J. Resour. Ecol. 2025 16(1): xxx-xxx
DOI: 10.5814/j.issn.1674-764x.2025.01.xxx
www.jorae.cn

How Do Situational Factors Impact Tourists' Pro-environmental Behaviors in Homestay? From the Perspective of Host-guest Interaction

WANG Jia[1, 2], LI Chenyao[3, *], YU Mengting[1], WANG Wenhui[4]

1. School of Tourism, Nanchang University, Nanchang 330031, China;
2. Tourism Research Institute, Nanchang University, Nanchang 330031, China;
3. Shenzhen Campus, Jinan University, Shenzhen, Guangdong 518053, China
4. School of Tourism, Hainan Normal University, Haikou 571127, China

Abstract: Within the domain of homestays, it is imperative to prioritize the augmentation of hosts' pivotal role and the facilitation of pro-environmental behavior among tourists as essential strategies for promoting the sustainability of homestay accommodations. This research utilizes homestays in Pingtan Island as a specific example and employs a survey methodology to collect data. Additionally, a structural equation model is utilized to analyze the causal relationship between situational factors within homestays and the pro-environmental behavior of tourists, specifically within the context of host-guest interaction. The results of the study indicate that there is a favorable correlation between environmental quality and the interaction between hosts and guests, and visitors' pro-environmental behaviors. Furthermore, it is worth noting that situational circumstances play a crucial role in shaping the dynamics of host-guest interaction. This, in turn, serves as a mediator for the influence of situational factors on tourists' pro-environmental behavior. Based on the aforementioned findings, the present study proceeds to examine the pragmatic ramifications of the research and provides recommendations for prospective areas of investigation.

Key words: situational factors; tourists' pro-environmental behavior; homestay; host-guest interaction

1 Introduction

The tourism industry has been recognized for its positive contributions to the economy and society. However, it is important to acknowledge that tourism has also had a growing detrimental effect on the environment. This is mostly attributed to the rising number of tourists and their environmentally unfriendly behaviors, as highlighted by several scholars (Dolnicar, 2020; Kim and Stepchenkova, 2020; Tkaczynski et al., 2020). Hence, the promotion of pro-environmental behavior among tourists during their travels is considered a crucial factor in advancing global sustainable tourism (Liu et al., 2019; Loureiro et al., 2022). Within this particular setting, a multitude of studies have been conducted to explore the mechanism of TPEB from diverse angles (Lee and Jan, 2015; Su et al., 2018b; Cvelbar et al., 2019; Yan and Jia, 2021). Previous studies have been carried out in several contexts, encompassing national parks, nature reserves, rural regions, cultural heritage places, and other relevant locations (Panwanitdumrong and Chen, 2021; Wu et al., 2022; Esfandiar et al., 2023). The studies referenced in this statement utilize many theoretical frameworks, including the Attitudinal-Situation-Behavior Theory, the Theory of Planned Behavior, the Social Exchange Theory, the Value-Belief-Norm Theory, among others (Han and Kim,

Received: 2023-05-20 **Accepted:** 2024-01-10
Foundation: The National Social Science Foundation Youth Project (21CGL025); The Jiangxi Provincial "Thousand Talent's Plan" Philosophy & Social Sciences Young Leading-level Professional Project (jxsq2023203026); The Social Science Foundation of Nanchang City (YJ202101).
First author: WANG Jia, E-mail: wangjia2014@ncu.edu.cn
***Corresponding author:** LI Chenyao, E-mail: glorialichenyao@outlook.com

Citation: WANG Jia, LI Chenyao, YU Mengting, et al. 2025. How Do Situational Factors Impact Tourists' Pro-environmental Behaviors in Homestay? From the Perspective of Host-guest Interaction. *Journal of Resources and Ecology*, 16(1): xxx–xxx.

2010; Su et al., 2018a; Wang et al., 2018a). Nevertheless, there is a lack of scholarly research about the topic of TPEB within the specific setting of homestay lodgings.

The rise in popularity of leisure-focused and specialized lodging options has led to the emergence of homestays as a prominent contributor to tourism, facilitating economic development. Nevertheless, the heightened level of demand is accompanied by a concomitant rise in waste generation and resource depletion, hence presenting a significant environmental hazard (Luo et al., 2023). The significance of tourists in environmental conservation should be reevaluated by the academic community, as their pro-environmental activities have been identified as a significant driver of environmental protection (Gao et al., 2021). Nevertheless, it is noteworthy that tourists often exhibit environmentally unfriendly behaviors in the context of homestay accommodation. These behaviors include the excessive utilization of linen (Budovska et al., 2020), disposable goods (Mair and Bergin-Seers, 2010), water (Gabarda-Mallorquí et al., 2021), and electricity resources (Wang et al., 2018b). In order to address these adverse effects, a significant portion of the current body of tourism research has concentrated on examining the transformation of tourists' internal beliefs. Specifically, scholars have explored the influence of factors such as tourists' experiences and their level of environmental concern on the development of tourism-related pro-environmental behaviors (TPEBs) (Ballantyne et al., 2011; Chen and Tung, 2014). However, as Ajzen (2015) observed in his recent study, significant alterations in beliefs have the potential to yield only modest modifications in the components of the tourists' pro-environmental behavior (TPEB). Therefore, the preceding aspects of TPEB necessitate a greater emphasis on the examination of situational circumstances in facilitating a modification in behavior. A significant body of research has incorporated elements such as environmental quality (Liu et al., 2019), facilities, physical resources (Wilson and Kelling, 2017), atmosphere, and services (Wang et al., 2018a) within the framework of Theory of Planned Behavior (TPB) or Extended TPB Theory (Han, 2015; Goh et al., 2017). In the context of homestays, hosts have employed many techniques to encourage guests to engage in pro-environmental behavior. These strategies encompass the use of signage, fines, rewards, individual demonstrations, and participation in volunteer activities (Wang et al., 2018a; Liu et al., 2019). At now, a significant dearth of empirical investigation exists about the influence of perceived environment quality and policy on the development of pro-environmental behaviors among homestay tourists. Hence, the examination of host-guest interaction offers a novel approach to investigate strategies for enhancing the constructive influence of hosts within the context of homestay environments, as well as fostering tourists' pro-environmental behavior through the effective enhancement of external circumstances.

The interaction between hosts and guests is a fundamental element of homestay experiences and exerts a significant influence on TPEB (Wang et al., 2018b; Li and Wu, 2020). The examination of host-guest interaction has emerged as a prominent area of interest within the fields of tourist sociology and anthropology in Western academia, starting from the 1970s (Smith, 2012). Previous studies have investigated the impact of host-guest interaction on both the ecological aspects and local inhabitants of tourist locations, alongside the contentment and disposition of tourists (Pizam et al., 2000; Fennell, 2006). Typically, these studies utilize qualitative methodologies to investigate the general characteristics of interactions between hosts and guests. However, they often neglect to analyze the specific processes and underlying mechanisms of these interactions, as well as their influence on tourists' pro-environmental behavior (Holloway et al., 2011). According to George (1999), the adoption of pro-environmental behavior among visitors can be impacted by social interactions. Additionally, George suggests that pro-environmental behavior is socially driven, since sustainable activities are fashioned by interactions with the tourism environment. However, there has been a scarcity of theoretical research regarding the manner in which hosts might exert an impact on visitors' pro-environmental behavior through social interactions, as well as how to maximize the effect of hosts by optimizing homestay environments. This study aims to establish a connection between homestay settings and the Stimuli-Organism-Response (SOR) theory, with the intention of expanding existing research in this area.

This study seeks to address the research gap by focusing on the psychological dynamics between hosts and tourists during the homestay experience on Pingtan Island in Fujian Province, China. To achieve this, the study employs Structural Equation Modeling (SEM) as a methodological approach. The present study aims to achieve three distinct objectives. Firstly, it seeks to investigate the impact of external situational factors on TPEB (Tourist Pro-Environmental Behavior). Secondly, it aims to examine the mediating effect of host-guest interaction in this context. Lastly, it intends to offer practical recommendations based on the perspective of host-guest interaction, with the goal of promoting low-carbon and environmentally sustainable development within the homestay sector. This study expands upon the existing literature on TPEB by examining the influence of host-guest interaction and further explores the situational factors that drive TPEB. This study offers insights into the practical consequences of TPEB in the context of homestay accommodations.

2 Literature review and development of hypotheses

2.1 The influence of situational factors on tourists' pro-environmental behavior

Tourists' Pro-Environmental Behavior (TPEB) encompasses the environmentally conscious actions taken by tourists

during travel (Wang et al., 2018a). It is characterized by the following attributes: first, the individuals or groups of tourists who undertake these behaviors; and second, the objective of minimizing negative impacts on tourism resources and environment or promoting harmonious coexistence between human and nature. Research on TPEB has largely centered around the development and measurement of scales and dimensions, internal and external influencing factors, and the underlying mechanisms that drive such behavior (Su et al., 2020; Jans, 2021). Personal factors such as gender, age, education level, and economic income (Sidique et al., 2010; Erdogan et al., 2012; May et al., 2021), as well as internal psychological factors such as perceived environment quality (Liu et al., 2019), individual values (Thøgersen, 2006), environmental attitude (Kim and Weiler, 2013; Grønhøj and Thøgersen, 2017), consumption concept (Kilbourne and Pickett, 2008), recreational motivation (Høyem, 2020), and emotion (Daryanto and Song, 2021), are widely recognized as important determinants of tourists' pro-environmental behavior and the focus of current research. It is important to note that tourists' decision to engage in pro-environmental behavior is not solely based on individual choice or rational consideration. Rather, it is shaped by the interaction with a range of external situational factors (Imran et al., 2014), including the surrounding environment (Wang et al., 2018b), behavioral reference (Wang et al., 2019), the reputation of the tourist destination (Su et al., 2020), destination social responsibility (Su and Swanson, 2017), social norms, social identity (Jans, 2021), laws and policies(Han et al., 2016), information dissemination, interpretation of content, environmental quality, persuasive and informative guidance, material incentives, situational barriers, and behavioral costs (Tam and Chan, 2018).

The Stimuli-Organism-Response (SOR) theory posits that external environmental factors, such as environmental quality, influence an individual' s psychological states, which, in turn, prompt specific behaviors (Mehrabian and Russell, 1974). In the context of tourism, situational factors such as environmental policy, quality, and destination type can evoke psychological responses from tourists, leading to pro-environmental behavior (Hines et al., 1987). Classification of situational factors can be categorized based on their nature, including environmental facilities, convenience, time costs, social norms, behavioral costs (Barr, 2003). Besides, these factors can also be differentiated into proactive and current situations with respect to time (Rivera, 2004). In the context of homestay, both environmental policy and environmental quality play significant roles in shaping tourists' pro-ecological behavior (Yu et al., 2015; Liu et al., 2019). Environmental quality encompasses various elements such as the hygienic conditions of public spaces and guest rooms, the sanitary state of linens and other amenities, as well as the logical arrangement of infrastructure and signage. Environmental policy, on the other hand, encompasses the regulations and guidelines set by the homestay establishment, incentives for eco-friendly practices, penalties for ecologically harmful actions, educational programs on environmental preservation, and recommendations on eco-friendly practices provided to guests at check-in.

According to the Stimulus-Organism-Response (SOR) theory, individuals are influenced by their perceptions of the environment's quality, which can be either positive or negative (Su et al., 2020). In response to this influence, individuals are faced with two options: modify their behavior or adapt to the environment (Liu et al., 2019). Typically, individuals opt for the latter, as it requires minimal effort and cost. This theory suggests that tourists staying in homestays are similarly influenced by their surroundings. In instances where the environmental quality of the homestay is optimal, tourists are inclined to adhere to the clean surroundings and engage in environmental preservation behavior. The Stimulus-Organism-Response theory suggests that the nature and manifestation of an individual's environmental behavior are closely tied to the emotional stimuli elicited by situational factors in the environment. Environmental policy constitutes a crucial aspect of these situational factors. Previous research has demonstrated that the restrictive effect of environmental policy has a favorable impact on socially responsible environmental behavior (Kalantari et al., 2007; Imran et al., 2014). For instance, environmental regulations, laws, and management systems can directly influence pro-ecological behavior. Therefore, external environmental policy and social norms impact tourists' emotions and shape individual environmental behavior. Thus, it is hypothesized:

H1: The situational factors of homestay have a positive effect on tourists' pro-environmental behavior.

H1a: The environmental quality of homestay has a positive effect on tourists' pro-environmental behavior.

H1b: The environmental policy of homestay has a positive effect on tourists' pro-environmental behavior.

2.2 The influence of situational factors on Host-guest interaction

The phenomenon of host-guest interaction refers to the dynamic relationship that exists between hosts and tourists during the process of travel (Maoz, 2006; Smith, 2012). The examination of this interaction primarily focuses on the influence it has on the environment of tourist destinations and the local residents, as well as the correlation between the host-guest interaction and tourists' satisfaction levels or their attitude towards tourism (Pizam et al., 2000; Fennell, 2006). Despite the substantial body of research that exists on the outcomes and impacts of host-guest interaction, there is a dearth of studies that assess the effect of this interaction as an external situational factor on tourists' pro-environmental behavior. Existing studies have demonstrated that a variety of internal motivations, such as residents' perception of tourism development, life satisfaction, emotional solidarity, and subjective attitude, as well as external factors such as

available time, resources, and opportunities, can impact the host-guest interaction and their co-creation (Lin et al., 2017; Ross and Saxena, 2019; Lan et al., 2021). Within the context of travel, tourists and hosts of homestays are likely to exhibit certain psychological reactions and awareness after exposure to environmental policy and the quality of the environment. These situational factors may prompt them to engage in corresponding interactive behavior. A well-maintained environment and properly formulated environmental policy can facilitate smoother communication between tourists and hosts, which in turn, will have a positive impact on the outcome of the host-guest interaction. Thus, it is hypothesized:

H2: The situational factors of homestay have a positive effect on host-guest interaction.

H2a: The environmental quality of homestay has a positive effect on host-guest interaction.

H2b: The environmental policy of homestay has a positive effect on host-guest interaction.

2.3 The mediating effect of host-guest interaction

The Social Exchange Theory says that the recipient of emotional satisfaction in the host-guest interaction has a reciprocal obligation to give back to the other party (Cook and Emerson, 1987). According to Bimonte and Punzo (2016), travel is primarily about the interactions between tourists and others or other places, and the host-guest interaction is a crucial aspect of travel and the foundation for homestay experiences. A sincere emotional connection between hosts and homestay tourists can foster a sense of welcome and reduce the emotional distance between them, thereby improving mutual understanding and inspiring tourists to engage in pro-environmental behavior (Li et al., 2021). In the context of travel, if tourists are able to acquire the information they require through the host-guest interaction, experience high-quality services, and have positive emotional interactions with their hosts, they will be driven to give back to both their hosts and the tourist destinations. This awareness will ultimately manifest as pro-environmental behavior. As a result, the host-guest interaction has a positive impact on tourists' pro-environmental behavior and mediates the effect of situational factors on their pro-environmental behavior. Thus, it is hypothesized:

H3: The host-guest interaction has a positive effect on tourists' pro-environmental behavior.

H4: The host-guest interaction mediates the effect of situational factors on tourists' pro-environmental behavior.

H4a: The host-guest interaction mediates the effect of the environmental quality of homestay on tourists' pro-environmental behavior.

H4b: The host-guest interaction mediates the effect of the environmental policy of homestay on tourists' pro-environmental behavior.

Finally, the research model was formalized and is presented in Figure 1.

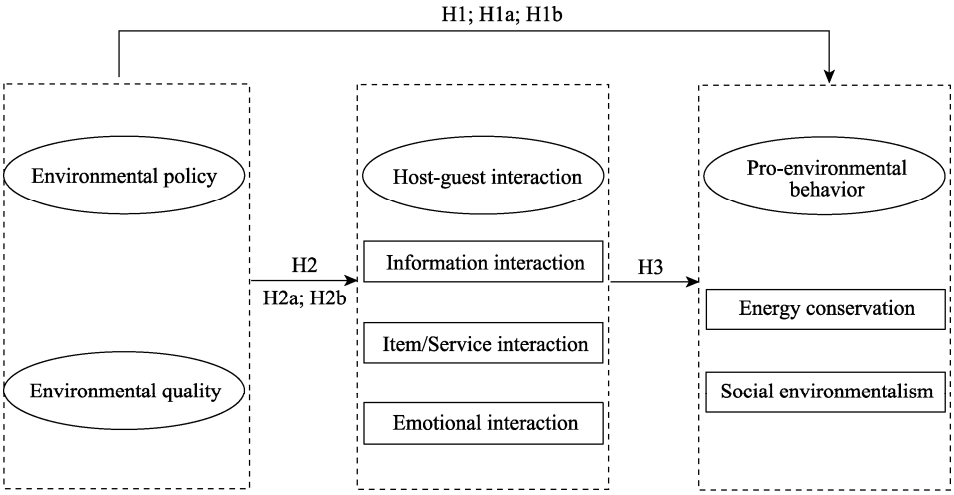

Figure 1 Research model

3 Methodology

3.1 Questionnaire design

The scale of this study, which is modified to adapt to suit the specific context of residential accommodation, is based on a widely utilized and well-established scale in previous research. The scale consists of two sections. The first section measures four key variables: environmental policy, environmental quality, host-guest interaction, and tourists' pro-environmental behavior. Each variable is assessed using a seven-point, Likert scales, that included anchor points ranging from "Strongly Disagree" (1) to "Strongly Agree" (7). The second section encompasses demographic characteristics, including age, gender, occupation, income, and other basic information of the respondents.

(1) Environmental quality is assessed using items adapted from the scale developed by China National Tourism Administration (CNTA, http://www.cnta.gov.cn/) (Liu et al.,

2019; Si et al., 2022). The items used in this study include "The linens in the homestay room are tidy and hygienic", "The public area within the homestay is clean and well-maintained" And "The overall environment of the Homestay is clean and hygienic".

(2) Environmental policy. In this study, environmental policy encompasses the guidelines and mandates that govern environmentally conscious behavior, environmental education, incentives and sanctions that are applied to tourists' environmental behavior conducted while staying in homestay. Drawing upon the work of Yu et al (2015), the environmental policy covers the following aspects: "Host- initiated environmental education can improve my behavior", "The host encourages guests to reduce or avoid the use of disposable items", and "The homestay metered provision of hot water and charging for water and energy based on usage".

(3) Host-guest Interaction. Host-Guest Interaction has been studied and analyzed by scholars from various dimensions, including location, tourist experience, customer outlook, and time. This study classifies Host-Guest Interaction into three categories: Information Interaction, Goods/Services Interaction, and Emotional Interaction. Information Interaction refers to the transmission of environmental protection information and signage in homestay. Goods/Services Interaction encompasses the availability and provision of hygienic and eco-friendly amenities within the homestay. Based on the research of Luo et al. (2020), Information Interaction and Goods/Services Interaction are measured by following items, including "The host offered small, locally-sourced gifts during my stay", "The host provided insights on environmental regulations and recommendations", "The homestay features labels indicating environmental protection" and "environmental brochures are available in the homestay". Emotional Interaction primarily involves the quality of the relationship between the hosts and the tourists. This includes the concept of genuine emotional interaction, which considers the sincerity and closeness of the emotional connection between both parties, as well as the friendliness of their attitude. One item adapted from Li et al. (2021) to measure the Emotional Interaction, which is "The host deepened my understanding of the local area through our friendly and smooth communication".

(4) Tourists' pro-environmental behavior. Tourists' Pro-Environmental Behavior is commonly studied through two dimensions: Energy-Saving Pro-Environmental Behavior and Social Environmentalism Pro-Environmental Behavior (Wang et al., 2018b). This classification aligns with the widely accepted dimensions of pro-environmental behavior in the mainstream tourism industry, both domestically and internationally. Energy-Saving Pro-Environmental Behavior encompasses the actions taken by tourists to conserve resources, protect the environment, and properly care for the facilities in the homestay. This dimension is informed by the work of Dolnicar et al (2017) and includes behaviors such as: "Turning off electrical devices when leaving the room", "Conserving water by turning off taps, showers, and avoiding waste", "Properly disposing of waste in trash cans" and "Ordering food in appropriate quantities to reduce waste"; Social environmentalism pro-environmental behavior mainly focuses on tourists' attachment to and dependence on the local environment of their tourist destination. This dimension is based on the research of Wang et al (2018) and encompasses behaviors such as: "Protecting the local environment from pollution" and "Respecting local customs and values by adopting local practices".

3.2 Data collection and sample characteristics

The study selects homestay groups in Pingtan Comprehensive Experimental Area, Fujian Province, China as the research sample, which meets the need of "homestay situation" constructed by the model. The destination is known for its stone house, a typical representative of traditional residential architecture in Fujian province, glowing blue patches, also known as "blue sand" or "blue tears", and beautiful subtropical island scenery. It attracts tourists from various provinces in southeast China to visit, and the various homestays on the island are the accommodation choices of most tourists. Data were collected by online and off-line questionnaires, which mainly entrusted the hosts of the homestays to distribute questionnaires to guests who lived in the homestays, and the online questionnaire relied on the internal Wechat groups and other social medias of the hosts. The questionnaire survey times over a ten-day period, from March 25 to April 6, 2022. A total of 489 questionnaires were distributed, of which 437 were valid, indicating an effective rate of 89.18%. Among 437 respondents, 61% were female, more than half were 18–25 years old, and 69 % had a bachelor' s degree. The respondents were mainly business personnels or students. The sample objectively reflects the actual situation of the demographic characteristics of homestay tourists in the case.

4 Results

4.1 Measurement model

Utilizing SPSS 24.0 for reliability testing, the results revealed that the Cronbach's alpha coefficients for the constructs under investigation ranged from 0.695 to 0.889, indicating a high level of reliability for the questionnaire. The Kaiser-Meyer-Olkin (KMO) was 0.965 (above the benchmark of 0.9). The Bartlett's Test of Sphericity produced a chi-squared approximation of 9439.681 with 528 degrees of freedom, which was significant (P<0.01). This result indicated that the overall quality of the measurement model met the standard, indicating suitability for exploratory factor analysis (EFA). Based on Principal Component Analysis, nine items were removed due to excessive cross-loading or misalignment with the original dimension, as determined through rotation of the cross-loading matrix.

Utilizing AMOS 23.0 for confirmatory factor analysis (CFA), seven items were excluded (REB4, SEB2, TIP3, INFO6, PERS2, PERS4, EQ2) to optimize the model's fit, based on the Modification Indices. The factor loadings of all remaining items were found to be greater than 0.5, and each item was determined to be statistically significant at a 0.1% level, suggesting that they effectively represent the properties of the underlying latent variables. The environmental quality, host-guest interaction, and pro-environmental behavior constructs were determined to be satisfactory, as indicated by their high Cronbach' s α and CR coefficients (greater than 0.7). However, the environmental policy construct had a lower coefficient (0.695 and 0.697), which was considered to be acceptable given its composition of only three items. This suggested that the overall reliability of the research data was considered to be sufficient. The results are shown in Table 1.

The mean of most the construct' s average variance extracted (AVE) was observed to span from 0.435 to 0.617, surpassing the minimal benchmark of 0.500, with the sole exception being the construct of environmental policy, which was slightly below the threshold of 0.5. These results indicated that the items utilized to gauge a particular variable possessed commendable convergent validity. The findings from the discriminant validity assessment (as presented in Table 2) revealed that most of the correlation coefficients were found to be lower than the square root of the AVE. This demonstrated the existence of a satisfactory level of discriminant validity between the questions that gauge diverse variables. The results are shown in Table 2.

Table 1 The results of confirmatory factor analysis

Variables and measurements items	Factors loading	Cronbach' s alpha	*t*-value	CR	AVE
Environmental quality		0.824			
The linens in the homestay room are tidy and hygienic	0.812		–		
The public area within the homestay is clean and well-maintained	0.814		18.447***	0.828	0.617
The overall environment of the homestay is clean and hygienic	0.727		15.606***		
Environmental policy		0.695			
Host-initiated environmental education can improve my behavior	0.685		–		
The host encourages guests to reduce or avoid the use of disposable Items	0.694		12.205***	0.697	0.435
The homestay metered provision of hot water and charging for water and energy based on usage	0.595		10.670***		
Host-guest interaction		0.852			
The host deepened my understanding of the local area Through our friendly and smooth communication	0.695		–		
The host offered small, locally-sourced gifts during my stay	0.736		13.968***		
The host provided insights on environmental regulations and recommendations	0.738		13.829***	0.853	0.538
The homestay features labels indicating environmental protection	0.738		13.915***		
Environmental brochures are available in the homestay	0.758		13.975***		
Pro-environmental behavior		0.889			
Ordering food in appropriate quantities to reduce waste.	0.753		–		
Properly disposing of waste in trash cans	0.775		16.420***		
Conserving water by turning off taps, showers, and avoiding Waste	0.775		16.141***	0.889	0.572
Turning off electrical devices when leaving the room	0.740		15.479***		
Respecting local customs and values by adopting local practices.	0.735		15.252***		
Protecting the local environment from pollution	0.758		15.667***		

Note: $P<0.05$ is significant; *** indicates $P<0.01$.

Table 2 Results of discriminant validity test

Variables	EQ	EP	HGI	PB
Environmental quality	0.785			
Environmental policy	0.768***	0.659		
Host-guest interaction	0.794***	0.919***	0.733	
Pro-environmental behavior	0.791***	0.609***	0.692***	0.756

Note: $P<0.05$ is significant; *** indicates $P<0.01$

4.2 Structural model and hypotheses testing

The goodness-of-fit indices of the structural model fit the data well: x^2/df=2.915, *RMSEA*=0.066, *GFI*=0.916, *NFI*=0.919, *TLI*=0.933, *CFI*=0.945, *PGFI*=0.676, *PNFI*=0.763. The effect of environmental policy on pro-environmental behavior was not significant ($P>0.05$), H1b was not supported. However, the effect of environmental quality on pro-environmental behavior was statistically significant (0.688,

P<0.01), H1a was supported. Both environmental quality (0.215, *P*<0.05) and environmental policy (0.754, *P*<0.01) had significant positive effects on the host-guest interaction, therefore, H2a and H2b were supported. Host-guest interaction had a significant positive effect on pro-environmental behavior (0.462, *P* <0.05), and H3 was supported. The results are shown in Figure 2.

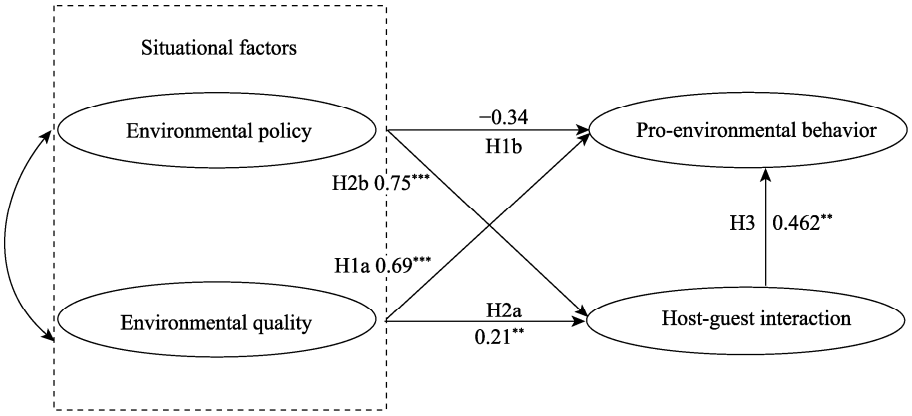

Figure 2 The results of structural equation model test
Note: *P*<0.05 is significant; *** indicates *P*<0.01.

4.3 Mediating effects

In order to examine the hypothesized mediating effects, we employed the bootstrap procedure in Amos 23.0 (Jose, 2013). The results are shown in Table 3. The number of bootstrap trials was fixed at 2000 with a confidence level of 95%. The results indicated that the comprehensive impact of environmental quality on tourists' pro-environmental behavior was significant (β=0.617), and the 95% confidence interval was determined to be (*CI*: 0.556 to 0.678). The direct effect was also found to be significant (β=0.457), with a 95% confidence interval of (*CI*: 0.377 to 0.537). The mediatory effect of host-guest interaction in the effect path of environmental quality on tourists' pro-environmental behavior was calculated to be 0.16, with an effect proportion of 25.93%. The lower and upper bounds of the 95% confidence interval were determined to be (*CI*: 0.104 to 0.272) and did not contain 0, which supported the conclusion that host-guest interaction partially mediated the impact of environmental quality on tourists' pro-environmental behavior, thereby confirming Hypothesis 4a.

The test revealed that the total effect of environmental policy on tourists' pro-environmental was significant (β= 0.376, *CI*: 0.307 to 0.444), but the direct effect was not significant (*CI*: –0.034 to 0.137). On the other hand, the indirect effect of environmental policy on tourists' pro-environmental behavior through host-guest interaction was found to be significant (β=0.324, *CI*: 0.291 to 0.507). This supported the conclusion that host-guest interaction fully mediated the effect of environmental policy on tourists' pro-environmental behavior. Hence, Hypothesis 4b is confirmed.

Table 3 The results of mediation effect test

Effect	Path	Effect	BootLICI	BootUICI	Percentage (%)
Total effect	（EQ→PRB）	0.617	0.556	0.678	
Direct effect	（EQ→PRB）	0.457	0.377	0.537	74.07
Indirect effect	（EQ→HGI→PRB）	0.16	0.104	0.272	25.93
Result	H4a		Partially mediate effect		
Total effect	（EP→PRB）	0.376	0.307	0.444	
Direct effect	（EP→PRB）	0.051	–0.034	0.137	Not significant
Indirect effect	（EP→HGI→PRB）	0.324	0.291	0.507	100.00
Result	H4b		Totally mediate effect		

Note: EQ= Environmental quality; EP= Environmental policy; TGI= Host-guest interaction; PRB= Pro-environmental behavior.

5 Discussion and conclusions

5.1 Discussion

This study focuses on the convergence of several significant aspects within the field of tourism, namely the increasing recognition and adoption of sustainable tourism practices, as well as the influential role played by hosts in molding pro-environmental behavior through their interactions with guests. This study presents a model that examines the effects of environmental policy, environmental quality, and

host-guest interaction on tourists' pro-environmental behavior in the context of homestays. The model is developed based on the Stimuli-Organism-Response (SOR) theory and is supported by the results of data analysis and hypothesis testing. The hypotheses were investigated using Structural Equation Modeling, with primary data taken from a sample of homestays situated on Pingtan Island. The results of the investigation demonstrate that:

(1) The significance of environmental quality within the framework of situational factors is of utmost importance in influencing the pro-environmental behavior of tourists. The results indicate that by enhancing situational elements, such as enhancing the quality of the environment, it is possible to promote pro-environmental behavior among tourists. The findings indicate a significant and positive correlation between environmental quality and tourists' pro-environmental behavior. Research has indicated that a positive correlation exists between the environmental quality and cleanliness of homestays, and the subsequent evaluation of the environment by tourists. This good rating, in turn, fosters a heightened sense of environmental consciousness among tourists, leading them to refrain from participating in activities that are detrimental to the environment. This finding aligns with the conclusions drawn in prior research conducted by researchers such as Wentao Si, Jingyan Liu, and others (Liu et al., 2019; Si et al., 2022).

(2) The observed relationship between environmental policies and tourists' pro-environmental behavior did not yield statistically significant results. The observed phenomenon can be ascribed to the notion that homestays primarily encourage tourists to participate in environmentally good actions through amicable recommendations, rather than obligatory mandates. Moreover, it is imperative to consider the various interpretations of environmental policies. From a policy perspective, it is essential to ensure that rules are established in a reasonable manner, and that the corresponding punishments for different categories of violations are properly delineated. From a policy standpoint, it is important to ensure that signage is distributed in a manner that is both reasonable and scientifically informed, with the aim of making it easily observable by customers. If the aforementioned prerequisites are not satisfied, the effectiveness of environmental policy becomes challenging (Wang et al., 2018a). Consequently, the impact of environmental legislation on the pro-environmental behavior of tourists is constrained.

(3) The interaction between hosts and guests is directly influenced by situational conditions. Research indicates that when the environmental quality of homestays is high and the environmental policies are well established, tourists generally have a greater sense of comfort and ease, which is subsequently manifested in their relationships with the hosts. Consequently, this phenomenon engenders enhanced levels of amicability and positivity in the interactions between hosts and visitors, thereby facilitating the transmission of information, the interaction pertaining to goods and services, and the establishment of emotional bonds. The aforementioned findings serve to enhance and broaden the current comprehension of the factors that precede host-guest interaction and co-creation within the homestay setting. The findings suggest that within the travel sector, the dynamics of host-guest interaction are shaped not just by external factors such as time, resources, and opportunities, but also by situational elements such as environmental quality and environmental policy.

(4) Host-guest interaction has been found to have a favorable impact on tourists' pro-environmental behavior. Furthermore, this interaction serves as a mediator between situational factors and tourists' pro-environmental behavior. This phenomenon is evident within the framework of homestay arrangements. Tourists, as recipients, acquire information, services, psychological gratification, and develop a sense of connection with the local culture by engaging in meaningful conversations and emotional exchanges with their hosts. Consequently, they establish psychological affiliation and reliance on the homestay experience. The acquisition of resources and amenities, as well as the emotional gratification experienced by tourists, may engender a sense of reciprocity towards the local hosts. The aforementioned observations indicate that tourists exhibit a heightened awareness towards their behaviors, exhibit conservation efforts, and demonstrate a willingness to acknowledge and honor the indigenous culture while staying in a homestay. The research findings align with opinion of Li et al. (2021).

5.2 Theoretical and Managerial implications

Although the subject of pro-environmental behavior among tourists has been extensively discussed in the field of tourism, with significant research efforts dedicated to its development (Abrahamse et al., 2009; Chen and Tung, 2014), the literature has just begun to comprehend the formation of pro-environmental behavior by taking into account an individual's ERB as contextualized actions. This study contributes to the current body of research by offering a more comprehensive understanding of the factors that shape tourists' ecologically responsible activities. This study contributes to the existing body of tourism research by incorporating the SOR (Stimulus-Organism-Response) framework. Specifically, it addresses the previously overlooked aspects of environmental quality, policy, and host-guest interaction. Previous literature on tourism, as cited by Powell and Ham (2008) and Chen and Tung (2014), has failed to consider these factors. The findings of this study affirm the significance of situational factors and the interaction between hosts and guests as influential precursors, thereby demonstrating the successful application of the SOR theory.

The existing management measures employed to govern

tourist behavior in homestays, including friendly reminders and verbal cues, have demonstrated limited efficacy in attaining the intended outcomes. Prior studies have underscored the need of augmenting situational variables and cultivating a rapport between hosts and guests to facilitate the advancement of sustainable growth within the homestay sector (Wang et al., 2018b; Li et al., 2021). The optimization of multiple critical pathways can facilitate the attainment of this objective:

First, enhancing the environmental quality in order to lessen the impact of the "Broken Windows Theory". According to this theory, it can be posited that an unfavorable scenic landscape will have a detrimental impact on the environment (Lang et al., 2010; Liu et al., 2019). The study's findings indicate that the presence of a disorderly and unclean environment can convey the message to tourists that engaging in environmental vandalism is acceptable at the location, thereby rendering pro-environmental actions ineffectual. Conversely, there exists a positive correlation between the quality of the picturesque area's environment and the likelihood of tourists participating in pro-environmental actions during their visit to the tourist destination. Hence, it is imperative to acknowledge the crucial significance of environmental quality. Therefore, tourism managers should prioritize the provision of a hygienic and enjoyable setting, since this has the potential to incentivize greater participation of tourists in pro-environmental activities. Improving the environmental quality of homestay accommodations has the potential to enhance the compatibility between tourists and their surroundings, so prompting them to reassess their incentives for engaging in environmentally harmful behaviors. The implementation of this method entails the preservation of the internal environmental conditions within a homestay. This entails ensuring that public spaces, such as the entrance, kitchen, living room, and terrace, are properly landscaped and maintained in an orderly manner. These areas serve as the initial points of contact for guests upon entering the homestay, and initial impressions hold greater significance than subsequent interventions. Additionally, meticulous attention should be given to maintaining cleanliness in the guest room, as it is the primary area where tourists spend a significant amount of time. This includes attending to details such as bed linens, wall corners, and toilet facilities. Furthermore, enhancing the infrastructure of the homestay involves providing appropriate waste disposal facilities and facilitating the ease of engaging in pro-environmental behaviors. Through the provision of a pleasant and comfortable lodging experience, hosts have the potential to instill a sense of mindfulness among tourists, ultimately fostering the adoption of pro-environmental behaviors.

Second, developing resilient environmental policies to mitigate the impacts of the "Butterfly Effect". Prior studies have indicated that tourists' adoption of environmentally friendly behavior can be influenced by factors such as environmental knowledge and the guidance provided by hosts through advice and signage (Cheng and Wu, 2015). However, the current study suggests that the direct effects of environmental policies on tourists' pro-environmental behavior are constrained. It is hypothesized that the effectiveness of non-mandatory environmental policies is frequently diminished due to inadequate enforcement measures. In pursuit of this objective, aside from utilizing environmental education signage, homestay hosts have the capacity to employ diverse strategies. These strategies encompass the provision of effective feedback channels, the provision of environmental incentives to tourists, and the reinforcement of environmental policies through the implementation of reward and punishment mechanisms. The impact of environmental policy on visitors' pro-environmental actions is mostly determined by the mediating influence of host-guest interaction. Therefore, it is imperative for homestay hosts to actively engage in transparent communication with tourists, so ensuring that they are promptly informed about the prevailing institutional rules. By providing proactive environmental and behavioral guidance, it is possible to enhance tourists' understanding of the significance of pro-environmental behavior and motivate them to embrace pro-environmental activities.

Third, promoting favorable emotional connections by augmenting the interaction between hosts and guests. The establishment of robust host-guest interactions and emotional bonds is a crucial element in fostering sustainable development within the context of homestay accommodations. This can be accomplished through the processes of information interaction, goods and services interaction, and emotional interaction. In the context of information interaction, it is imperative for homestay hosts to augment their communication efforts with tourists. This entails offering them valuable travel advice and pertinent information regarding the utilization of homestay amenities. Additionally, hosts should strive to exhibit genuine sincerity and hospitality, hence fostering the establishment of a harmonious relationship. In order to uphold a favorable reputation, it is advisable for homestay hosts to refrain from engaging in unfavorable conduct, including but not limited to imposing exorbitant fees and engaging in unethical practices. By employing this approach, hosts have the potential to cultivate a sentiment of loyalty and appreciation within tourists, ultimately leading to the manifestation of environmentally conscious actions. During the course of host and guest interaction, the utilization of the Chinese concept of face can serve as an effective tool for homestay owners to mitigate ecologically detrimental behavior. The phenomenon of "face consciousness" manifests itself in several subtle manners, such as commendation, public acknowledgement, hints for better conduct, and implicit yet discernible expressions of dislike (Wang et al., 2018b). In general, hosts can enhance their communication skills with visitors by leveraging their knowledge of the Chinese cultural background. This can

enable hosts to effectively persuade tourists to engage in pro-environmental behaviors throughout their interactions.

5.3 Limitations and directions for future research

The present study encompasses many constraints that present avenues for further exploration in subsequent research endeavors. The current discourse exhibits an absence of dialogue regarding the correlation between different dimensions of host-guest interaction and various facets of pro-environmental behavior. Furthermore, as a result of time constraints and the focus on COVID-19 prevention and control, this study exclusively examines homestays located on Pingtan Island. The data gathering process mostly relies on online sources, which may result in limitations regarding the extent of in-depth research conducted on various types of homestays. In order to enhance the scope and depth of research on host-guest interaction, homestay situations, and tourists' pro-environmental behavior, it is recommended that comprehensive interviews be conducted in the future. These interviews would aim to analyze the mechanisms through which multiple tourist destinations, various types of homestay situations, and different dimensions of host-guest interaction influence tourists' inclination towards pro-environmental behavior.

References

Abrahamse W, Steg L, Gifford R, et al. 2009. Factors influencing car use for commuting and the intention to reduce it: A question of self-interest or morality? *Transportation Research Part F: Traffic Psychology and Behaviour*, 12(4): 317–324.

Ajzen I. 2015. The theory of planned behaviour is alive and well, and not ready to retire: A commentary on Sniehotta, Presseau, and Araújo-Soares. *Health Psychology Review*, 9(2): 131–137.

Ballantyne R, Packer J, Sutherland L A. 2011. Visitors' memories of wildlife tourism: Implications for the design of powerful interpretive experiences. *Tourism Management*, 32(4): 770–779.

Barr S. 2003. Strategies for sustainability: Citizens and responsible environmental behaviour. *Area*, 35(3): 227–240.

Bimonte S, Punzo L F. 2016. Tourist development and host-guest interaction: An economic exchange theory. *Annals of Tourism Research*, 58: 128–139.

Budovska V, Torres A, Øgaard T. 2020. Pro-environmental behaviour of hotel guests: Application of the theory of planned behaviour and social norms to towel reuse. *Tourism and Hospitality Research*, 20(1): 105–116.

Chen M F, Tung P J. 2014. Developing an extended theory of planned behavior model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management*, 36: 221–230.

Cheng T M, Wu H C. 2015. How do environmental knowledge, environmental sensitivity, and place attachment affect environmentally responsible behavior? An integrated approach for sustainable island tourism. *Journal of Sustainable Tourism*, 23(4): 557–576.

Cook K S, Emerson R M. 1987. Social exchange theory. In: Cook K S (ed.). Social exchange theory. Beverly Hills, USA: Sage Publications.

Cvelbar L K, Grün B, Dolnicar S, et al. 2019. 'To clean or not to clean?' Reducing daily routine hotel room cleaning by letting tourists answer this question for themselves. *Journal of Travel Research*, 60(1): 220–229.

Daryanto A, Song Z. 2021. A meta-analysis of the relationship between place attachment and pro-environmental behaviour. *Journal of Business Research*, 123: 208–219.

Dolnicar S. 2020. Designing for more environmentally friendly tourism. *Annals of Tourism Research*, 84: 102933. DOI: 10.1016/ j.annals.2020. 102933.

Erdogan M, Akbunar S, Asik U O, et al. 2012. The effects of demographic variables on students' responsible environmental behaviors. *Procedia-Social and Behavioral Sciences*, 46: 3244–3248.

Esfandiar K, Pearce J, Dowling R, et al. 2023. The extended theory of planned behaviour model and national parks visitors' pro-environmental binning behaviour: A cross-cultural perspective. *Journal of Outdoor Recreation and Tourism*, 42: 100602. DOI: 10.1016/j.jort.2022.100602.

Fennell D A. 2006. Evolution in tourism: The theory of reciprocal altruism and tourist–host interactions. *Current Issues in Tourism*, 9(2): 105–124.

Gabarda-Mallorquí A, Garcia X, Fraguell R M, et al. 2021. Are hotel stay characteristics influencing guests' environmental behaviour? Predicting water conservation habits. *Current Issues in Tourism*, 24(16): 2342–2356.

Gao Y, Ma Y, Bai K, et al. 2021. Which factors influence individual pro-environmental behavior in the tourism context: Rationality, affect, or morality? *Asia Pacific Journal of Tourism Research*, 26(5): 516–538.

Goh E, Ritchie B, Wang J. 2017. Non-compliance in national parks: An extension of the theory of planned behaviour model with pro-environmental values. *Tourism Management*, 59: 123–127.

Grønhøj A, Thøgersen J. 2017. Why young people do things for the environment: The role of parenting for adolescents' motivation to engage in pro-environmental behaviour. *Journal of Environmental Psychology*, 54: 11–19.

Han H. 2015. Travelers' pro-environmental behavior in a green lodging context: Converging value-belief-norm theory and the theory of planned behavior. *Tourism Management*, 47: 164–177.

Han H, Kim Y. 2010. An investigation of green hotel customers' decision formation: Developing an extended model of the theory of planned behavior. *International Journal of Hospitality Management*, 29(4): 659–668.

Han J H, Lee M J, Hwang Y S. 2016. Tourists' environmentally responsible behavior in response to climate change and tourist experiences in nature-based tourism. *Sustainability*, 8(7): 644. DOI: 10.3390/su8070644.

Hines J M, Hungerford H R, Tomera A N. 1987. Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *The Journal of Environmental Education*, 18(2): 1–8.

Holloway D, Green L, Holloway D. 2011. The intratourist gaze: Grey nomads and 'other tourists' . *Tourist Studies*, 11(3): 235–252.

Høyem J. 2020. Outdoor recreation and environmentally responsible behavior. *Journal of Outdoor Recreation and Tourism*, 31: 100317. DOI: 10.1016/j.jort.2020.100317.

Imran S, Alam K, Beaumont N. 2014. Environmental orientations and environmental behaviour: Perceptions of protected area tourism stakeholders. *Tourism Management*, 40: 290–299.

Jans L. 2021. Changing environmental behaviour from the bottom up: The formation of pro-environmental social identities. *Journal of Environmental Psychology*, 73: 101531. DOI: 10.1016/j.jenvp.2020.101531.

Jose P E. 2013. Doing statistical mediation and moderation. New York, USA: Guilford Press.

Kalantari K, Fami H S, Asadi A, et al. 2007. Investigating factors affecting environmental behavior of urban residents: A case study in Tehran City-Iran. *American Journal of Environmental Sciences*, 3(2): 67–74.

Kilbourne W, Pickett G. 2008. How materialism affects environmental beliefs, concern, and environmentally responsible behavior. *Journal of Business Research*, 61(9): 885–893.

Kim A K, Weiler B. 2013. Visitors' attitudes towards responsible fossil collecting behaviour: An environmental attitude-based segmentation approach. *Tourism Management*, 36: 602–612.

Kim M S, Stepchenkova S. 2020. Altruistic values and environmental knowledge as triggers of pro-environmental behavior among tourists. *Current Issues in Tourism*, 23(13): 1575–1580.

Lan T, Zheng Z, Tian D, et al. 2021. Resident-tourist value co-creation in the intangible cultural heritage tourism context: The role of residents' perception of tourism development and emotional solidarity. *Sustainability*, 13(3): 1369. DOI: 10.3390/su13031369.

Lang D L, Salazar L F, Crosby R A, et al. 2010. Neighborhood environment, sexual risk behaviors and acquisition of sexually transmitted infections among adolescents diagnosed with psychological disorders. *American Journal of Community Psychology*, 46: 303–311.

Lee T H, Jan F H. 2015. The influence of recreation experience and environmental attitude on the environmentally responsible behavior of community-based tourists in Taiwan. *Journal of Sustainable Tourism*, 23(7): 1063–1094.

Li Q, Wu M. 2020. Tourists' pro-environmental behaviour in travel destinations: Benchmarking the power of social interaction and individual attitude. *Journal of Sustainable Tourism*, 28(9): 1371–1389.

Li S, Liu M, Wei M. 2021. Host sincerity and tourist environmentally responsible behavior: The mediating role of tourists' emotional solidarity with hosts. *Journal of Destination Marketing & Management*, 19: 100548. DOI: 10.1016/j.jdmm.2020.100548.

Lin Z, Chen Y, Filieri R. 2017. Resident-tourist value co-creation: The role of residents' perceived tourism impacts and life satisfaction". *Tourism Management*, 61: 436–442.

Liu J, Wu J S, Che T. 2019. Understanding perceived environment quality in affecting tourists' environmentally responsible behaviours: A broken windows theory perspective. *Tourism Management Perspectives*, 31: 236–244.

Loureiro S M C, Guerreiro J, Han H. 2022. Past, present, and future of pro-environmental behavior in tourism and hospitality: A text-mining approach. *Journal of Sustainable Tourism*, 30(1): 258–278.

Luo J, Zhuang C, Liu J, et al. 2023. A comprehensive assessment approach to quantify the energy and economic performance of small-scale solar homestay hotel systems. *Energy and Buildings*, 279: 112675. DOI: 10.1016/j.enbuild.2022.112675.

Luo W T, Xie S Y, Li Y J, et al. 2020. Study on the perceived importance of host-guest interaction modes in homestays by tourists. *Journal of Central China Normal University* (*Natural Sciences*), 54(6)：1004–1014. (in Chinese)

Mair J, Bergin-Seers S. 2010. The effect of interventions on the environmental behaviour of Australian motel guests". *Tourism and Hospitality Research*, 10(4): 255–268.

Maoz D. 2006. The mutual gaze. *Annals of Tourism Research*, 33(1): 221–239.

May A M, McGarvey M G, Gustafson C R, et al. 2021. Gender, environmental issues and policy: An examination of the views of male and female economists. *Ecological Economics*, 182: 106877. DOI: 10. 1016/ j. ecolecon.2020.106877.

Mehrabian A, Russell J A. 1974. An approach to environmental psychology. Cambridge, MA, USA: MIT Press.

Panwanitdumrong K, Chen C L. 2021. Investigating factors influencing tourists' environmentally responsible behavior with extended theory of planned behavior for coastal tourism in Thailand. *Marine Pollution Bulletin*, 169: 112507. DOI: 10.1016/j.marpolbul.2021.112507.

Pizam A, Uriely N, Reichel A. 2000. The intensity of tourist-host social relationship and its effects on satisfaction and change of attitudes: The case of working tourists in Israel. *Tourism Management*, 21(4): 395–406.

Powell R B, Ham S H. 2008. Can ecotourism interpretation really lead to pro-conservation knowledge, attitudes and behaviour? Evidence from the Galapagos Islands. *Journal of Sustainable Tourism*, 16(4): 467–489.

Rivera J. 2004. Institutional pressures and voluntary environmental behavior in developing countries: Evidence from the Costa Rican hotel industry. *Society and Natural Resources*, 17(9): 779–797.

Ross D, Saxena G. 2019. Participative co-creation of archaeological heritage: Case insights on creative tourism in Alentejo, Portugal. *Annals of Tourism Research*, 79: 102790. DOI: 10.1016/j.annals.2019.102790.

Si W, Jiang C. and Meng L. 2022. The relationship between environmental awareness, habitat quality, and community residents' pro-environmental behavior—Mediated effects model analysis based on social capital. *International Journal of Environmental Research and Public Health*, 19(20): 13253. DOI: 10.3390/ijerph192013253.

Sidique S F, Joshi S V, Lupi F. 2010. Factors influencing the rate of recycling: An analysis of Minnesota counties. *Resources*, *Conservation and Recycling*, 54(4): 242–249.

Smith V L. 2012. Hosts and guests: The anthropology of tourism. Philadelphia, USA: University of Pennsylvania Press.

Su L, Hsu M K, Boostrom J R E. 2020. From recreation to responsibility: Increasing environmentally responsible behavior in tourism. *Journal of Business Research*, 109: 557–573.

Su L, Huang S S, Pearce J. 2018a. How does destination social responsibility contribute to environmentally responsible behaviour? A destination resident perspective. *Journal of Business Research*, 86: 179–189.

Su L, Swanson S R. 2017. The effect of destination social responsibility on tourist environmentally responsible behavior: Compared analysis of first-time and repeat tourists. *Tourism Management*, 60: 308–321.

Su L, Swanson S R, Chen X. 2018b. Reputation, subjective well-being, and environmental responsibility: the role of satisfaction and identification". *Journal of Sustainable Tourism*, 26(8): 1344–1361.

Tam K P, Chan H W. 2018. Generalized trust narrows the gap between environmental concern and pro-environmental behavior: Multilevel evidence. *Global Environmental Change*, 48: 182–194.

Thøgersen J. 2006. Norms for environmentally responsible behaviour: An extended taxonomy. *Journal of Environmental Psychology*, 26(4): 247–261.

Tkaczynski A, Rundle-Thiele S, Truong V D. 2020. Influencing tourists' pro-environmental behaviours: A social marketing application. *Tourism Management Perspectives*, 36: 100740. DOI: 10.1016/ j.tmp. 2020. 100740.

Wang C, Zhang J, Cao J, et al. 2019. The impact of behavioral reference on tourists' responsible environmental behaviors. *Science of The Total Environment*, 694: 133698. DOI: 10.1016/j.scitotenv.2019.133698.

Wang C, Zhang J, Yu P, et al. 2018a. The theory of planned behavior as a model for understanding tourists' responsible environmental behaviors: The moderating role of environmental interpretations. *Journal of Cleaner Production*, 194: 425–434.

Wang W, Wu J, Wu M Y, et al. 2018b. Shaping tourists' green behavior: The hosts' efforts at rural Chinese B&Bs. *Journal of Destination Marketing & Management*, 9: 194–203.

Wilson J Q, Kelling G L. 2017. The police and neighborhood safety: broken windows. In: Walker J T (ed.). Social, ecological, and environmental theories of crime. London, UK: Taylor & Francis.

Wu J, Wu H C, Hsieh C M, et al. 2022. Face consciousness, personal norms, and environmentally responsible behavior of Chinese tourists: Evidence from a lake tourism site. *Journal of Hospitality and Tourism Management*, 50: 148–158.

Yan A, Jia W. 2021. The influence of eliciting awe on pro-environmental behavior of tourist in religious tourism. *Journal of Hospitality and Tourism Management*, 48: 55–65.

Yu X, Wu X, Zhang Y, et al. 2015. Factors driving environmentally responsible behaviors by tourists: A case study of Taiwan, China. *Tourism Tribune*, 30(7): 49–59. (in Chinese)

主客互动视角下民宿情境因素对游客亲环境行为的影响研究—以平潭岛为例

王 佳[1,2]，李辰珧[3]，余梦婷[1]，王文辉[4]

1. 南昌大学旅游学院，南昌 330031；
2. 南昌大学旅游研究院，南昌 330031；
3. 暨南大学深圳旅游学院，广东深圳 518053
4. 海南师范大学旅游学院，海口 517127

摘 要：目的：旅游者体验与环境保护之间的协调已成为21世纪亟待解决的问题，因此，本研究旨在深入研究民宿体验中主人与旅游者之间的心理互动，探索情境因素对旅游者亲环境行为(TPEB)的影响机制。研究设计与方法：本研究采用定量方法来研究TPEB影响机制。于2022年3月25日至4月6日在中国福建省平潭岛，共回收有效问卷437份，以结构方程模型(SEM)为方法对其进行了分析。研究结果：环境质量和主客互动对游客的亲环境行为都有正向影响。此外，情境因素对主客互动有显著影响，主客互动又在情境因素对游客亲环境行为的影响中起中介作用。研究局限性/影响：首先，缺乏关于主客互动的不同维度与亲环境行为之间关系的讨论。其次，研究范围仅限于平潭岛的国内游客。因此，未来应该对不同类型的民宿以及不同维度的主客互动进行深入研究。实践意义：本研究从改善环境质量、制定稳健的环境政策、培养积极的情感联系等方面，为目的地管理在游客环境行为管理、降低民宿成本、低碳运营等方面提供了切实可行的措施和建议。独创性/价值：本研究通过研究情景因素的作用扩展了TPEB的相关研究，并拓宽了民宿情境中主客互动的驱动因素。

关键词：情境因素；游客亲环境行为；民宿；主客互动