0.5, demonstrating adequate convergent validity. These results confirm that the items effectively capture their respective constructs.

**Table 2 Measurement model summary**

Construct	Items	Factor Loading
Eco-tourism Attitudes ( $\alpha$ = 0.839, AVE = 0.571, CR = 0.840)	ETA1	0.625
	ETA2	0.754
	ETA3	0.838
	ETA4	0.789
Tourism Involvement ( $\alpha$ = 0.899, AVE = 0.501, CR = 0.903)	TI1	0.642
	TI2	0.705
	TI3	0.727
	TI4	0.754
	TI5	0.781
	TI6	0.713
	TI7	0.614
	TI8	0.669
	TI9	0.765
Environmental Sustainability ( $\alpha$ = 0.893, AVE = 0.561, CR = 0.899)	ES1	0.663
	ES2	0.841
	ES3	0.801
	ES4	0.781

	ES5	0.709
	ES6	0.745
	ES7	0.685
Socio-cultural Sustainability ( $\alpha = 0.890$ , AVE = 0.540, CR = 0.891)	SS1	0.734
	SS2	0.789
	SS3	0.676
	SS4	0.671
	SS5	0.724
	SS6	0.728
	SS7	0.811
Sustainable Tourism Development (STD) ( $\alpha = 0.918$ , AVE = 0.700, CR = 0.800)	ES	0.788
	SS	0.696

#### 4.2 Structural Model

Table 3 results are shown here, and the model estimation indicated that the evidence fit the framework well. The current research looked at path estimates and their statistical significance in evaluating hypothesized assumptions. The direct effects ( $H_1$ ) were tested in the first stage. The path estimate reported that ETA had a significant direct impact on STD (ETA  $\rightarrow$  STD,  $\beta = 0.0.387$ ,  $p = 0.003$ ). Thus, the study found support for  $H_1$ .

Table 3 shows the result of the structural model

Path	Coeffieicent	Std. Error	P Value	Hypothesis
ETA $\rightarrow$ STD	0.387	0.132	0.003	Supported
ETA $\rightarrow$ TI	0.93	0.164	***	
TI $\rightarrow$ STD	0.171	0.077	0.026	

#### 4.3 Mediation Analysis

The mediation effect was then investigated (Table 4). Furthermore, in addition to the previously described hypothesis, the study analyzed the mediation hypothesis using user-defined estimand in AMOS 23 using 5000 bootstrap samples. The findings show a statistically significant indirect effect of TI between ETA and STD (ETA  $\rightarrow$  TI  $\rightarrow$  STD: ( $H_3$ ) = 95% Boot- LLCI = 0.355; Boot- ULCI = 0.018). Thus, the study accepts  $H_2$ . However, TI's partial mediation affects the relationship between ETA and STD (direct effect = 0.387, indirect effect = 0.158).

Table 4Mediation Effect

Hypothesis	Estimate	Bootstrap 95% CIs		P value	Result
		Lower	Upper		
ETA $\rightarrow$ TI $\rightarrow$ STD	0.158	0.355	0.018	0.03	Partial Mediation

## 5. DISCUSSION AND IMPLICATION

### 5.1 Direct Impact of Eco-Tourism Attitude on Sustainable Tourism Development

With this study, we have proposed a comprehensive mediation framework to analyze the impact of ETA on STD in the context of the tourism industry. The results indicated that ETA significantly affects STD (ETA  $\rightarrow$  STD,  $\beta = 0.387$ ,  $p = 0.003$ ). The results are consistent with the findings of earlier literature

(Jogarathnam & Ching-Yick, 2006; Raats & Krakauer, 2020; Wiklund & Shepherd, 2005). Positive attitudes toward eco-tourism can encourage adopting sustainable practices, including conserving natural resources, minimizing environmental harm, and supporting local economies. Policymakers can harness these attitudes to craft policies that encourage eco-friendly tourism infrastructure and incentivize sustainable actions among tourists and stakeholders. Tourism operators can align their offerings with the eco-conscious preferences of travelers, improving customer satisfaction and promoting long-term sustainability. For local communities, emphasizing eco-tourism can create economic opportunities while protecting cultural and environmental heritage. Ultimately, prioritizing eco-tourism can establish a virtuous cycle that promotes tourism growth while preserving ecological and social well-being.

### **5.2 Indirect Impact through Tourism Involvement**

Table 4 shows that ETA is positively related to TI ( $\text{ETA} \rightarrow \text{TI}$ ,  $\beta = .93$ ,  $p = 0.000$ ), and TI is also positively associated with STD ( $\text{TI} \rightarrow \text{STD}$ ,  $\beta = .171$ ,  $p = 0.026$ ). The results are congruent with the findings of earlier literature (Gliga & Evers, 2023; Khan et al., 2022; Kowalik et al., 2023). Our study adds to existing information by arguing that tourists must implement positive eco-tourism attitudes through tourism involvement to achieve better performance. The results also indicated that TI partially mediates the impact of ETA on STD ( $\text{ETA} \rightarrow \text{STD}$ :  $H_3$ ) = 95% Boot-LLCI = 0.355; Boot-ULCI = 0.018). The findings are consistent with the previous studies. The results imply that ETA is a crucial tool for promoting TI and that TI is a prerequisite to better sustainable tourism development. The results indicate that promoting positive attitudes toward eco-tourism is vital for increasing tourism involvement (TI), which is key to sustainable tourism development. By fostering eco-tourism values, stakeholders can inspire greater participation from tourists and local communities in environmentally conscious actions. This increased engagement can facilitate the implementation of sustainable practices, such as conservation, efficient resource use, and cultural preservation, leading to a more sustainable and balanced tourism industry. Therefore, emphasizing eco-tourism attitudes and tourism involvement can generate a mutually beneficial cycle, aligning economic growth with environmental and social sustainability.

### **5.3 Theoretical Implication**

The research on eco-tourism attitudes and sustainable practices highlights the complexity of STD by emphasizing the role of TI. The study challenges the assumption that increased tourism involvement directly mediates the relationship between SP and sustainable tourism development. This contributes to the theoretical understanding by suggesting that factors other than tourism involvement may be more critical in fostering sustainability. The findings call for further exploration of alternative drivers, such as policy interventions, community engagement, and environmental education, in shaping the dynamics of sustainable tourism development.

### **5.4 Managerial Implications**

For tourism operators and policymakers, the research underscores the importance of directly promoting sustainable practices, such as adopting eco-friendly policies and offering sustainable tourism products, rather than solely focusing on increasing tourism involvement. Managers should prioritize environmental conservation initiatives, resource efficiency, and cultural preservation as core components of their strategies. Additionally, tourism stakeholders must foster more profound awareness and education regarding sustainability among tourists and local communities to ensure long-term impact. By understanding that tourism involvement alone may not be sufficient, managers can design more effective, targeted interventions to achieve sustainable tourism goals. From a managerial perspective, this highlights the importance of cultivating positive eco-tourism attitudes among tourists and local communities.

### **5.5 Study Limitations and the Potential for Future Research**

This study has certain limitations that future research could address. Firstly, it focuses exclusively on the tourism industry in Rajasthan, India, and may be geographically confined to specific tourist locations, limiting the findings' applicability to other cultural or regional contexts. The study primarily examines tourism involvement as a mediator between eco-tourism attitudes, sustainable practices, and sustainable tourism development, potentially overlooking other complex factors that influence sustainability in tourism. Future research could investigate the effects of various tourism types, such as mass tourism versus eco-tourism, on sustainability outcomes could yield more detailed insights. Moreover, conducting longitudinal studies to assess the long-term influence of eco-tourism attitudes and practices on sustainable



development would provide valuable perspectives on the evolving nature of the tourism sector. Research exploring how sociocultural, economic, and environmental factors impact sustainable tourism practices could also enhance understanding of effective strategies in diverse settings.

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