Intention to Visit Disaster Struck Tourism Sites: Role of Information Sources, Risk Perception and Individual Factors

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ABSTRACT

This study investigates how varying information sources influence perceived risk and the intention to visit disaster-affected tourism destinations, with a particular focus on the moderating effect of travel type (solo vs. group). Drawing on a sample of 184 respondents, the research employs an experimental design in which participants are exposed to either official government statements or personal narratives from influencers. Perceived risk is assessed across five dimensions: physical, financial, performance, social-psychological, and time. Findings reveal that personal sources of information are associated with significantly lower perceived risk than official sources. Furthermore, perceived risk negatively influences travel intention and mediates the relationship between information source and travel intention. The type of travel further moderates this relationship, with the effect being more pronounced among solo travelers. These insights offer theoretical contributions to risk perception models in tourism and practical guidance for destination managers and policymakers seeking to restore tourism in disaster-affected regions.

Keywords: disaster tourism, Information sources, risk, solo travel, group travel.

INTRODUCTION:

The increasing frequency and intensity of natural disasters over the past several years have become a major concern on a global scale, with widespread socio-economic, environmental, and cultural implications. The Emergency Events Database (EM-DAT) recorded a total of 399 disasters related to natural hazards. These events resulted in 86,473 fatalities and affected 93.1 million people Centre for Research on the Epidemiology of Disasters (CRED,2023). The United Nations Office for Disaster Risk Reduction (UNDRR) reported a 75% increase in the number of global climate-related disasters from 2000 to 2019 compared to the previous two decades. Such events, including floods, cyclones, wildfires, and earthquakes, have been exacerbated by climate change and rapid urbanization (UNDRR, 2020). India, due to its vast geographical expanse and diverse climatic conditions, remains highly susceptible to natural calamities. Between 2018 and 2024, India experienced numerous severe events, including Cyclone Fani (2019), which affected over 28 million people in Odisha and caused significant economic losses estimated at ₹24,176 crore (NDMA, 2019). The devastating Kerala floods of 2018, which impacted over a million people and caused infrastructural damage worth over ₹31,000 crore, highlighted the acute vulnerability of certain regions (RGIDS,2018).

The tourism sector, a major driver of India's economy, is particularly susceptible to such disasters. Tourism accounts for 9.2% of India's GDP and supports millions of jobs; however, its dependency on perceived safety and accessibility makes it highly vulnerable to natural calamities (Ministry of Tourism, India, 2021). Disasters disrupt infrastructure, transportation, and services vital to tourism, often leading to a sudden decline in tourist arrivals. After the 2018 floods, the estimated the loss to the tourism sector is Rs 1,500 crore both on account of damage due to the flood and the cancellation of bookings in the months following the disaster. ((()))) The psychological impact of disasters further complicates recovery, as potential tourist's perceived risk remains elevated even after infrastructural restoration.

Perceived risk in the context of disaster-affected tourism sites encompasses various dimensions, including physical, financial, performance, social-psychological, and time risk (Reisinger & Mavondo, 2005). Physical risk pertains to concerns regarding personal safety, while performance risk relates to doubts about the availability and quality of services. Social risk reflects worries about the potential social consequences of visiting, and psychological risk encompasses feelings of fear or anxiety associated with the destination. Effective risk communication strategies can play a pivotal role in mitigating these concerns. The manner in which information is conveyed, whether through official government reassurances or personal narratives from influencers, significantly shapes tourists' perceptions and, consequently, their travel intentions.

This study aims to explore the complex interplay between perceived risk and travel intention in the context of disaster-affected tourism destinations,

emphasizing the role of information sources. Specifically, it examines how official government communications and personal narratives from influencers shape tourists' perceptions of risk and subsequent intention to visit. Perceived risk is analyzed across five dimensions: physical, financial, performance, social-psychological, and time. Additionally, the study investigates how the nature of travel—whether solo or in a group—moderates the relationship between perceived risk and travel intention. By analyzing responses from 184 participants exposed to different information scenarios, the study contributes valuable insights into the mechanisms through which disaster-related risks are perceived and acted upon. The findings offer both theoretical advancements in risk communication and practical strategies for enhancing tourism recovery post-disaster.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

2.1 Source of Information differently influences perceived risk such that the perceived risk is low (vs. High) when the information source is personal (vs. official)

The role of information sources in shaping perceived risk has been extensively explored in the literature, particularly in tourism and disaster contexts. Research indicates that the source of information significantly influences how individuals perceived risk, with personal sources often leading to lower perceived risk compared to official sources.

Personal sources, such as recommendations from friends, family, or influencers, tend to be more relatable and trustworthy, which can mitigate the perceived threat of a destination (Schroeder & Pennington-Gray, 2015). According to literature, when travelers receive information from personal experiences or social media influencers, they tend to feel more confident in their decision-making process, as these sources provide more authentic and humanized narratives (Sparks & Pan, 2013). This aligns with the concept of social proof, where individuals are more likely to trust the experiences of others who are perceived as similar to themselves (Cialdini, 2007). Personal sources also allow for a more nuanced understanding of risk, providing firsthand accounts of how a destination is recovering, which helps reduce anxiety about safety (Gursoy et al., 2019).

In contrast, official sources of information, such as government statements or institutional advisories, are often seen as distant and less relatable. While these sources may provide essential factual data, they tend to emphasize risk in a more formalized, generalized manner, which can heighten perceptions of danger (Floyd et al., 2014). Research in crisis communication has shown that official messages can inadvertently amplify the perception of risk due to their focus on severity and precautionary measures (Liu et al., 2015). Thus, the existing literature suggests that personal sources of information reduce perceived risk by presenting a more relatable and trustworthy perspective, while official sources may increase perceived risk due to their formal, generalized nature. This leads to the formulation of the following hypothesis:

- ❖ H1: The source of information differently influences perceived risk such that perceived risk is lower when the information source is personal (vs. official).

2.2 Perceived risk influences intention to travel such that higher the perceived risk, lower the travel intention

Perceived risk has long been recognized as a critical factor influencing consumer decision-making, particularly in tourism. It refers to the subjective evaluation of potential adverse outcomes associated with a decision or action (Sönmez & Graefe, 1998). In the context of travel to disaster-struck tourist destinations, perceived risks are often heightened due to the lingering effects of the disaster, including safety concerns, infrastructure challenges, and negative societal perceptions. These risks can be categorized into five dimensions: physical, financial, performance, social-psychological, and time-related risks.

Physical risk is frequently highlighted in tourism studies as a primary deterrent for travelers. It pertains to the fear of physical harm or unsafe conditions at a destination (Reisinger & Mavondo, 2005). For disaster-struck destinations, the association with past natural calamities or political instability amplifies these fears (Lepp & Gibson, 2003). Financial risk, on the other hand, is the perceived possibility of monetary loss, either due to cancellations, poor service delivery, or unanticipated expenses. Performance risk captures tourists' concerns about whether the destination will meet their expectations, particularly when recovery efforts are still ongoing (Chew & Jahari, 2014).

Social-psychological risk encompasses the apprehension of judgment or criticism from peers or society for choosing a potentially unsafe destination. It also reflects the potential emotional distress associated with the travel decision (Khasawneh & Alfandi, 2019). Time risk is associated with the fear of wasting valuable time due to disruptions or unsatisfactory experiences. Together, these dimensions form a comprehensive framework for understanding how perceived risk influences travel intention.

Several studies support a strong negative relationship between perceived risk and travel intention. For instance, Quintal et al. (2010) demonstrated that heightened risk perceptions negatively affect tourists' behavioral intentions, as they are likely to choose safer alternatives. Similarly, Lepp and Gibson (2003) emphasized that physical and financial risks deter tourists from visiting destinations associated with natural disasters or political unrest. Chew and Jahari (2014) found that even after recovery efforts, perceived risks could linger, reducing travel intentions significantly.

These findings align with Ajzen's (1991) theory of planned behavior, which posits that attitudes, subjective norms, and perceived behavioral control influence intentions. Risk perceptions negatively affect attitudes and perceived control, thus diminishing the intention to travel to high-risk destinations. Furthermore, Khasawneh and Alfandi (2019) noted that reducing perceived risks through safety campaigns, improved infrastructure, and marketing efforts could partially mitigate these effects, although travelers' hesitancy often persists.

Despite the increasing emphasis on disaster management and recovery marketing, the adverse influence of perceived risk remains significant. Tourists prioritize destinations that they perceive as safe, with risks related to physical harm, financial losses, or wasted time being particularly influential. Performance and social-psychological risks add further complexity to decision-making, especially when societal norms and emotional well-being are involved.

Based on these insights, the following hypothesis is proposed:
- ❖ H2: Perceived risk influences intention to travel such that higher perceived risk leads to lower travel intention.

2.3 Perceived risk mediates the relationship between information source and Intention to travel.
The choice of information sources plays a significant role in shaping perceptions and behaviors in tourism, particularly for destinations perceived as risky. Travelers often rely on external sources to assess the safety and viability of visiting disaster-affected areas. These sources, including official government safety statements and travel bloggers' personal narratives, influence perceived risk and, consequently, travel intentions.

Official government safety statements are typically characterized by their formal tone, credibility, and focus on factual information. These statements aim to provide objective assessments of a destination's safety and readiness to host tourists (Rittichainuwat & Chakraborty, 2009). When governments issue safety reassurances, they can reduce perceived risks by addressing concerns about physical, financial, and performance risks. However, overly cautious or ambiguous statements may unintentionally heighten perceived risks, as travelers may interpret them as a lack of confidence in the destination's safety (Chew & Jahari, 2014).

On the other hand, travel bloggers' personal narratives are perceived as more relatable, engaging, and authentic. These narratives often describe firsthand experiences, highlighting positive aspects of visiting disaster-struck destinations while addressing potential risks in a less formal manner (Schmallegger & Carson, 2008). Studies show that personal narratives can create emotional connections and provide a sense of trust, which may reduce perceived risks associated with visiting such destinations (Liu et al., 2019). However, the subjective nature of these narratives can sometimes amplify risks if bloggers emphasize negative aspects or share their anxieties.

Perceived risk is a well-established mediator in tourism research, influencing the relationship between external factors like information sources and travel intentions. According to the elaboration likelihood model, the processing of information varies based on source credibility and content (Petty & Cacioppo, 1986). Government statements often appeal to the central route of persuasion, emphasizing logic and evidence, while bloggers' narratives leverage the peripheral route, focusing on emotions and personal connections. Both pathways affect perceived risk, which, in turn, shapes travel intentions.

Empirical evidence supports the mediating role of perceived risk in this context. For instance, Chew and Jahari (2014) found that destination image mediates the relationship between perceived risk and revisit intentions, highlighting the centrality of risk perceptions. Similarly, Liu et al. (2019) demonstrated that the credibility and tone of information sources influence perceived risk, which affects travelers' intentions to visit disaster-struck areas. This suggests that the way information is presented—not just the content—plays a critical role in shaping perceptions and decisions.

The relationship between information sources, perceived risk, and travel intention aligns with Ajzen's (1991) theory of planned behavior. Information sources influence attitudes (via perceived risk) and perceived behavioral control, which are key determinants of travel intention. A reassuring government statement or a positive travel blog can lower perceived risks, enhancing the likelihood of visitation. Conversely, contradictory or negative messaging can increase perceived risks, discouraging travel.

Based on this understanding, the following hypothesis is proposed:
- ❖ H3: Perceived risk mediates the relationship between information source and Intention to travel.

2.4 Type of travel (solo or group) moderates the relationship between perceived risk and Intention to travel.
Travel behavior varies significantly based on individual preferences, and the type of travel—solo or group—can influence how perceived risk affects travel intentions. Solo travelers often exhibit higher levels of autonomy and self-reliance, while group travelers benefit from shared responsibilities, social support, and collective decision-making. These differences can moderate the impact of perceived risk on the intention to visit disaster-struck tourist destinations.

Research suggests that solo travelers perceive higher levels of risk compared to those traveling in groups. For instance, Lepp and Gibson (2003) found that solo

travelers are more susceptible to physical and social-psychological risks, as they lack the reassurance and support of companions. Group travelers, on the other hand, benefit from a sense of security that stems from being in a collective, which can mitigate the adverse effects of perceived risks (Eitzinger & Wiedemann, 2007). This distinction becomes particularly significant in the context of disaster-struck destinations, where risks such as safety, financial uncertainties, and time constraints are heightened.

Performance and time-related risks may also influence solo and group travelers differently. Solo travelers might prioritize efficient time use and fulfillment of personal goals, making them more sensitive to these risks (Reisinger & Mavondo, 2005). Group travelers, by contrast, may place greater emphasis on shared experiences, which can dilute individual concerns about destination performance or time management (Khasawneh & Alfandi, 2019).

Social-psychological risks also vary between the two groups. Solo travelers may experience greater societal judgment or emotional distress when visiting disaster-struck areas, especially if such destinations are perceived as unsafe or inappropriate for leisure travel. Group travelers, however, can mitigate these risks through collective validation and shared social norms (Quintal et al., 2010). This aligns with the social exchange theory, which posits that individuals are more willing to accept risks when they perceive greater social rewards or mutual support (Cropanzano & Mitchell, 2005).

Empirical evidence supports the moderating role of travel type in risk perception and travel intention. For example, Yang and Nair (2014) noted that group travel significantly reduces perceived physical and social-psychological risks, making individuals more likely to visit high-risk destinations. Solo travelers, by contrast, are less likely to proceed with travel plans when faced with heightened risks, as they lack the protective buffer of group dynamics.

Given these insights, travel type is likely to moderate the relationship between perceived risk and travel intention. For group travelers, the adverse effects of perceived risks are expected to be weaker due to the mitigating influence of collective security and shared decision-making. For solo travelers, the relationship is likely stronger, as they face risks independently and without the benefit of social support.

Based on this understanding, the following hypothesis is proposed:
- ❖ H4: Type of travel (solo or group) moderates the relationship between perceived risk and Intention to travel

3. Study Method
3.1 Stimuli Development
A series of focus groups and pre-tests were conducted to identify the stimulus for the experimental study. In the first stage, a focus group study was conducted among 10 post graduate students (N = 10, Mage = 22.5, Male = 60%) to understand the kind of nature-based travel destinations preferred by them. Besides, the major features desired while choosing a nature-based travel destination was also studied. The stimuli were developed based on the results from the focus group. Further, a pretest was conducted among students enrolled in post graduate business programme (N = 38, Mage = 23, Female = 58%). The stimuli were assessed for perceived realism using a 4 Item scale (Cronbach alpha = 0.78). The participants perceived the destination to be real. The likeliness to visit the location was measured using a 3 item 5-point scale (Cronbach Alpha = 0.88). The likeliness to visit the location was found to be high (Likeliness to visit = 4.46). In the next step, official social media pages of the Kerala tourism was visited and the manner of social media posts were evaluated. Based on these, a social media post was generated which was subjected to realism check with a sample of 30 respondents (N =30, Mage = 24, Male = 53%). Similarly, social media posts of travel influencers with more than 1 million followers were identified. Based on these, a sample social media post was generated which was subjected to realism check with a sample of 45 respondents (N = 45, Mage = 23, Female = 53%). In both the cases, perceived realism was above median values. In the next stage, the source of the two social media posts were hidden and respondents (N =20, Mage = 24, Female = 60%) were asked to identify which of these came from an official handle and which came from an influencer handle. A t-test revealed that the information from the official handle was perceived more as official (Mofficial = 4.87, SD = 0.22, t (19) = 98.14) than as from an influencer (Minfluencer = 2.25, SD = .91, t (19) = 10.9) and this difference was found to be significant (p = .000). Similarly, the information from the influencer handle was perceived to be more from the influencer (Minfluencer = 4.27, SD = .49, t (19) = 16.9) than from an official source (Mofficial = 2.25, SD = 0.56, t (19) = 16.88) and this difference was found to be significant (p = .000). Thus, the stimuli were found to be suitable for the study.

3.2 Participants and Procedure
The study was conducted among 184 students enrolled in the post graduation programme in two major business schools in the state. Students were randomly allotted to the study groups. Following the debriefing the participants were directed to read the scenario that was assigned to them in the folder. Following this, the participants answered questions on the mediator, moderator, dependent, manipulation and control variables and perceived realism. The collected data was screened and data of 8 participants were discarded as they did not pass the data screening. Some of them were incomplete and others included participants who had recent exposure to some disaster struck tourism sites. Studies in tourism have shown that prior experience affects the tourists' expectation of the destination.

3.3 Measurement
In the experimental study, the independent variables, information sources and travel type, were manipulated,

while the dependent and control variables were measured. The study focuses on participants' intention to visit a disaster-struck tourism destination, which was measured using a three-item, five-point Likert scale. Measurements of intention to visit were taken both before and after the incident. The proposed mediator, perceived risk, was evaluated using a 15-item scale adapted from Fuchs and Reichel (2006). Perceived realism, reflecting the extent to which the information provided was realistic, informative, relatable, and understandable, was measured using a four-item scale. Additionally, the perception of the gravity of the situation was assessed with a single-item, five-point scale. Similarly, a single-item, five-point scale was employed to gauge the likelihood of participants engaging in supportive relief activities for the affected area.

RESULTS

3.4.1 Manipulation check

The realism score for all the manipulations were found to be above the median value of 2.5 in the 5-point scale. Thus, realism was effectively manipulated. The natural disaster was perceived to be of significantly high gravity (M Gravity = 3.95, SD = 0.35). Thus, the participants evaluated the situation to be of serious nature. The participants also expressed interest in participating in the relief activities in the site (M participation = 3.86, SD = 0.45) showing that they would like to engage in support activities. Thus, all the manipulations were found to be effective.

3.4.2 Statistical Analysis

The differential influence of official and personal sources of information on the perceived risk was analyzed using t-test. The risk perception was found to be significantly lower when the information source was personal M[Risk Perception_Personal] = 2.53, SD = .30 than when the information source was Official M[Risk Perception_Official] = 4.07, SD = .60. This indicates that the perceived risk is low when the information source is personal than from an official handle. Thus, we found support for the H1

H1: Source of Information differently influences perceived risk such that the perceived risk is low (vs. High) when the information source is personal (vs. official)

A correlation analysis revealed a significant but weak negative relationship between perceived risk and intention to travel to disaster struck tourism destination r (182) = -.22, p = .002. Thus, it was found that when the risk perception is high, the travel intention is less and when the risk perception is low, the travel intention is high. Thus, we found evidence for H2
H2: Perceived risk influences intention to travel such that higher the perceived risk, lower the travel intention

3.4.2 Mediation Analysis

The mediating effect (Information Source □ Perceived risk □ Intention to travel) of perceived risk on Information source and intention to travel was examined using PROCESS macro (Hayes 2013; Hayes 2017, Model 4) with 10,000 bootstrapped samples. The analysis supports consistent results and it is found that there exists a significant indirect effect (b = .79, p <.00) thus supporting H3

H3: Perceived risk mediates the relationship between Information source and Intention to travel

The direct effect of Information source on Intention to travel was also found to be significant (b = .56, p =.00) thus suggesting a partial mediation. Thus, information source influences perceived risk and perceived risk in turn influences the intention to travel to disaster stuck tourism destinations.
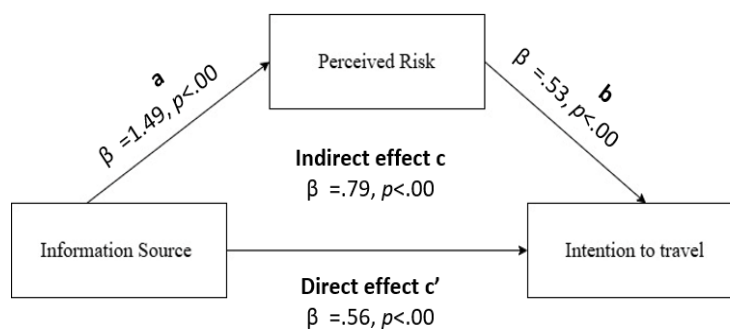

Fig. 1 Simple Mediation Model

3.4.3 Mediated Moderation effect

The moderating role of type of travel – traveling alone or as group – was examined using PROCESS macro (Hayes, 2013; Hayes, 2017) Model 14 with 10,000 bootstrapped samples using Information source (Official vs Personal) as independent variable, Perceived risk as the mediator, Type of travel as moderator and the intention to travel as the dependent variable. The index of mediated moderation was found to be significant : Index = .96, CI =[-1.3, -5.7]

Type of travel was found to moderate the relationship between perceived risk and intention to travel (b = .65, p < .00). However, this interaction was found to be significant only in the case of Solo travel (b = .79, p = .00) and not for Group Travel (b = .14, p = .28). Thus, it was found that in situations involving solo travel, when the risk perception is low, the intention to travel is high and when the risk perception high, the intention to travel is low. However, in situations involving group travel, the intention to travel was found to be high irrespective of the perceived risk. Thus, even when the perceived risk is high, group travellers' intention to visit the disaster stuck tourism sites are high. Thus, we get evidence for the H4.

H4: Type of travel moderates the relationship between perceived risk and Intention to travel

Thus, type of travel moderates the relationship with the effect being significant only in cases of solo travel and not in group travels.
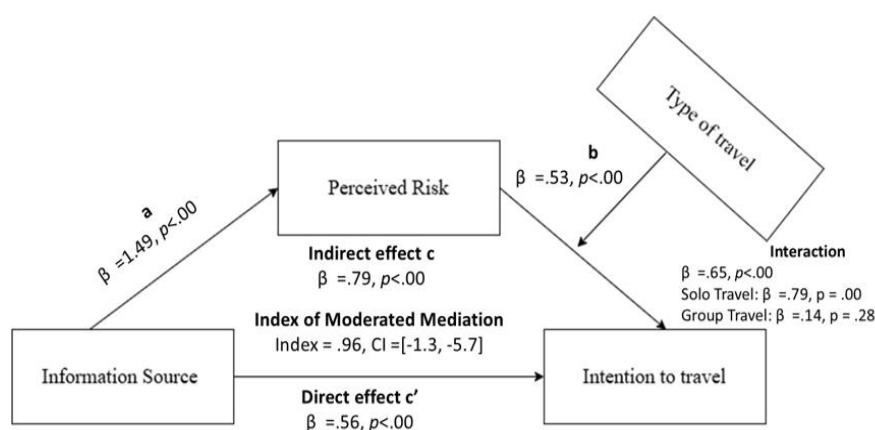

Fig 2: Mediated moderation model

GENERAL DISCUSSION AND STUDY IMPLICATIONS

4.1 Theoretical Contributions

This study provides valuable theoretical contributions to the understanding of perceived risk in post-disaster tourism, particularly in relation to how information sources shape risk perception and travel intentions. The findings suggest that the type of information source—personal versus official—significantly influences perceived risk. Personal sources, such as influencers, lead to a lower perceived risk than official sources, which aligns with previous studies that emphasize the importance of trust and relatability in risk perception. The influence of personal accounts versus institutional information highlights the need to examine the nature of information in tourism studies, particularly in the context of disaster recovery.

Additionally, this research offers new insights into the multidimensional nature of perceived risk. By examining five dimensions—physical, financial, performance, social-psychological, and time risk—the study expands the conceptualization of risk in tourism, acknowledging that travellers assess risks on multiple levels. This nuanced approach helps refine existing risk perception models in tourism, suggesting that risk is not just an abstract concept but a complex, multidimensional construct influenced by various types of information.

Furthermore, the study demonstrates the moderating role of travel type (solo vs. group) in the relationship between perceived risk and travel intention. Solo travelers, being more sensitive to risk, are significantly influenced by the level of perceived risk, with lower perceived risk leading to higher travel intentions. In contrast, group travelers demonstrate a consistent intention to travel regardless of perceived risk, which indicates that group dynamics and collective decision-making processes may buffer individual perceptions of risk. These findings open new avenues for research into travel behavior and risk perception, especially in the context of post-disaster tourism. Understanding how different types of travelers respond to risk can provide valuable insights into crafting targeted tourism recovery strategies.

4.2 Managerial Implications

From a managerial perspective, the findings of this study provide actionable insights for tourism managers seeking to facilitate recovery in disaster-affected destinations. One of the most significant implications is the use of influencers to mitigate perceived risks and enhance travel intentions. Influencers, particularly those with established trust and credibility, can play a pivotal role in reshaping public perception of safety. By providing personal narratives and firsthand experiences, influencers can make disaster-affected destinations appear more accessible and less risky to potential travelers. Tourism authorities and destination managers can collaborate with influencers to share positive, responsible messages about recovery efforts, sustainable rebuilding, and eco-friendly initiatives. This will help lower the perceived risk among tourists, particularly solo travelers who may be more sensitive to safety concerns. Moreover, tourism marketing strategies should be tailored to the needs of different traveler types. For solo travelers, who exhibit a higher sensitivity to risk, personalized risk-reduction measures are critical. These measures might include clear communication of safety

protocols, such as the availability of emergency services, health and safety guarantees, and local recovery initiatives. Personal stories shared by influencers or testimonials from other solo travelers can also be effective in reinforcing safety and creating a sense of reassurance.

On the other hand, group travel presents unique opportunities for managing perceived risk. Group travelers generally demonstrate high intentions to visit regardless of perceived risk, likely due to the collective nature of their travel experience. For group travel, tourism managers should emphasize the shared safety benefits and social experiences that group dynamics offer. Highlighting local guides, cultural immersion activities, and the social aspects of group travel can enhance the appeal of post-disaster destinations for group tourists. Offering group packages that include guided tours, local engagements, and cultural experiences can also promote responsible tourism, helping to ensure that the destination benefits from increased tourism while minimizing potential negative impacts.

Promoting community-based tourism can offer valuable benefits both for tourists and local communities. Community-based tourism emphasizes local involvement and cultural immersion, providing travelers with more meaningful and authentic experiences. This approach can also support the local economy and encourage tourists to contribute to the long-term resilience of the destination. By involving local guides and community members, tourism managers can ensure that visitors experience the destination in a way that is both respectful of local culture and beneficial to the community. This fosters a sense of shared responsibility among tourists, which is particularly important in the context of post-disaster recovery.

Risk communication strategies should be designed to emphasize the positive aspects of travel to disaster-affected destinations. Tourism managers can leverage various communication channels, including social media, influencer partnerships, and official tourism websites, to convey key messages about the resilience of the destination. Highlighting recovery efforts, sustainable rebuilding initiatives, and eco-friendly practices in communications can position the destination as a responsible and sustainable choice for travelers. This strategy will not only attract tourists but also help build long-term confidence in the destination.

4.3 Societal Implications
This study underscores the role of tourism in promoting resilience and sustainability in post-disaster contexts. Tourism is often viewed as a double-edged sword, with the potential to either support or hinder recovery efforts. The findings of this study suggest that tourism, if managed responsibly, can be a powerful tool for restoring confidence in disaster-affected destinations. By highlighting the efforts made towards sustainable rebuilding, eco-friendly practices, and community involvement, tourism can help shift public perception of the destination from one of vulnerability to one of recovery and hope. This is particularly important for regions that rely heavily on tourism as a source of income, as it can accelerate the economic recovery process and provide a sense of normalcy.

Promoting tourism as a means to support resilience is crucial in fostering long-term sustainability. Travelers who choose to visit post-disaster destinations not only contribute economically but also play a role in demonstrating solidarity with local communities. For example, tourists who engage in community-based tourism activities can directly support local businesses, artisans, and guides, helping to revitalize the local economy. Additionally, tourists can be encouraged to participate in sustainable tourism practices, such as supporting eco-friendly accommodations, participating in local conservation efforts, and respecting cultural heritage.

The findings also suggest that group tourism has a particularly important role to play in post-disaster recovery. Group travel offers a platform for tourists to experience the destination collectively, which can lead to a greater sense of social responsibility. Group travelers are likely to engage in shared social experiences, contributing to community well-being and supporting local infrastructure. Emphasizing the social benefits of group travel, such as connecting with others and fostering a sense of community, can increase its attractiveness as a form of tourism that contributes to the broader goal of sustainable recovery.

Incentivizing responsible tourism is key to ensuring that tourism contributes positively to destination recovery. Governments and tourism organizations can offer incentives, such as discounts or special packages, to encourage tourists to visit post-disaster areas in a responsible and sustainable manner. This could include promoting eco-tourism activities, encouraging the use of local services, or offering rewards for tourists who demonstrate a commitment to responsible behavior.

Tourism can be a powerful driver of social change by attracting tourists who are seeking meaningful travel experiences. The post-disaster context offers tourists the opportunity to visit destinations that are rebuilding and recovering, offering a unique chance to witness and contribute to the resilience of the destination. By promoting this aspect of tourism, destinations can appeal to travelers who are motivated by the desire to make a positive impact, fostering a sense of shared responsibility and collective action.

The implications of this study offer valuable insights for tourism managers, influencers, and policymakers seeking to facilitate the recovery of disaster-affected destinations. By leveraging influencers, promoting community-based tourism, and tailoring risk communication strategies to solo and group travelers, tourism can play a significant role in the resilience and sustainability of affected regions.

5. Limitations and future research directions

This study provides significant insights into the relationship between information sources, perceived risk, and travel intentions to disaster-affected destinations, with a focus on the moderating role of travel type (solo vs. group). The findings underscore the critical role that the nature of information sources plays in shaping tourists' perceptions of risk. Specifically, personal sources of information, such as influencers, were found to significantly lower perceived risk when compared to official sources, highlighting the importance of trust and relatability in influencing travel decisions. This suggests that leveraging influencers in post-disaster tourism recovery can be an effective strategy to mitigate concerns and increase travelers' confidence in visiting affected areas. The study also reveals that perceived risk has a significant impact on travel intention, with higher perceived risks leading to lower intentions to visit. This correlation, though weak, emphasizes the need for targeted risk-reduction measures to make disaster-affected destinations more appealing to potential tourists. It further highlights the importance of crafting effective communication strategies that address travelers' concerns and encourage positive perceptions of affected areas. The study's exploration of travel type as a moderating factor provides new insights into how different travelers react to risk. Solo travelers are more sensitive to perceived risk and, therefore, require personalized communication and safety assurances to enhance their travel intentions. Conversely, group travelers exhibit a higher level of intention to visit regardless of the perceived risk, suggesting that group tourism offers an effective way to mitigate individual concerns and promote sustainable tourism practices.

While this study offers valuable insights into the interplay between information sources, perceived risk, and travel intentions, several limitations should be acknowledged. First, the use of a hypothetical disaster scenario may not fully capture the emotional and behavioral responses that real-life events evoke, potentially limiting ecological validity. Second, the sample size of 184 respondents, though adequate, may not be fully representative of diverse demographic or cultural groups, restricting generalizability. Additionally, the study focused on only two types of information sources—official statements and influencer narratives—excluding other influential sources like peer reviews or news media. The reliance on self-reported data may also introduce bias due to social desirability or respondents' limited introspective accuracy.

Future research should consider longitudinal designs to observe changes in risk perception and travel intention over time, particularly as recovery efforts evolve. Expanding the study to include diverse geographical and cultural contexts would also provide a more comprehensive understanding of global travel behavior. Moreover, integrating additional moderators, such as prior travel experience, trust in media, or destination familiarity, could enrich the model. Experimental designs using real-world disaster case studies or immersive simulations (e.g., VR) may further enhance the validity and applicability of findings in post-disaster tourism research.

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