A Study of the Influence of Destination Social Cues on Tourists' Protective Decision-Making in a Risky Environment

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Abstract: Tourism industry needs to reduce the perceived uncertainty of potential tourists after a crisis, and the attitudes of government management, businesses and residents are crucial as social information. Based on Protection action decision model (PADM), this paper develops a comprehensive model of social cues on tourists' uncertainty reduction. The survey responses from 395 potential tourists in China were analyzed using a structural equation model. The results show that the three social cues perceived by potential tourists (tourism firms' socially responsible behavior, destination resilience, and resident trustworthiness) are negatively related to perceived uncertainty; perceived uncertainty mediates the effect of social cues on travel intentions. Perceived effort has an important mediating role between socially responsible behavior of tourism firms and destination resilience and perceived uncertainty. This study helps destination governments and firms to adopt relevant strategies for post-crisis destinations to facilitate the recovery of local tourism.

1. Introduction

Tourism recovery is particularly important in the aftermath of disasters [1] (Williams & Baláž, 2015). Tourism is highly dependent on customers' perceptions of safety, is heavily affected by perceived uncertainty. Destination management organizations wishing to recover quickly after a tourism disaster first need to reduce tourists' perceived uncertainty. Despite the importance of uncertainty for tourism decision-making, to our knowledge, few studies have focused on the impact of destination social cues on perceived uncertainty. In the aftermath of a crisis, travelers are unable to predict what will happen at a destination before they arrive, and they seek external cues and up-to-date information about the destination [2] (Chua, Al-Ansi, Lee, 2020). Destination governments, social media, family, and friends may provide travelers with information about threats or protection [3] (Ritchie & Jiang, 2019). From a destination perspective, this study focuses on three subjects that are of interest to tourists: destination management organizations, companies, and residents. What behavioral information from the 3 main subjects can be useful information that can

help to reduce tourists' perceived uncertainty, and thus promote their travel intentions, is the main question that this study addresses.

This study aims to explore the mechanisms by which destination social cues (3 main subjects: businesses, DMOs, and residents) influence tourists' travel intentions in uncertainty environments. First, this study explored the role of perceived uncertainty between social cues and travel intention, revealed the perceived coping effects between social cues and travel intentions of potential tourists in risky environments, and introduced the PADM into the field of tourism risk for the first time for research, adding the individual's state of uncertainty to the second stage of the PADM (the perception stage) to broaden the validity of the modeling research. Second, based on the EASI theory, the mediating role of perceived effort between tourism corporate social responsibility behavior and destination resilience and perceived uncertainty is explored, revealing the interactions and mediating mechanisms of multiple factors in risky environments, which can help the destination government and enterprises to formulate relevant management strategies to promote the recovery of local tourism.

2. Literature Review and Hypotheses Development

2.1 The Protective Action Decision Model

The Protective Action Decision Model (PADM) is an important theoretical framework proposed by Lindell and Perry to describe public responses to threatening risk situations [4] (Lindell & Perry, 1992). The model describes that people receive risk information about environmental and social factors from various information sources, and the information and receiver characteristics lead to psychological activities: first, they pay attention to and understand the risk information presented, then they trigger risk perceptions, stakeholder perceptions, and protective behavior perceptions, and based on the perceptions and behavioral decisions, they develop and implement appropriate risk response behaviors [5](Lindell & Perry, 2012).

To date, PADM has been widely used in such fields as residents' intentions to shelter [6](Strahan & Watson, 2018), consumer behavior intention [7] (Liu, Ouyang & Cheng, 2019), Internet users' behaviors. There are limited studies used PADM to discuss the mechanisms of protective behavior.

According to the PADM, social cue information is derived from observing the behavior of others, and some of the cue information (favorable information: e.g., trustworthy, professional responsibility, etc.) influences protective behavioral decisions through benefit perception [5] (Lindell & Prerry, 2012). In uncertain environments, potential tourists' information about the destination is asymmetric, resulting in perceived uncertainty.
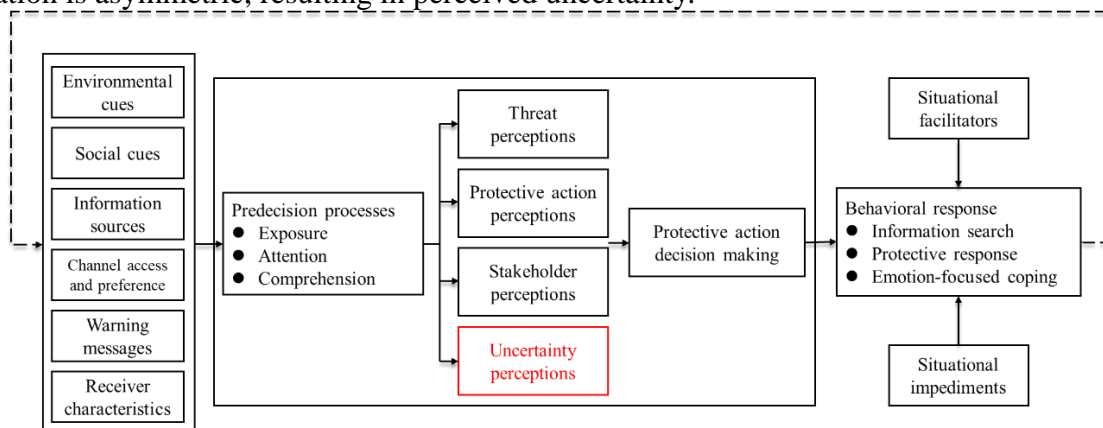

Figure 1: Uncertainty perceptions in the PADM (Adapted from[5](Lindell & Perry, 2012))

This study considers the individual's uncertainty state as a perception of the decision environment, which should be juxtaposed with three core perceptions—threat perceptions, protective action perceptions, and stakeholder perceptions and can be placed in the second stage of PADM (perception stage).

Uncertainty perceptions in the PADM is shown in Figue 1.

2.2 Social Cue Information Influences Protective Behavioral Decisions

In high-risk or crisis situations, tourists often search and seek safety and risk information in the pre-visit stage to reduce uncertainty and ensure safety [9-10](Aliperti & Cruz, 2019; Law, Buhalis, & Cobanoglu, 2014). The subjects that tourists are most concerned about before traveling are the three main subjects of the destination government, enterprises and residents. According to PADM, social cue information is derived from observing the behavior of others, and some of the cue information (favorable information: e.g., trustworthy, professional responsibility, etc.) influences protective behavioral decisions through benefit perceptions [5] (Lindell & Prerry, 2012). Thus, the objective of this paper is to determine which behavioral information of the three main subjects of the destination reduces the uncertainty of tourists through their perceived interests and thus influences their behavior and decisions?

With a first focus on tourism enterprises, the tourism products and services are inherently uncertain. Tourism products are intangible in character, and tourists need to rely on external cues to make travel decisions. Since the COVID-19 pandemic, travelers' perceptions of uncertainty have become increasingly salient, and information provided by destination suppliers helps reduce pre-purchase information asymmetries, which are critical to tourists' decisions (Karl, 2018). CSR behavior can be an important cue to reduce uncertainty due to the fact that CSR is a meaningful thing for the destination society and tourists (Font & Harris, 2004), and travelers may subconsciously infer that tourism companies will help the affected destination, and take care of the well-being of the local community through socially responsible behavior (Henderson, 2007), and a large body of research also suggests that performing CSR leads to favorable evaluations and post-purchase behavior (Jeon, Lee, & Jeong, 2020. In conclusion, the social responsibility activities of tourism enterprises in the current environment are efforts made in a responsible manner. Based on the theoretical relationship between corporate social responsibility and positive individual responses, this study hypothesizes that well-organized corporate social responsibility initiatives will enhance tourists' certainty. As a result, we propose the following hypothesis [8]:

H1: Socially responsible behavior of destination tourism enterprises has a negative effect on the perceived uncertainty of tourists.

Considering that tourists' perception of destination safety greatly influences their decision-making, the destination's resilience in responding to threats plays a crucial role. Destination resilience is defined as "the ability of a destination to minimize potential threats and respond quickly to a crisis by fostering adaptive capacity" (Mair, Ritchie, & Walters, 2016). Given that each crisis varies in scale and damage, destinations will adopt different measures and strategies to address the crisis, which requires destinations to be sufficiently resilient, and resilient destinations should be equipped to respond as quickly as possible to a crisis by developing adaptive capacity and minimizing potential threats (Mair, Ritchie, & Walters. 2016). Crisis-affected destinations need to move to a resilience-based planning approach. The capacity of post-disaster destinations can serve as a catalyst to inspire tourists' emotions towards the destination and also inspire tourists' trust in the destination. As a result, the following hypothesis is proposed:

H2: Destination resilience has a negative effect on the perceived uncertainty of tourists.

At the destination resident level, a potential tourist's trust in destination residents affects his or

her expected sense of security during the trip. Most behavioral research considers trust as a psychological state in which individuals accept vulnerability, based on confidence in others and positive expectations of others' behavior (Moorman, Zaltman, & Deshpande., 1992). In terms of constitutive structure, trust consists of cognitive and affective dimensions, with cognitive trust developing when individuals rely on the competence, knowledge, and reliability of others, while affective trust is based on the benevolence of others. Cognitive trust is grounded in the trustworthiness of others in communication, but affective trust is based on an emotional assessment of others' kindness, and these two trust dimensions reinforce each other (Czernek & Czakon, 2016). Trust is a necessary condition for a successful relationship between consumers and service providers, and in the tourism industry, there has been extensive research confirming that building trust in destinations, and trust in businesses (including online travel trust, and in travel and hospitality staff) are critical factors in promoting and successfully attracting tourists (Liu, Pu, Guan, 2016).

In uncertain environments, trust is a vital component that unites people and sustains their attitudes and behaviors (Fancourt, Steptoe, & Wright, 2020). Strategies such as risk information consistency, proactivity, credibility, and transparency are strategies to build public trust in periods of public health crisis. A high level of public trust in authorities leads to a reduction in risk perceptions resulting from COVID-19. Tourist trust in a destination consists of five dimensions involving multiple stakeholders, including authorities, tourists, residents, employees, and institutions (Juan et al.), with this study focusing on the resident dimension. Specifically, a tourist's interaction trust with residents before and during a trip affects the prospective tourist's expected security on future trips, and interaction trust refers to one person's belief that another person is reliable in his or her actions or words. Existing findings suggest that tourist-employee interaction trust influences traveler decision making, but given the contagious character of COVID-19, interaction trust between tourists and residents is diminished because destinations are full of uncertainties, such as the complexity and variety of residents contacted at the destination and the invisibility of asymptomatic infected individuals (Gössling, Scott, & Hall, 2020). Therefore, it has been argued that potential tourists' trust in the residents of the destination affects their sense of security and motivation to travel.As a result, the following hypothesis is proposed:

H3: The credibility of the destination's residents has a negative effect on the perceived uncertainty of tourists.

2.3 Perceived Uncertainty and Travel Intention

Perceived uncertainty refers to an individual's perception that he or she lacks sufficient information to make a prediction or decision (Milliken, 1987). In the COVID-19 pandemic, the public perceives an increased risk, leading to a loss of confidence in travel plans, which in turn causes a decrease in perceived uncertainty. Reduced perceived uncertainty may cause the public to be pessimistic about post-pandemic tourism. According to the protection motive theory, potential tourists will be more likely to react to protect their self-safety when faced with such unpromising risk issues (Zheng et al., 2021). When the public realizes the uncertain risk that tourism may bring, generating negative attitudes will discourage their intention to travel. In summary, the lower the perceived uncertainty of potential tourists in the context of the New Crown epidemic, the more likely they are to reduce their intention to travel, or to adopt protective behaviors.

H4: Perceived uncertainty has a significant negative effect on the intention to travel.

2.4 Mediating Role of Perceived Effort

In a crisis, the positive behavior of the destination and the socially responsible behavior of the

company often lead to a feeling of "solidarity" among the public in the crisis, which is a complex social emotion. According to the emotion as social information model, individuals who observe the behavior of others generate both emotional and cognitive responses, which jointly determine their behavior (Van Kleef, 2009; Kleef, Dreu, & Manstead, 2010). From this, it can be inferred that when tourists observe the efforts of the destination itself, such as positive responses after the emergence of confirmed cases, companies actively maintaining customer relations during the crisis, and performing socially responsible behaviors, they cause potential tourists to perceive the efforts of the subject and influence their behavior. As a result, the following hypothesis is formulated:

H5: Perceived effort mediates the relationship between destination resilience and uncertainty.

H6: Perceived effort mediates the relationship between tourism enterprises' social responsibility behavior and uncertainty.

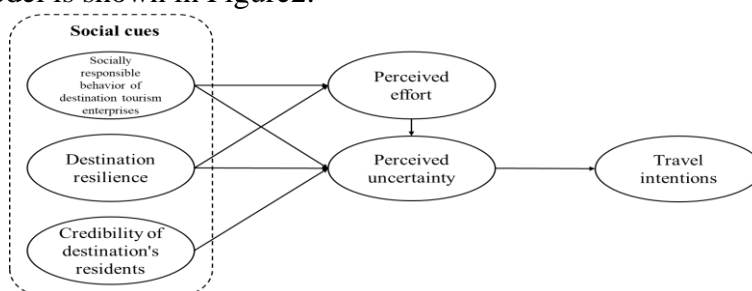Hypothesized model is shown in Figure2.

Figure 2: Hypothesized model

3. Method

3.1 Background and Measures

Data collection for this study began in October 2022. At that time, the outbreak in China was spreading widely and rapidly, and could easily cause insidious transmission among the population.

The question items used in this study were adapted from existing English literature. In this paper, the scale was translated in strict accordance with the translation-back-translation procedure to ensure the accuracy of the translation of the items and to avoid the effects of semantic differences between Chinese and English. In addition, a small pre-test was conducted to communicate with the respondents about the completeness, relevance and fluency of the scale, and the content and wording of some of the items were adjusted to conform to the theme of the study and to ensure that the respondents had a consistent understanding of the scale, thus completing the process of scale design, and forming the scale that was ultimately adopted in this study.

To measure the social responsibility behaviors of tourism enterprises, the scale design of Maignan and Ralston (2002) was integrated, such as "The tourism enterprises in this destination provide donations to disaster-stricken areas". For the measure of destination resilience, the authors have adapted it from the relevant performance of the destination community during a crisis, such as "the destination's information on crisis response is clear". In order to measure resident trustworthiness, the authors adapted the questions based on behaviors related to residents' responses to the outbreak, such as "Residents of this destination have a strong emergency response capability," etc. Perceived effort was measured by adapting Mohr and Bitner's (1995) perceived effort question items, such as "The destination puts a lot of effort into coping with the crisis" and "The destination is persistent in coping with the crisis." Measures of perceived uncertainty were translated based on Colquitt's (2012) and others' research on perceived uncertainty, resulting in final scales such as "I have felt a lot of uncertainty" and "Many things have seemed unsettled" and "I have not been able

to predict how things would go". Measures of the control variable preference for uncertainty (Tolerance for uncertainty) were translated from Nicholas (2007) et al.'s scale, such as "Unforeseen events upset me greatly." etc. Measurement of willingness to travel was set up at the levels of willingness to revisit and willingness to recommend with reference to related studies, such as "I am interested in the destination". All of these questions were scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3.2 Data Collection

Data were collected using a combination of online and offline methods. The offline questionnaire was distributed from October 2022 to December 2022 at a high-traffic high-speed railway station in Chengdu, Sichuan Province, China, and the online questionnaire was distributed from November 2022 to January 2023 on a professional data collection and survey platform called Credamo.com, with a sample of registered members from various provinces and cities in China. A total of 397 valid questionnaires were collected for the study. Detailed sample demographics are reported in Table 1.

Table 1: Participants' demographic profiles.

Characteristic	Frequency	Percentage	Characteristic	Frequency	Percentage
Gender			*Age*		
male	179	45.1	18~25 years	139	35
female	218	54.9	26~40 years	204	51.4
Education			41~55 years	48	12.1
Less than high school	20	5.1	>56 years	6	1.5
College	37	9.3	*Main channels for browsing information on the internet*		
Bachelor's degree	291	73.3			
Postgraduate degree	45	11.3	Internet search engine	184	46.3
PhD	4	1	Web portal	94	23.4
Career			News client	105	26.4
Student	105	26.5	Sticky forum	55	13.9
Working in the state-owned company	72	18.1	Micro blog	203	51.1
Working in the private sector	161	40.6	Wechat/ QQ	184	46.3
Working in the foreign company	17	4.3	Tiktok	211	53.1
Woring in the public institution/ Civil servant	26	6.5	RED	117	29.5
Freelancer	10	2.5	Others	4	1
Retiree	3	0.8	*Family structure*		
Others	3	0.8	Singleton	116	29.2
Monthly income			Young couple	41	10.3
<2000 yuan	85	21.4	three-member family	168	42.3
2001~5000 yuan	56	14.1	Three-generation families	57	14.4
5001~10000 yuan	149	37.5	old married couple	6	1.5
10001~30000 yuan	95	23.9	Elderly single	1	0.3
>30001 yuan	85	21.4	Others	8	2

4. Analysis and Results

4.1 Measurement Model Test

A six-factor measurement model was estimated using Confirmatory Factor Analysis (CFA) with AMOS 26.0 and SPSS 26.0. The results showed that the data fit for the model was acceptable: χ^2 (246) =545.325 (p<0.001); CFI = 0.932; TLI = 0.924; RMSEA = 0.055. The standardised item factor loadings, Composite Reliability and Average Variance Extracted (AVE) data are reported in Table 2.

Table 2: Measurement model results

Constructs and items	Standardised loading (sig.)	Composite reliability	Cronbach's alpha
Socially responsible behavior of destination tourism enterprises		0.786	0.780
This destination tourism enterprises provides donations to disaster-stricken areas.	0.766***		
This destination tourism enterprises is constantly improving the quality of its products and services.	0.672***		
This destination tourism enterprises is environmentally conscious in its operations and strives to be a green business.	0.785***		
Destination resilience		0.862	0.867
The message about the destination's response to the crisis is clear.	0.677***		
The destination's security facilities are sound and complete.	0.691***		
The destination's security system is sound and complete.	0.690***		
The destination responds quickly to crisis events.	0.694***		
The destination's management is highly professional in responding to crises.	0.779***		
Residents of the destination are supportive of the crisis response measures put in place by the local government.	0.748***		
The credibility of the destination's residents		0.836	0.825
Residents of this destination have a strong emergency response capability.	0.896***		
Residents of this destination support local tourism development.	0.637***		
Residents of this destination actively cooperate with the government in responding to crises.	0.691***		
Residents of this destination are united.	0.756***		
Perceived effort		0.812	0.814
The destination has put a lot of energy into responding to the crisis.	0.656***		
The destination has been persistent in responding to the crisis.	0.694***		
The destination spent a lot of time responding to the crisis.	0.692***		
The destination has put a lot of effort into responding to the crisis.	0.835***		
Perceived uncertainty		0.901	0.903
I have felt a lot of uncertainty.	0.860***		
Many things have seemed unsettled.	0.896***		
I have not been able to predict how things would go.	0.844***		
Travel intentions		0.818	0.818
I am interested in this destination.	0.731***		
I'd love to visit the destination.	0.686***		
Even if I've traveled before, I'd travel to this destination again.	0.788***		
I'd recommend my friends and family to visit the destination.	0.701***		

As shown in Table 2, all the standardized item factor loadings exceeded 0.6, which showed sufficient reliability, and the Cronbach's alpha values of the constructs exceeded 0.7, which also

indicated sufficient reliability (Fornell & Larcker, 1981). The average variance extracted (AVE) of constructs ranged from 0.509 to 0.751, which exceeded the required limit of 0.5(Fornell & Larcker, 1981). The values of composite reliability for each coefficient were all acceptably >0.7 (Gefen et al., 2000).

The correlation coefficients for all the variables are shown in Table 3. The square roots of the AVEs ranged from 0.714 to 0.867, all higher than the correlations between the variables, which indicated that discriminate validity was satisfied. All the path coefficients were significant and higher than the recommended standard of 0.6 (Chin, 1988).

Table 3: The correlation coefficients.

Variables	AVE	*SRB*	*DR*	*CDR*	*PE*	*PU*	*TI*
Socially responsible behavior of destination tourism enterprises (SRB)	0.552	**0.743**					
Destination resilience (DR)	0.510	0.361	**0.714**				
The credibility of the destination's residents (CDR)	0.564	0.474	0.507	**0.751**			
Perceived effort (PE)	0.522	0.461	0.444	0.508	**0.723**		
Perceived uncertainty (PU)	0.752	-0.369	-0.378	-0.367	-0.245	**0.867**	
Travel intentions (TI)	0.529	0.465	0.407	0.411	0.448	-0.360	**0.728**

Note: Diagonal elements in bold are square roots of the average variance extracted.

4.2 Structural Model Test

The study uses a SEM to test the net effects for the causal paths in the structural model. The model showed an acceptable fit to the data: χ^2 (246) = 545.325 (p<0.001); CFI = 0.932; TLI = 0.924; RMSEA = 0.055. Figure 3 presents the standard regression weights of the causal paths in the model. The results showed that: i) SRB (β = −0.178; p < 0.001), DR (β = −0.180; p < 0.001) and CDR (β = −0.189; p<0.01) had a significant negative impact on PU; ii) SRB (β = 0.376; p <0.001) and DR (β = 0.284; p <0.001) positively related to PE; iii) PE had a significant negative relationship with PU (β = −0.132 ; p <0.001); and iv) PU was negatively related to TI (β = −0.425 ; p <0.001). Therefore, to summarize, hypotheses H1, H2, H3 and H4 were accepted.

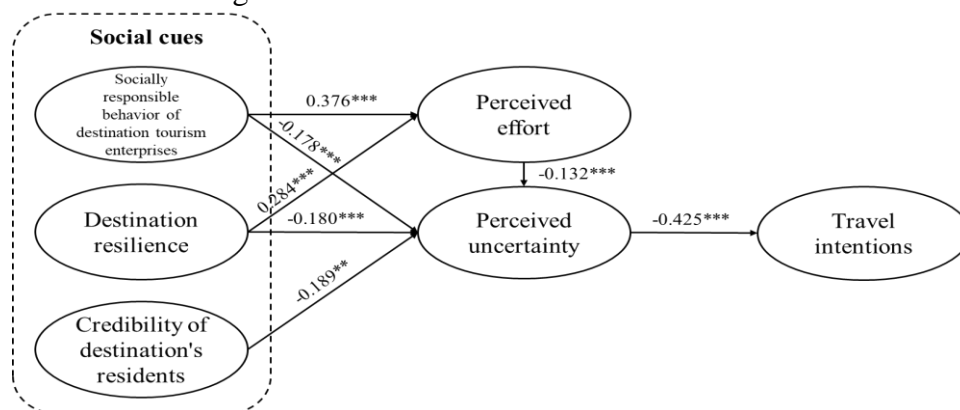SEM results is shown in Figure 3.

Figure 3: SEM results

4.3 The Mediation Analysis

The mediated effect of SRB and DR on perceived uncertainty via the perceived effort was examined. The indirect effect of SRB and DR on perceived uncertainty was assessed by examining

the 95 percent CI around indirect using a bootstrapping procedure (using 5000 bootstrap samples) (Preacher and Hayes, 2008). The indirect SRB on perceived uncertainty via perceived effort was negative and significant (the indirect effect was -0.104, $p < 0.001$; 95 percent CI $=-0.204\sim-0.015$). And the indirect effect of DR on perceived uncertainty via perceived effort was negative and significant (the indirect effect was -0.105, $p < 0.001$; 95 percent CI $=-0.206\sim-0.005$). Therefore, hypothesis H5 and H6 is supported.

4.4 Results

The results show that the social cues of the three main subjects of tourism destinations that are the focus of this study - socially responsible behavior of destination tourism enterprises, destination resilience, and credible residents influence tourists' decision-making through their perceived benefits and thus their decisions. Specifically, in a crisis environment, socially responsible behaviors of destination tourism firms, higher destination resilience, and credible residents can reduce tourists' perceived uncertainty about the destination and thus increase their intention to travel (H1, H2, H3, H4). And when tourists focus on positive destination behaviors and corporate social responsibility behaviors, they will perceive the destination subject's effort, which will reduce tourists' perceived uncertainty. That is, perceived effort negatively mediates the relationship between perceived uncertainty and destination resilience and destination tourism corporate social responsibility behavior (H5, H6).

5. Conclusion and Discussions

5.1 Conclusion

The purposes of this paper were to explore and test the combined roles of perceived uncertainty and perceived effort in the social cues–travel intention relationship. The proposed research was tested using empirical data collected from 397 Chinese tourists. The results indicate satisfactory reliability and validity of the constructs and support the 5 hypotheses within structural equation modelling. The results suggest key theoretical and managerial implications.

The data analysis found that tourism CSR behaviors have a positive effect on travel intentions, which is consistent with studies on CSR behaviors (Jeon, Lee, & Jeong, 2020; Su & Swanson, 2019). In terms of potential mechanisms, there is a significant negative correlation between tourism CSR behaviors and perceived uncertainty. The findings of this study have practical implications for tourism managers and companies in the post epidemic era who will be able to enhance the travel intentions of potential tourists by adopting CSR behaviors.

This study confirms that destination resilience can act as a catalyst to stimulate tourists' emotions and trust in the destination, thereby reducing their uncertainty, which is consistent with previous findings (Zheng, Luo, & Ritche, 2020b). It has been found that resilient destinations can respond quickly to crisis events and communicate clear and relevant information to provide essential services for tourists to survive and prosper. And Prayag (2018) pointed out that resilience covers before, during, and after crisis remedies when organizations and societies respond quickly to mitigate crises, so from the moment a crisis occurs, destination management agencies should act proactively and pay attention to constructing and characterizing destination resilience in order to reduce the perceived uncertainty of potential tourists and increase their willingness to travel.

Data analysis found that resident trustworthiness also can reduce travelers' perceived uncertainty. When potential tourists trust local residents, they believe that local residents are reliable in terms of their behavior or speech, which enhances the expected sense of security during future trips.

Perceived effort was found to have a significant mediating effect between tourism CSR behavior

and destination resilience and perceived uncertainty. According to EASI theory, the expression of positive emotions tends to elicit positive impressions of the expresser in the perceiver, whereas negative emotions tend to elicit negative impressions, which in turn may influence the perceiver's behavior. Specifically, positive behaviors of destination governments and CSR behaviors can enable potential tourists to perceive the efforts of destination subjects, thereby reducing their perceived uncertainty. Therefore, destination firms and governments should actively communicate this type of information to the public, and therefore, destination governments and firms should actively demonstrate to the community at large the efforts made in risky environments to leave a positive impression in the minds of potential tourists and to facilitate the recovery of the tourism industry after a crisis.

5.2 Theoretical Contribution

In this paper, PADM is applied to the field of tourism for the first time, revealing the perceived coping effects between social cues and travel intentions of potential tourists in risky environments, and introducing perceived uncertainty and perceived effort to reveal the interaction and mediation mechanisms of multiple factors in risky environments. Theoretical contribution of this study lies in the in-depth analysis of social cues, which are the most concerned by tourists in risk information, the introduction of PADM into the field of tourism risk for the first time to be investigated, and the inclusion of the individual's state of perceived uncertainty into the second stage (perceived stage) of PADM, which expands the research on the validity of the model. Scholars studying the behavioral decisions of tourists in risky environments have provided new model ideas and theoretical foundations.

5.3 Practical implication

These findings provide some important managerial implications. The results of this study suggest that after a crisis, tourists cannot foresee the situation of a destination before they travel to it, and they look for external cues and up-to-date information about the destination, which may be positive or negative, and destination management organizations and tourism firms should focus on managing risk information and actively demonstrate to potential tourists the behaviors that have been made in response to the crisis. Destination governments should project an image of resilience that is perceived by potential tourists. The results also suggest that the credibility of destination residents is critical to attracting and sustaining tourist traffic. Potential tourists perceive destination residents as trustworthy when they demonstrate a friendly and welcoming attitude, maintain high standards of honesty and integrity, and provide authentic local experiences. Destination residents should work with tourism-related businesses to ensure that consistent and credible messages are conveyed to potential tourists.

6. Study Limitations and Future Research

This study has four limitations. First, this study chose Chinese tourists during the epidemic as the study population to examine the impact of social cues on tourists' willingness to travel. Second, this study reveals the mechanism of social cues' influence on tourists' willingness to travel based on PADM. The reception and processing of crisis and risk information by potential tourists in a crisis context may be an important mediating condition influencing their behavior, and future research could investigate this mediating effect. In addition, this study focuses on tourists' willingness to travel in risky environments, which belongs to the Protective response in the third stage (Behavioral response) of the PADM, and future research could address the other two variables in the third stage

and examine the antecedents of their effects. Fourth, for the moderating effect of perceived effort, this study only focuses on tourists' perceptions of destination resilience and tourism firms' social responsibility behaviors. Future research could explore the effects of other behaviors of destination management agencies and firms on tourists' perceived effort.

Acknowledgement

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