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How Tourists' Perceived Risk Affects Behavioral Intention through Crisis Communication in the Post-COVID-19 Era

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Abstract: In the post-COVID-19 era, with tourism activity beginning to revitalize, the behavioral intention of tourists has emerged as the focus of much research interest. While previous studies have suggested that tourists' perceived risk affects behavioral intention, it has not been found that perceived risk is influenced by other factors that affect behavioral intention in the post-COVID-19 era. This study constructs a research model to understand how tourists' perceived risk influences emotional attachment to destinations and tourists' behavioral intention through crisis communication and NPI. Through face-to-face interviews, this study conducted a survey and collected data from 1047 tourists who visited Dadaocheng's renowned Chinese herbal street in Taiwan and examined the causal relationships through structural equation modeling. The results indicated that an increase in perceived risk had a positive effect on crisis communication and NPI and affected tourists' behavioral intentions through emotional attachment to the destination. This study provides an opportunity to establish an essential contribution to post-disaster crisis management, which may serve as a marketing reference for tourism operators in the post-COVID-19 era, as well as to address future pandemic challenges.

Keywords: perceived risk; crisis communication; the post-COVID-19 era; behavioral intention; non-pharmaceutical interventions; emotional attachment

MSC: 91C05

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1. Introduction

COVID-19 significantly affected the world in 2020, impacting the tourism industry and disrupting all travel activities, including air travel, sightseeing, shopping and other activities, resulting in a substantial impact on the economic well-being of tourism related operators. Behavioral intention of tourists refers to the willingness of tourists to return to a destination and actively share travel-related information to friends and family with positive comments [1]. A study on tourists' visits to wilderness areas suggested that behavioral intention consists of recommendations to friends and family, repeat visits and word-of-mouth [2]. Behavioral intent is considered as an indicator of consumer retention and is separated into positive (favorable) and negative (unfavorable) facets [3]. Positive behavioral intentions encourage consumers to repeat visits or recommend a visit to others, while negative behavioral intentions generate criticism and complaints, refusal to return, or publicizing of bad feelings, making behavioral intention a relatively accurate measure for predicting individual behavior [4]. Tourism is one of the most risk-prone industries and has suffered the greatest impact. Previous studies have identified that post-disaster travelers' behavioral intention is affected by perceived risk [5] as one of the key factors for traveling to a destination. Perceived risk refers to the negative affect of uncertainty that consumers experience when purchasing goods [6]. In the context of tourism, perceived risk refers to the risks that travelers may encounter in the process of travel, such as physical

health or monetary loss, or a difference in the expected outcome [7]. Studies have identified seven types of perceived risk for travelers: health, war and political instability, terrorism, bizarre cuisines, cultural barriers, national politics and religious dogmas, and criminality [8]. Historically, studies have focused on criminality, terrorism and natural disasters such as earthquakes and tsunamis [9–11].

With the increasing awareness of issues concerning public health, health-related perceived risk has emerged as a critical concern for travelers. In the past, tourism operators have avoided proactive communications regarding health-related perceived risk, for instance, by posting announcements and discussions, as in the case of SARS in 2003 [3], which led to an increase in travelers' perceived risk towards certain destinations, affecting traveler behavioral intention and resulting in a decrease in the number of travelers [12]. In the event of a major pandemic, both residents and tourists experience increased perceived risk associated with the need for self-protection and protection of their families, resulting in a reduction or even cessation of travel demand [1,13]. The consensus choice for tourists given the risk to their health is to cease and refrain from travel, which has led the tourism industry only rarely to initiate crisis communication in response to perceived health risks in the past.

Prior studies on crisis communication have primarily addressed the allocation of responsibility and response to a crisis within an organization, disseminating information through the media and informing consumers of the causes and solutions to the crisis [14], thus reducing the perceived risk of consumers ceasing to consume [15]. However, no research has been conducted to investigate crisis communication from tourists.

In the post-COVID-19 era, with the global impact of the pandemic, the perceived health risks of tourists have evolved, with studies suggesting that tourists may no longer be able to refuse to travel or change their choice of destination if they wish to do so, or that reducing the perceived risk in the post-COVID-19 era may strengthen tourists' confidence and increase their willingness to revisit [16]. In the post-COVID-19 era, tourists demand specific practices to protect their health and safety during holiday traveling, which would preferably increase tourists' behavioral intentions [17,18]. Crisis communication contributes to mitigate adverse effects and harm, while crisis communication at the destination enables tourists to be more aware of local responses and to effectively reduce perceived risks [19].

In addition, strengthening NPI is a means to reduce perceived risk and self-protection for travelers. As destinations also experience pandemic and precautionary measures, tourism operators comply with NPI as a way of self-protection, sharing sentiments and experiences and generating destination emotional attachment, all of which have served as primary factors influencing travelers' behavioral intention in the post-pandemic era [20].

Following the COVID-19 pandemic, studies on travelers' perceived risk and behavioral intention began to emerge, mainly for different countries, social demographics, structures, motives, hotels and public information. However, few studies have been conducted on the behavioral intention of travelers affected by their emotional attachment to destination through crisis communication and self-protective measures and NPI in the presence of fears when facing perceived risk [21].

In the post-COVID-19 era, tourists are well aware of the fact that all countries in the world are affected by the pandemic and that avoidance is no longer a solution [22], thus influencing new variables of behavioral intention. Crisis communication among tourists involves actively sharing their worries and fears, hoping not only to transform negative emotions, but also to receive positive responses in order to maintain health [23,24].

This study aims to investigate whether crisis communication and self-referential NPI conveyed by travelers when they feel perceived risk may contribute to the establishment of emotional attachment to the destination and influence their behavioral intention. As we enter the post-COVID-19 era, tourism activities around the world are gradually picking up and the tourism industry, which has languished for over two years, is expected to revitalize; however, the pandemic remains a reality and is projected to recur in the future, raising awareness regarding health risks, which has emerged as the most critical issue for

the tourism industry and can no longer be evaded as in the past [25]. According to past studies, tourists simply opt to avoid traveling to these destinations and instead choose other destinations [26].

However, in the post-COVID-19 era, the perceived health risks and behavioral intentions of tourists have changed; because COVID-19 is highly contagious and transmission of the virus is occurring worldwide, avoidance is no longer the best solution and, instead, tourists voice their worries and fears and, furthermore, seek protection to ensure their health and safety during travel [27]. Therefore, the results of this study indicate how tourists' behavioral intentions are influenced by crisis communication, resulting in a reference for recommendations and guidelines for future tourism operators around the world to conduct tourism activities and marketing of destinations in the interest of attracting more tourists and revitalizing the tourism economy [28].

2. Literature Review

2.1. Perceived Risk

Perceived risk was firstly applied in psychology. Bauer proposed it in 1960 and then applied it in research into consumer behaviors [29]. Unpleasant experiences, including anger, disappointment and concern [30], might occur during the process of purchasing because of the failure of achieving expected outcome. There are seven types of perceived risks: financial risk, performance risk, personal risk, mental risk, social risk, time risk and opportunity cost risk [31,32].

In the past, perceived risk was often used to study consumer behaviors. Since 1990, studies related to travelling began to be explored. There are seven types of perceived risk that tourists might encounter during travelling. Some studies pointed out that when external factors, such as war [33], terrorism [34], local insecurity [35] and natural disaster [8] occurred, tourists' perceived risk would enhance and their behavioral intention would reduce. They might even change their destination and consider other options [36,37].

Among these factors, food was the biggest worry, mainly because of cleanliness and local eating habits. Health factors worried tourists the most and tended to rapidly increase perceived risks; for example, infectious diseases might cause people to feel unwell and even be life-threatening [38]. During the pandemic of H1N1 in 2009, local people even stopped engaging in social activities to avoid being infected [39].

During the pandemic of COVID-19, tourists' perceived risk was high [40]. To ensure tourists start to visit attractions again in the post-pandemic era, the first thing is to understand how to reduce tourists' perceived risk [41]. Furthermore, we should attract tourists through public information, social media and even presentations on the destination to further guide their behavioral intention to travel [42,43]. In the post-COVID-19 era, the reduction of perceived risk will be one of the most important issues for personnel in the tourism industry.

In the post-COVID-19 era, tourists' perceived risk has undergone major changes, affecting travel behavioral intentions [25]. Several studies have predicted post-pandemic changes in tourist behavior, such as destination choice, when to travel and how to travel. This has become a direction worthy of continuous attention in future research [44,45].

2.2. Crisis Communication

Crisis communication is the response implemented by individuals when encountering crisis. It includes two elements, "what to say" and "how to express it" [46]. What to say refers to "the response to the crisis" (content) while how to express it refers to "the method used to respond to the crisis" (form). For an individual, this can be expression through the emotions of crying, anger, avoidance and complaint [47].

For an organization, crisis is an essential threat. It might damage the interests and survival of the company. Normally, crisis happens suddenly. Crisis to individuals refers to unexpected change in the intended environment or in infectious diseases and can cause damages to property, physical health and mental injury.

Crisis communication must be emphasized and handled no matter whether from individuals or organizations [48]. Avoiding or failing to respond to crisis communication is worse than delivering negative information [49], because trust from consumers will be lost and even turn into the spreading of negative reputation [50,51].

Crises that the travelling industry face include natural disasters, terrorist attack, wars and infectious diseases and can seriously damage the market. It is very important to value crisis communication delivered by tourists, including the emotions of fear and sadness [52]. When Thailand encountered natural disasters, terrorist attack, pandemic and political tension in the past, their official tourism bureau established a series of tourism strategies through crisis communication with tourists to recover the positive image, so they were willing to resume their travel to Thailand [53].

Studies also revealed, when there is a health issue or virus outbreak on a cruise ship, that perceived risk will affect tourists' attitude as well as the delivery of crisis communication [54]. In addition, during the Tohoku Earthquake and tsunami in Japan, people in the affected areas posted the live situation on Twitter and information on whether everyone was safe or not. Tourists tend to use social media to deliver their crisis communication [50,55,56].

There are five different types of crisis: rumors, natural disasters, bad intentions, accidents and improper behavior. This study focuses on COVID-19 and as a natural disaster. When there is a crisis, it is very important to pay attention to tourists' feelings during crisis communication because their feelings will affect crisis liability and behavioral intention [57,58].

Destination crisis communication affects tourists' travel intentions. Health perceived risk is the most important issue in the consumer decision-making process in the wake of the COVID-19 pandemic [22].

Relationship between Perceived Risk and Crisis Communication

Experiences of natural disasters in the past created perceived risk, that is, relative judgment towards incidents or activities of potential injury. Perceived risk in the tourism industry is consideration towards the level of potential injury that might happen during the process, including health, personal injury, financial loss and even the gap in expected value [59]. Therefore, crisis communication is the method of expressing concerns and responses with crisis tourists because they want attention paid to their emotions. In studies related to the tourism industry in the past, there was very little attention to emotions. Crisis communication should attend to the emotions related to the crisis that individuals want to be considered, in the hope of reducing the damage caused by the crisis [60].

Individuals create perceived risk according to their experience of pandemic in the past. When the perceived risk is higher, they deliver crisis communication about being scared or worried about infection. Their main purpose is hoping to obtain attention and methods of response [61].

Previous studies revealed during the period of pandemic that the perceived risk would be enhanced and respondents normally delivered crisis communication about being scared of getting infected. They wanted to obtain more information about infection prevention. When the perceived risk is higher, consumers' crisis communication will be relatively enhanced. Based on the above, the study proposed the following hypothesis.

H1. Tourists' perceived risk towards COVID-19 will positively affect tourists' crisis communication.

2.3. Non-Pharmaceutical Interventions

NPI (Non-pharmaceutical interventions) have been established by WHO [62] in response to pandemics such as H1N1 and COVID-19. The methods of NPI include quarantine, contact tracing, travel restrictions, closing down schools and workplaces, cancelling gatherings, washing hands and wearing masks. The main purpose is to delay the spreading of the virus [63,64].

During the pandemic of bird flu in 2006, WHO suggested adopting NPI to prevent infection because NPI could be correctly and rapidly implemented to significantly reduce the severity of the global pandemic [65]. However, it was still possible to be a failure when NPI was not properly implemented [66]. The evidence showed from SARS in 2003 and H1N1 in 2009 that the measures of wearing masks as NPI could effectively reduce virus infection to the maximum [67]. The virus spreading of COVID-19 in December 2019 featured infection but with no symptoms. Under that kind of situation, any person who was infected might have spread the virus to others unknowingly. At times like this, NPI is the best method for individuals to prevent COVID-19 [68].

Scholars found from the investigation that NPI is very useful in reducing community transmission and the burden of COVID-19, providing the coverage rate is very high [69]. Other scholars implemented NPI research in the following six countries: China, Korea, Italy, Iran, France and the U.S.A., and carried out evidence-based assessment on NPI measures regarding the effect of COVID-19 prevention. The outcome revealed there was around 6.1 million confirmed cases prevented or delayed, equivalent to the prevention of around 495 million people being infected [70].

For travelling, NPI refers to hygiene actions to effectively avoid spreading the pandemic. Besides, it is an important factor in helping tourists overcome mental barriers against travelling. When travelling during the pandemic, the acceptance level towards NPI from others is as important as personal acceptance of NPI [71]. If individuals have faith in NPI, this will affect the behavioral intention during the pandemic.

Relationship between Perceived Risk and Non-Pharmaceutical Interventions

NPI is a method different from the drugs and vaccines used to respond to pandemic all over the world. Some studies have pointed out that when people have used non-pharmaceutical interventions, such as masks and social distancing, they were protected, showing the effect of NPI on pandemic prevention [72].

Individuals have generated perceived risk based on the recognition of pandemic in the past. When the perceived risk is higher, it has higher demands for the implementation of NPI as a measure of self-protection [73]. Studies in the past found that, when there was information related to infectious diseases, this enhanced people's perceived risk, stopping them from going to public places and prompting them to carry out NPI measures, such as wearing masks and washing hands regularly. Based on the above, this study proposed the following hypothesis.

H2. Tourists' perceived risk regarding COVID-19 will positively affect NPI.

2.4. Emotional Attachment

Emotional attachment was first discussed around psychology. During the process of growing up, children generate emotional attachment to their parents. The level of this will deepen with time [74]. Emotional attachment involves the emotion generated due to a certain event between one person and another [75,76]. When an individual experiences a process along with an external person, event, or object, emotional attachment will be generated [77]. When an individual has continuous feelings towards a specific object or thing, this creates emotional attachment. When a firm provides its customers with a continuous commitment, it creates a deeper emotional attachment [78]. This can be used in the area of commercial marketing or consumer behavior to expand applications, consumers and brands [79].

The application of emotional attachment in tourism can involve the experiential activities of festivals at the destination arranged for tourists. Increased emotional attachment during the participation in these activities enhances tourists' loyalty to the destination [80]. The frequency of natural disasters and infectious diseases all globally has become a severe issue for traveling. Some studies have highlighted that tourists' crisis communication and emotional attachment have a positive influence on their behavioral intention [81,82].

Infectious diseases in recent years have seriously affected the tourism market. Although the pandemic has lasted for more than two years, people's intention to travel has never reduced. People all over the world have collective memory of COVID-19, in particular, of the necessary control forcefully implemented to avoid the transmission of COVID-19, including social distancing, curfew, staying at home and NPI. This shared experience creates emotional attachment [83]. Place attachment has a higher degree of intensity in human–place interaction than destination [84]. After the experience of pandemic, it reduces the sense of isolation.

2.4.1. Relationship between Crisis Communication Strategy and Emotional Attachment

Common emotional experiences are the essential condition of emotional attachment. Because of the same experience, consumers generate a sense of belonging and recognition as well as enhancing their emotional attachment to the enterprise [85]. Consumers will generate a different intensity of emotional attachment, along with satisfaction, participation and brand attitude [86].

Studies have revealed that tourists possess the same emotions of fear and anxiety as others during COVID-19 and establish emotional attachment through crisis communication. This kind of attachment might not even need actual consumption. When hotel owners experience the same process as employees and tourists, they have the same experience of crisis communication and regard each other as victims. Therefore, emotional attachment will be deepened. Based on the above, the study proposes the following hypothesis [87].

H3. Tourists' crisis communication regarding COVID-19 will positively affect emotional attachment.

2.4.2. Relationship between Non-Pharmaceutical Interventions and Emotional Attachment

NPI involves knowledge about preventing COVID-19 disaster. According to studies, when there is a disaster, the emotional attachment generated will be more active because of the measures experienced. For the tourism industry, to avoid being infected and protect families during COVID-19, everyone works together more and employees request each other to implement NPI measures [88]. Therefore, when the destination implements strict NPI measures or even actively publishes information and countermeasures regarding the disaster, tourists will generate an emotional attachment of trust [89]. Based on the above, the study proposes the following hypothesis.

H4. During COVID-19, NPI positively affected emotional attachment towards the traveling destination.

2.5. Behavioral Intention

Behavioral intention refers to the preference for and degree of engaging with a certain behavior in the future. The stronger the intention, the more likely it is that the behavior will be achieved. Human's behaviors are subject to the influence of objectives and intention. Through diverse choices in different situations, we will be able to better predict attitudes towards and ideas about behavioral intention [90,91]. Behavioral intention is the drive to implement a certain behavior, such as the willingness of consumers to spend money again. Behavioral intention is deeply affected by service quality, motivation and habits and it is related to leaving, staying and loyalty [92]. Behavioral intention is subject to the influence of external motivation, social collective strength and organizational atmosphere [93]. Once there is any change in behavioral intention, it will affect subsequent behaviors.

Behavioral intention is also one of the key points in research on the tourism industry. The frequency of behaviors in the past can be regarded as tourists' behavioral intention, while the prediction of actual behaviors will affect important issues for the next journey [94]. Some studies have pointed out that, through search volume of websites, tourists' travel needs and destination preferences can be discovered. More importantly, more and more

tourists like to use mobile devices to search, but the use of personal computers is much reduced [95]. Tourists' behavioral intention is also affected by the reputation of the destination. Because behavioral intention will affect consumers' next actions and actual behavior, enterprises must monitor it better to obtain more business opportunities if they want a sustainable operation. Studies in the past have pointed out that perceived value, perceived quality and satisfaction are very good indicators for prediction of behavioral intention.

2.5.1. Relationship between Emotional Attachment and Behavioral Intention

Emotional attachment refers to the process of shared experience. Accumulated feelings are generated through interaction and the occurrence of incidents, such as emotional attachment to local events and activities. Tourists' emotional attachment towards place will affect their tourism behavior [96]. In particular, attachment to the same experience as that occurring in the place of disaster will actively affect behavioral intention towards traveling. Studies have shown that tourists who live near coastlines tend to generate emotional attachment to potential places because of their understanding of tsunamis, which further affects their behavioral intention [97].

According to a study, the Chinese Medicine Street in Dadaocheng is part of a historical town and the hub of Chinese medicine trading. During COVID-19, the street implemented stricter NPI measures and requirements. In terms of COVID-19 prevention and control using Chinese medicine, some tourists have visited before and have generated trust and attachment. Therefore, based on the above research and theory, the study proposes the following hypothesis.

H5. Tourists' emotional attachment towards the destination will positively affect behavioral intention.

2.5.2. Relationship between Non-Pharmaceutical Interventions and Behavioral Intention

During the pandemic, every county requested individuals, schools and communities to adopt preventive measures, which changed people's life and behaviors. Individuals followed the request because they were aware that NPI could protect themselves and their families [98]. Therefore, willingness towards NPI implementation was enhanced. As a result, NPI became an important predictive indicator for traveling during the pandemic. For potential travelers on cruise ships, active adoption of personal NPI will enhance behavioral intention. Therefore, based on the above research, the study proposed the following hypothesis.

H6. The implementation of NPI measures will positively affect behavioral intention.

The model that we have proposed for the realization of this research is represented in Figure 1.

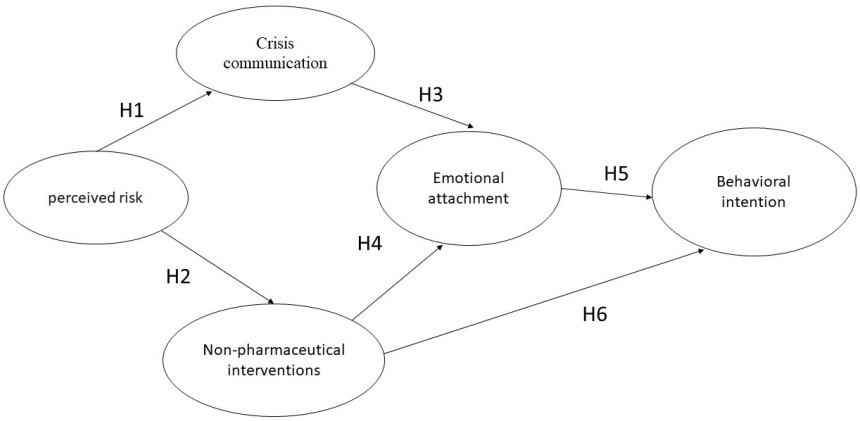

Figure 1. Research Model.

3. Methodology

3.1. Setting and Sample

This study selected Dadaocheng, a prominent old city district in Taiwan, situated on Dihua Street near the Danshui River in Datong District, Taipei. Since the late 18th century, it has served as an important port of entry merchant area for import and export goods. Among all commodities, Chinese herbal medicines take up the largest share. In addition to Chinese herbalists, the area also features Chinese medicine clinics. For this reason, it is known as the "Chinese Medicine Street". Every year, events related to Chinese herbal medicine are held here. Often people visit to cater to their specific needs.

In this study, we selected this place for sample data collection largely on the basis of the fact that, during the COVID-19 pandemic, the public environmental protection efforts in Dadaocheng, as well as the requirements of the stores for visitors to take preventive measures, all met the government's requirements, and it was ranked as one of the best tourist spots for pandemic prevention. In addition, Dadaocheng itself serves as a tourist attraction for the distribution of Chinese herbal medicine, where visitors have a basic understanding of and attitude toward health risk management and self-protection NPI requirements and can fully comply with the preventive measures required by the government and stores, making it ideal as a sample for this study.

The data were collected from visitors to Dadaocheng. Face-to-face questionnaire surveys were conducted by the researcher and two staff members in front of one of Dadaocheng's most famous attractions, the Taipei Xiahai City God Temple, one of the most popular tourist attractions in Dadaocheng. Participants completed the questionnaire in person, with 1047 valid questionnaires collected and an effective rate of 87.25%.

3.2. Measures

The questionnaire contains two parts. Part I was designed with questions based on the five variables of the study. The level of participators' recognition was measured with a 7-point Likert scale. A point from 1 to 7 was given to each question from "strongly disagree" to "strongly agree." Part II sought basic demographic statistics, educational background and whether the visit to Dadaocheng was based on the specific purpose of seeking Chinese medicine, as well as a question on the purpose of using Chinese herbs [99].

In terms of questions, perceived risk attitude towards COVID-19 was measured with the 8 scales from the research carried out by Yıldırım and Abdurrahim [69]. Strategies of crisis communication were measured with the six scales from the research done by Haiming et al. NPI was measured with the 10 scales from the research done by Choong-Ki et al. [100]. Emotional attachment was measured with the five scales from the research done by Thomson et al. [101]. Behavioral intention was measured with the four scales obtained from the research done by HakJun et al. [102].

3.3. Methods

There are two primary phases of data analysis in this study. Data analysis is comprised of two primary components: the measurement model and the structural model. The measuring model consists primarily of confirmatory factor analysis (CFA), which confirms the applicability of the model, and then the structural equation model SEM is applied to determine the relationship between the variables. CFA refers to the degree of association between the indicator and the superficial variables following the establishment of a scale. Prior to advancing to the next step of validation, the study met the fundamental conditions.

Structural equation modeling (SEM) is a combination of statistical computational techniques, such as factor analysis and path analysis, that can be used to investigate the interaction between multiple variables. It has become the most valued and widely used statistical method in numerous academic disciplines [103]. Due to its theoretical orientation, the structural equation model is an empirical rather than an exploratory statistical tool. It is commonly employed in management, accounting and marketing studies [104].

The most fundamental characteristic of structural equation modeling (SEM) is that it requires a theory prior to model construction. Numerous factors cannot be directly viewed and can only be measured by the observed meaning indicators. Moreover, structural equation models can be validated by model replacement and data collecting for each model.

In the early days of this study, perceived risk was predominantly used via sales to examine customers' consuming experiences. Later, it was applied to tourism marketing and, in the past, it was also utilized in crisis communication to consider an organization when an internal crisis happened. However, in this study, we utilize the crisis communication theoretical framework to evaluate the indicators of visitors in the post-COVID-19 period and then analyze the data to gain a deeper understanding of tourists' attitude toward crisis communication. The structural equation model offers a broad range of applications, is grounded in theory, is reasonably stable, has a small error margin and a high degree of reliability.

In addition, the structural equation model requires a large sample size to collect multiple variables at once and Anderson [105] suggested that the sample size should be at least 150 to 200; however, the valid sample size collected in this study was 1047, which is suitable for structural equation model analysis.

Structural equation models permit the comparison of patterns created by various theories, as well as the observation of the simultaneous effects of several independent factors on dependent variables. Comparatively to regression and path analysis, structural equation modeling can incorporate the measurement error of variables into the analysis process. Because the measurement error is accounted for, the path coefficients are more precise.

4. Results

4.1. Characteristics of the Respondents

In terms of respondents, the number of females was more than that of males; there were 636 females and 411 males. In respect of age, only 3.63% of respondents were under 18 years old, accounting for the least ratio. The age profile that accounted for the most was between 41–50 years old in 25.6%, and 12.42% of respondents were above 61 years old. As for educational background, more respondents had a university degree (including college)—569, accounting for 54.35%. This was followed by postgraduate or above at 22.06%. Besides, the response to the question related to whether the visit to Dadaocheng was specifically for Chinese medicine in the past showed a proportion of 50% of the total. For the purpose of using Chinese medicine, 78.41% was for health maintenance while 12.61% was for illness treatment. Table 1 contains the demographic data of the sample used in this research.

Table 1. Characteristics of the respondents (N = 1047).

	Feature	Frequency	%
Gender	Man	411	39.26%
	Woman	636	60.74%
Age	≦18	38	3.63%
	19–30	177	16.91%
	31–40	241	23.02%
	41–50	268	25.60%
	51–60	193	18.43%
	≧61	130	12.42%
Educational background	Junior high school or below	40	3.82%
	Senior high (vocational) school	207	19.77%
	University (college)	569	54.35%
	Postgraduate or above	231	22.06%
Visited Dadaocheng in the past for Chinese medicine	Yes	528	50.43%
	No	519	49.57%

Table 1. *Cont.*

	Feature	Frequency	%
Purpose of using herbal medicine	Health maintenance	821	78.41%
	Illness treatment	132	12.61%
	Never used before	94	8.98%

4.2. Measurement Model

The measurement model of the study was tested with confirmatory factor analysis (CFA) to understand the model fit, reliability and validity on the variables used for measurement. According to the suggestions from previous studies [106], the model fit of the study met the testing standards and was good. These results are shown in Table 2.

Table 2. Model Fit Analysis.

Measure	Value	Suggested Value
Chi-square/df	3.315	<5
Goodness of Fit index (GFI)	0.948	>0.9
Root mean square error of approximation (RMSEA)	0.048	<0.08
Standard Root mean square residual (SRMR)	0.031	<0.06
Adjusted Goodness of Fit Index (AGFI)	0.931	>0.9
Normed Fit Index (NFI)	0.970	>0.9
Relative Fit Index (RFI)	0.964	>0.9
Incremental Fit Index (IFI)	0.979	>0.9
Comparative Fit Index (CFI)	0.979	>0.9

Moreover, reliability analysis was used to find out the consistency of questions in the questionnaire. Cronbach's α value and CR value were used as index of reliability. Cronbach's α values in the study were all greater than 0.7 [107], while CR values were within the standard, being greater than 0.6 [108]. These results are shown in Table 3. Therefore, the questionnaire had good reliability and internal consistency.

Besides, in terms of validity, the study adopted convergent validity and discriminant validity for testing. Convergent validity means that the measured variables can be converged on the same potential variable. Discriminant validity means that the relevance between questions with different dimensions must not be too high. According to Fomell and Larcker [109], convergent validity requests that factor loading must be greater than the standard value of 0.6, t value greater than the level of significance, which is 1.96, and AVE should be greater than the standard value of 0.5. According to Table 3, all meet these requirements, which means the questionnaire has good convergent validity.

Discriminant validity is to verify the difference existing in two different dimensions. The study tested it by comparing the AVE value of the dimension and the square of correlation coefficient between dimensions. According to studies in the past, AVE value must be greater than the square of the correlation coefficient, which means it is with discriminant validity.

According to Table 4, AVE of all dimensions is between 0.723 and 0.844; the smallest value is 0.723. Below the diagonal of the chart, it shows that the square values of correlation coefficient for each dimension are between 0.205 and 0.018 while the biggest value 0.205 is smaller than the smallest value of AVE, which is 0.723. From this, the square values of correlation coefficient for each dimension are all smaller than AVE values. This meets the testing requirements. Therefore, the dimension of the study has discriminant validity.

Table 3. Analysis of Reliability and Convergent Validity.

Constructs	Items	Factor Loading	t-Value	Cronbach's α	AVE	CR
Perceived risk	PR4	0.674 ***	23.949	0.901	0.723	0.911
	PR6	0.923 ***	38.127			
	PR7	0.959 ***	40.767			
	PR8	0.817 ***	31.366			
Non-pharmaceutical interventions	NPI5	0.764 ***	28.574	0.932	0.751	0.937
	NPI7	0.781 ***	29.522			
	NPI8	0.862 ***	34.312			
	NPI9	0.967 ***	41.837			
	NPI10	0.94 ***	39.719			
Crisis communication strategy	CCS2	0.686 ***	24.635	0.929	0.778	0.932
	CCS4	0.921 ***	38.345			
	CCS5	0.961 ***	41.328			
	CCS6	0.932 ***	39.111			
Emotional Attachment	EA2	0.811 ***	30.698	0.912	0.725	0.913
	EA3	0.84 ***	32.433			
	EA4	0.919 ***	37.495			
	EA5	0.833 ***	32.007			
Behavioral intention	BI1	0.925 ***	38.387	0.939	0.844	0.942
	BI2	0.956 ***	40.633			
	BI3	0.873 ***	34.846			

*** p-value < 0.001.

Table 4. AVE and Squared correlations.

	PR	NPI	CCS	EA	BI
PR	0.723				
NPI	0.065	0.751			
CCS	0.205	0.027	0.778		
EA	0.002	0.028	0.018	0.725	
BI	0.003	0.047	0.006	0.430	0.844

The diagonal is AVE. Squared correlations are under the diagonal.

4.3. Structural Equation Model

The structural equation model (SEM) is used to test the interrelation between dimensions. In the study, model fit index was verified. The results are as below: Chi-square/df = 4.246 < 5, GFI = 0.937 > 0.9, RMSEA = 0.057 < 0.08, SRMR = 0.043 < 0.06. In addition, AGFI = 0.920, NFI = 0.963, RFI = 0.957, IFI = 0.972 and CFI = 0.972. They are all greater than 0.9, meeting the standard values. Therefore, the hypotheses of the study have good level of model fit.

The study used path coefficients to analyze and verify the hypotheses of the study. The results are shown in Figure 1. Tourists' perceived risk towards COVID-19 has a positive influence on crisis communication (γ = 0.454, $p < 0.001$) and NPL (r = 0.256, p-value < 0.001). Therefore, H1 and H2 are supported. In addition, tourists' crisis communication (r = 0.106, p-value < 0.01) and NPI (r = 0.148, p-value < 0.001) has positive correlation towards emotional attachment. Tourists' emotional attachment to the destination (r = 0.637, p-value < 0.001) has active and positive significance regarding their behavioral intention.

Therefore, H5 is valid. Finally, tourists' NPI has a positive influence on behavioral intention (r = 0.11, *p*-value < 0.001). Therefore, H6 is valid. Details are in Table 5.

Table 5. Hypothesis Test Analysis.

Path Coefficient		t-Value	*p*-Value	
H1	PR→CCS	0.454	12.350	***
H2	PR→NPI	0.256	7.616	***
H3	CCS→EA	0.106	3.206	**
H4	NPI→EA	0.148	4.452	***
H5	EA→BI	0.637	20.532	***
H6	NPI→BI	0.110	4.200	***

*** *p*-value < 0.001, ** *p*-value < 0.01.

The complete results of the model are shown in Figure 2.

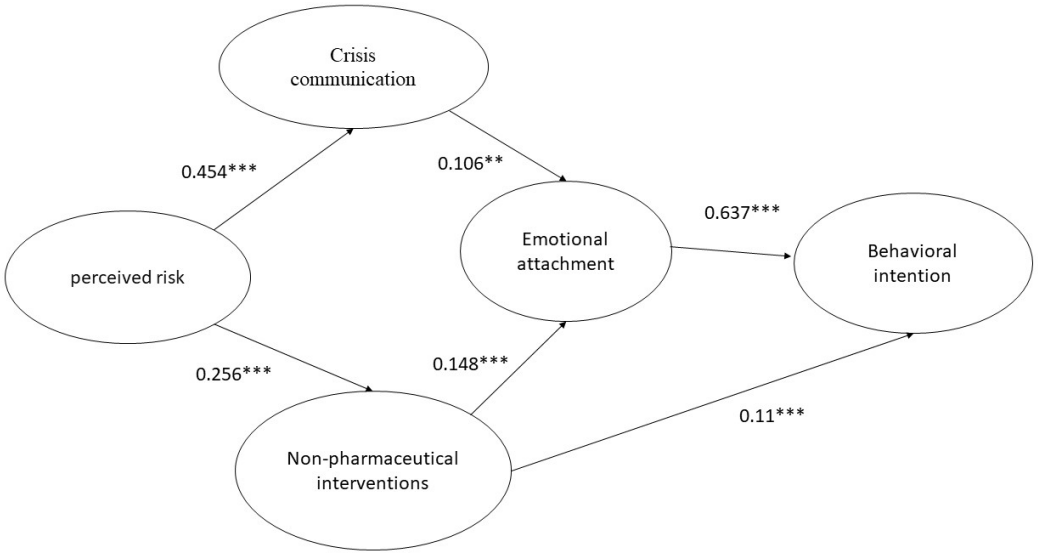

Figure 2. Structural Analysis of Research Model. *** *p*-value < 0.001, ** *p*-value < 0.01, * *p*-value < 0.05.

5. Conclusions

5.1. Discussion

This study examines the relationship between passengers' perceptions of risk and their travel intentions in the post-COVID-19 environment, demonstrating that the increase in perceived risk among travelers after COVID-19 had a favorable and statistically significant impact on crisis communication and self-protective nonpharmaceutical strategies for NPI. In other words, travelers perceive a greater risk of COVID-19 due to their fear of infection and they defend themselves by communicating their concern about infection through crisis communication and by enhancing their self- and externally imposed NPI measures.

In the post-COVID-19 period, unlike in the past, travelers have undergone a period of protection and even experience of the disease, which, when combined with vaccination, has altered their perception of danger. Tourists are aware that COVID-19 is very contagious and that, in addition to their personal protective precautions, NPI requires the collaborative efforts of external parties, including practitioners at the location. Consequently, visitors opt to share their worries and anxieties, their thoughts and opinions after infection and their own opinions and experiences during the epidemic using crisis communication in order to acquire more information and responses for self-protection.

Over an extended period of time, the NPI self-protection procedures have been validated and individuals have demonstrated that they can be protected. Therefore, when

travelers are aware of the higher danger, they self-impose additional NPI measures and pay greater attention to the activities of retailers and tourist places, in particular when considering traveling as an option.

This study also discovered that the crisis communication and NPI of travelers had a positive effect on their emotional attachment to the destination, because they were also exposed to the COVID-19 outbreak and the experience of prevention and because they complied with the NPI requirements, such as wearing masks, maintaining social distance and disinfecting their hands with alcohol. These shared emotional experiences are essential for influencing emotional attachment positively. In addition, NPI and destination emotional connection favorably influence travelers' behavioral intention, therefore better NPI measures will also have a favorable effect on travelers' behavioral intention. The increase in NPI measures will also have a beneficial effect on passengers' behavioral intentions and travelers' emotional attachment to the destination will also increase their behavioral intentions to travel to the destination after the pandemic.

As a result of the pandemic, people from all over the world share recollections and experiences, such as how to avoid the epidemic, which vaccines were delivered, symptoms after the disease were diagnosed, the same NPI measures used, etc. In the post-COVID-19 age, these shared memories have turned into shared experiences for everyone, including those in the tourism business. Similarly, visitors and hotel travel employees share the same memories and travelers are aware that hotel personnel are victims also, much more so than themselves. As a result of emotional attachment, travelers are more likely to develop travel intent while selecting a place.

This result is significant from an academic standpoint since, historically, the perceived health hazards of travel were negatively connected with behavioral intention. However, in the post-COVID-19 era and the reopening of tourism activities, travelers choose to meet future travel behavioral intentions face-to-face, communicate perceived risks through crisis communication, develop an emotional attachment to destination and strengthen NPI measures to protect themselves and others. The outcomes of this study provide the academic community with new insights and directions.

5.2. Theoretical Implication

This study has several theoretical implications. First of all, it understands that perceived risk plays an important role in travelers' decision making in the post-epidemic era, which positively influences behavioral intention and promotes the development of perceived risk theory. This is in line with previous studies, including the empirical survey through TPB [27] and that of the Hanfu Festival [110].

Secondly, this study demonstrates that travelers will use NPI as self-protection because of the perceived risk in order to improve crisis communication, and this study further understands that the way travelers respond when faced with perceived risk also makes the use of NPI more active and even self-imposed. This is mainly due to the trust in experts—that good NPI can reduce the risk of infection [55], which is further confirmation for future research on epidemics.

In addition, crisis communication in past studies mostly took organizations as the starting point, but in the post-COVID-19 era the unavoidable influence of epidemics, coupled with the development and use of social media nowadays, makes crisis communication no longer unidirectional and, likewise, it becomes one of the variables that influence travelers' behavioral intentions. This has led to a wider use of the theoretical implications of crisis communication, which is an important indicator in the wake of the COVID-19 pandemic.

In this study, the implementation of crisis communication and NPI was found to create an emotional attachment with the destination, although in line with previous research travelers have a stronger emotional attachment to destinations with the same experience and the same types of encounter [111]. Meanwhile, positive NPI and the destination's emotional attachment both positively influence tourists' behavioral intention [112], but in the post-COVID-19 era, unlike the past, emotional attachment is built on the same epidemic

negative encounter and few negative factors emerged from the present study. From the present study, we discovered that the establishment of emotional attachment can also be established through the shared experience of negative events, which allows for greater application and interpretation of the theoretical implications of emotional attachment [84].

5.3. Managerial Implication

With the arrival of the post-COVID-19 era and the gradual reopening of countries, tourist destinations are expected to welcome tourists. This study provides significant insights for tourists, travel industry and hotel industry, government, the airline industry and other related organizations to recover tourists and return to travel marketing management. This study found that, in the post-COVID-19 era, when travelers' perceived risk increased, so did their crisis communication and NPI self-protection. NPI measures should be publicly communicated so that travelers understand that crisis communication is effective and can be addressed and protected.

Crisis communication for travelers is a crucial factor in the recovery and prosperity of a destination. Social networking platforms are an important channel for tourists to use for crisis communication, transforming people from passive recipients to active participants. Tourists will reveal their awareness of risks and hope to obtain solutions and answers, but if they continue to fail to get effective responses, they may not only turn to other destinations but also invest more negative emotions. When the tourism industry encounters negative news and conditions, the key to recovery is to coordinate a consistent crisis communication and marketing communication strategy. However, the wrong crisis communication may result in greater damage and crisis for the destination, such as negative tourist sentiment and a secondary public opinion crisis. When tourists participate in crisis communication at a destination, they may become more resentful of the destination and give more damaging comments because they do not get the desired results.

In addition, crisis communication and the implementation of NPI for self-protection conveyed by travelers were shared by all of us during the epidemic and this process allowed travel industry operators to establish an emotional attachment with travelers. In the post-COVID-19 era, we can share our efforts in the fight against the epidemic by communicating that, despite the fact that we were also affected by the outbreak, we still persevered in the hope that tourists would come to visit us again, thus evoking the empathy of tourists, especially when travelers shifted their attitude toward the destination, harboring a sense of sadness and sorrow that they were also victims, and hoping that the hotel and travel staff would continue to maintain the situation, which would increase their behavioral intention.

In the post-COVID-19 era, the tourism market has reopened after a two-year hiatus. As a tourism operator, in addition to comprehension of crisis communication regarding tourists, it is necessary to further apply and respond to the pandemic and develop relevant marketing and management strategies to attract more tourism traffic, as well as to respond to future pandemics.

5.4. Limitations and Future Research Recommendations

The same as for most evidence-based research, this study also has its limitations. One is that the samples were only from Taiwan. It can only represent the situation in that country and might not be applicable to other regions. It is suggested that future studies use different countries as the subject of their study in order to globalize this research.

Secondly, the destination established in the study is the famous Dadaocheng Chinese Herbal Medicine Street in Taiwan. Tourists who came here belong to a significant market segmentation and understand and are concerned about issues related to public health. The study subjects already have basic knowledge of NPI. Researchers in the future can carry out relevant moderating effect studies based on different market segments.

Lastly, the occurrence of pandemic diseases in the post-COVID-19 era has become normal. Although tourists know how to protect themselves, tourists' perception of health risk is

still the most important. This will affect their behavioral intention and must not be ignored. It is suggested to adopt longitudinal research for continuous follow-up and exploration.

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References

1. Kim, S.H.; Holland, S.; Han, H.S. A Structural Model for Examining How Destination Image, Perceived Value, and Service Quality Affect Destination Loyalty: A Case Study of Orlando. *Int. J. Tour. Res.* **2013**, *15*, 313–328.
2. Tian-Cole, S.; Crompton, J.L.; Willson, V.L. An Empirical Investigation of the Relationships Between Service Quality, Satisfaction and Behavioral Intentions among Visitors to a Wildlife Refuge. *J. Leis. Res.* **2002**, *34*, 1–24. [CrossRef]
3. Parasuraman, A.; Zeithaml, V.; Berry, L. A Conceptual Model of Service Quality and its Implications for Future Research. *J. Mark.* **1985**, *49*, 41–50. [CrossRef]
4. Engel, J.F.; Blackwell, R.D.; Miniard, P.W. *Consumer Behavior*, 6th ed.; Dryden Press: Chicago, IL, USA; New York, NY, USA, 1995.
5. Teng, C.Y.; Jahari, S.A.B. Destination image as a mediator between perceived risks and revisit intention: A case of post-disaster Japan. *Tour. Manag.* **2014**, *40*, 382–393.
6. Reisinger, Y.; Mavondo, F. Travel anxiety and intentions to travel internationally: Implications of travel risk perception. *J. Travel Res.* **2005**, *43*, 212–225. [CrossRef]
7. Adam, I. Backpackers' risk perceptions and risk reduction strategies in Ghana. *Tour. Manag.* **2015**, *49*, 99–108. [CrossRef]
8. Lepp, A.; Gibson, H. Tourist Roles, Perceived Risk and International Tourism. *Ann. Tour. Res.* **2003**, *30*, 606–624. [CrossRef]
9. Sönmez, S.F.; Apostolopoulos, Y.; Tarlow, P. Tourism in Crisis: Managing the Effects of Terrorism. *J. Travel Res.* **1999**, *38*, 13–18.
10. Huang, J.; Min, J.C. Earthquake Devastation and Recovery in Tourism: The Taiwan Case. *Tour. Manag.* **2002**, *23*, 145–154. [CrossRef]
11. Park, K.; Reisinger, Y. Differences in the Perceived Influence of Natural Disasters and Travel Risk on International Travel. *Tour. Geogr.* **2010**, *12*, 1–24. [CrossRef]
12. Saling, B.M.; Baharuddin Semmaila, A.G. Effect of Service Quality and Marketing Stimuli on Customer Satisfaction: The Mediating Role of Purchasing Decisions. *J. Bus. Manag. Sci.* **2016**, *4*, 76–81.
13. Law, R. The perceived impact of risks on travel decisions. *Int. J. Tour. Res.* **2006**, *8*, 289–300. [CrossRef]
14. Obembe, D.; Kolade, O.; Obembe, F.; Owoseni, A.; Mafimisebi, O. COVID-19 and the tourism industry: An early-stage sentiment analysis of the impact of social media and stakeholder communication. *Int. J. Inf. Manag. Data Insights* **2021**, *1*, 100040. [CrossRef]
15. Wang, J.; Liu-Lastres, B.; Ritchie, B.W.; Mills, D.J. Travelers' self-protections against health risks: An application of the full Protection Motivation Theory. *Ann. Tour. Res.* **2019**, *78*, 102743. [CrossRef]
16. Abdelrahman, M. Personality Traits, Risk Perception, and Protective Behaviors of Arab Residents of Qatar During the COVID-19 Pandemic. *Int. J. Ment Health Addict.* **2022**, *20*, 237–248. [CrossRef] [PubMed]
17. Çınar, K.; Kavacık, S.Z.; Bişkin, F.; Çınar, M. Understanding the behavioral intentions about holidays in the shadow of the COVID-19 pandemic: Application of protection motivation theory. *Healthcare* **2022**, *10*, 1623. [CrossRef]
18. Li, C.H.; Chao, P.J. Impact of emotional contagion through social network sites on travel willingness in the pandemic. *J. Qual. Assur. Hosp. Tour.* **2022**, 1–18. [CrossRef]
19. Kapuściński, G.; Richards, B. News Framing Effects on Destination Risk Perception. *Tour. Manag.* **2016**, *57*, 234–244. [CrossRef]
20. Zhang, J.; Xie, C.; Chen, Y.; Dai, Y.-D.; Yi-Jun, W. The Matching Effect of Destinations' Crisis Communication. *J. Travel Res.* **2022**, 1–26. [CrossRef]
21. Wallis, P.; Nerlich, B. Disease metaphors in new epidemics: The UK media framing of the 2003 SARS epidemic. *Soc. Sci. Med.* **2005**, *60*, 2629–2639. [CrossRef]
22. Maser, B.; Weiermair, K. Travel Decision-Making: From the Vantage Point of Perceived Risk and Information Preferences. *J. Travel Tour. Mark.* **1998**, *7*, 107–121.
23. Maulana, N.; Astuti, R.D.; Sukamdani, H.B.; Tjiptoherijanto, P. Risk Perception in the Post COVID-19 Pandemic Era: An Analysis of Tourist Accommodation and Travel Behavior in the New Normal Era. *Sustainability* **2022**, *14*, 14758. [CrossRef]
24. Larissa Neuburger & Roman Egger. Travel risk perception and travel behaviour during the COVID-19 pandemic 2020: A case study of the DACH region. *Curr. Issues Tour.* **2021**, *24*, 1003–1016. [CrossRef]
25. Sujood; Hamid, S.; Bano, N. Behavioral intention of traveling in the period of COVID-19: An application of the theory of planned behavior (TPB) and perceived risk. *Int. J. Tour. Cities* **2022**, *8*, 357–378.
26. Mandina, S.P.; Du Preez, E.A. Travelers' Risk Perceptions and Intentions to Visit African Destinations amidst COVID-19: The Case of Brands South Africa and Zimbabwe. *Afr. J. Hosp. Tour. Leis.* **2022**, *11*, 975–995.
27. Chan, C.S. Developing a Conceptual Model for the Post-COVID-19 Pandemic Changing Tourism Risk Perception. *Int. J. Environ. Res. Public Health* **2021**, *18*, 9824. [PubMed]

28. Zhang, X.; Tang, J. A Study of Emotional Solidarity in the Homestay Industry between Hosts and Tourists in the Post-Pandemic Era. *Sustainability* **2021**, *13*, 7458.
29. Bauer, R.A. Consumer Behavior as Risk Taking. In *Dynamic Marketing for a Changing World, Proceedings of the 43rd Conference of the American Marketing Association*; Hancock, R.S., Ed.; American Marketing Association: Chicago, IL, USA, 1960; pp. 389–398.
30. Jacoby, J.; Kaplan, L.B. The Components of Perceived Risk. In Proceedings of the Third Annual Conference of the Association for Consumer Research, Chicago, IL, USA, 3–5 November 1972; Venkatesan, M., Ed.; Association for Consumer Research: Chicago, IL, USA, 1972; pp. 382–393.
31. Mitchell, V.M. Consumer Perceived Risk: Conceptualizations and Models. *Eur. J. Mark.* **1999**, *33*, 163–195. [CrossRef]
32. Mansfeld, Y. Cycles of war, terror, and peace: Determinants and management of crisis and recovery of the Israeli tourism industry. *J. Travel Res.* **1999**, *38*, 30–36. [CrossRef]
33. Sönmez, F.S.; Graefe, R.A. Influence of Terrorism Risk on Foreign Tourism Decisions. *Ann. Tour. Res.* **1998**, *25*, 112–144. [CrossRef]
34. Richard, George. International tourists' perceptions of crime-risk and their future travel intentions during the 2010 FIFA World Cup™ in South Africa. *Crime Prev. Community Saf.* **2012**, *14*, 79–103. [CrossRef]
35. Huan, T.T.; Beaman, J.J.; Shelby, L.B. No-escape natural disaster: Mitigating Impacts on Tourism. *Ann. Tour. Res.* **2004**, *31*, 255–273.
36. Quintal, V.A.; Lee, J.A.; Soutar, G.N. Risk, Uncertainty and the Theory of Planned Behavior: A Tourism Example. *Tour. Manag.* **2010**, *31*, 797–805.
37. Cahyanto, I.; Wiblishauser, M.; Pennington-Gray, L.; Schroeder, A. The dynamics of travel avoidance: The case of Ebola in the U.S. *Tour. Manag. Perspect.* **2016**, *20*, 195–203. [CrossRef] [PubMed]
38. Cowling, B.J.; Ng, D.M.; Ip, D.K.; Liao, Q.; Lam, W.W.; Wu, J.T.; Lau, J.T.; Griffiths, S.M.; Fielding, R. Community psychological and behavioral responses through the first wave of the 2009 influenza A(H1N1) pandemic in Hong Kong. *J. Infect. Dis.* **2010**, *202*, 867–876.
39. SCrossReCañizares, S.M.; Cabeza-Ramírez, L.J.; Muñoz-Fernández, G.A.; Fuentes-García, F.J. Impact of the perceived risk from Covid-19 on intention to travel. *Curr. Issues Tour.* **2020**, *24*, 970–984.
40. Matiza, T. Post-COVID-19 crisis travel behaviour: Towards mitigating the effects of perceived risk. *J. Tour. Futures* **2022**, *8*, 99–108.
41. Abraham, V.; Bremser, K.; Carreno, M.; Crowley-Cyr, L.; Moreno, M. Exploring the consequences of COVID-19 on tourist behaviors: Perceived travel risk, animosity and intentions to travel. *Tour. Rev.* **2020**, *76*, 701–717. [CrossRef]
42. Hakim, M.P.; Zanetta, L.D.; da Cunha, D.T. Should I stay, or should I go? Consumers' perceived risk and intention to visit restaurants during the COVID-19 pandemic in Brazil. *Food Res. Int.* **2021**, *141*, 110152.
43. Morgan, R.M.; Hunt, S.D. The commitment-trust theory of relationship marketing. *J. Mark.* **1994**, *58*, 20–38. [CrossRef]
44. Zhong, L.; Liu, J.; Morrison, A.M.; Dong, Y.; Zhu, M.; Li, L. Perceived differences in peer-to-peer accommodation before and after COVID-19: Evidence from China. *Int. J. Contemp. Hosp. Manag.* **2023**. [CrossRef]
45. Zhao, Y.; Wang, H.; Guo, Z.; Huang, M.; Pan, Y.; Guo, Y. Online reservation intention of tourist attractions in the COVID-19 context: An extended technology acceptance model. *Sustainability* **2022**, *14*, 10395. [CrossRef]
46. Arpan, L.M.; Pompper, D. Stormy weather: Testing "stealing thunder" as a crisis communication strategy to improve communication flow between organizations and journalists. *Public Relat. Rev.* **2003**, *29*, 291–308. [CrossRef]
47. Coombs, W.T.; Holladay, S.J. Helping Crisis Managers Protect Reputational Assets: Initial Tests of the Situational Crisis Communication Theory. *Manag. Commun. Q.* **2002**, *16*, 165–186.
48. Coombs, W.T.; Holladay, S.J. Communication and Attributions in a Crisis: An Experiment Study in Crisis Communication. *J. Public Relat. Res.* **1996**, *8*, 279–295. [CrossRef]
49. Coombs, W.T. Information and Compassion in Crisis Responses: A Test of Their Effects. *J. Public Relat. Res.* **1999**, *11*, 125–142. [CrossRef]
50. Rather, R.A. Monitoring the impacts of tourism-based social media, risk perception and fear on tourist's attitude and revisiting behaviour in the wake of COVID-19 pandemic. *Curr. Issues Tour.* **2021**, *24*, 3275–3283.
51. Coombs, W.T. An Analytic Framework for Crisis Situations: Better Responses From a Better Understanding of the Situation. *J. Public Relat. Res.* **1998**, *10*, 177–191.
52. Taecharungroj, V.; Avraham, E. From tsunami through terror attacks to Covid-19: Crisis communication strategies and recovery campaigns to combat Thailand's tourism crises. *Asian J. Commun.* **2021**, *32*, 41–64.
53. Liu, B.; Pennington-Gray, L.; Krieger, J.L. Tourism crisis management: Can the Extended Parallel Process Model be used to understand crisis responses in the cruise industry? *Tour. Manag.* **2016**, *55*, 310–321.
54. Acar, A.; Muraki, Y. Twitter for crisis communication: Lessons learned from japan's tsunami disaster. *Int. J. Web Based Communities* **2011**, *7*, 392–402. [CrossRef]
55. Shah, Z.; Chu, J.; Feng, B.; Qaisar, S.; Ghani, U.; Hassan, Z. If you care, I care: Perceived social support and public engagement via SNSs during crises. *Technol. Soc.* **2019**, *59*, 101195.
56. Ritchie, B.; Dorrell, H.; Miller, D.; Miller, G. Crisis communication and recovery for the tourism industry: Lessons from the 2001 foot and mouth disease outbreak in the UK. *J. Travel Tour. Mark.* **2003**, *15*, 199–216.
57. Bill Faulkner. Towards a framework for tourism disaster management. *Tour. Manag.* **2001**, *22*, 135–147.
58. World Health Organization. Coronavirus Disease (COVID-19) Pandemic. WHO. 2020. Available online: https://www.who.int/emergencies/diseases/novel-coronavirus-2019 (accessed on 1 October 2020).
59. Rimal, R.N.; Real, K. Perceived risk and efficacy beliefs as motivators of change: Use of the risk perception attitude (RPA) framework to understand health behaviors. *Hum. Commun. Res.* **2003**, *29*, 370–399.

60. Zhang, J.; Xie, C.; Wang, J.; Morrison, A.M.; Coca-Stefaniak, J.A. Responding to a major global crisis: The effects of hotel safety leadership on employee safety behavior during COVID-19. *Int. J. Contemp. Hosp. Manag.* **2020**, *32*, 3365–3389.
61. Sturges, D.L. Communicating through Crisis: A Strategy for Organizational Survival. *Manag. Commun. Q.* **1994**, *7*, 297–316.
62. Xiao, J.; Shiu, E.Y.C.; Gao, H.; Wong, J.Y.; Fong, M.W.; Ryu, S.; Cowling, B.J. Nonpharmaceutical Measures for Pandemic Influenza in Nonhealthcare Settings-Personal Protective and Environmental Measures. *Emerg. Infect. Dis.* **2020**, *26*, 967–975.
63. Pannu, J. Nonpharmaceutical Measures for Pandemic Influenza in Nonhealthcare Settings—International Travel-Related Measures. *Emerg. Infect. Dis.* **2020**, *26*, 2298–2299.
64. Nigmatulina, K.R.; Larson, R.C. Living with influenza: Impacts of government imposed and voluntarily selected interventions. *Eur. J. Oper. Res.* **2009**, *195*, 613–627. [CrossRef]
65. Cowling, B.J.; Fung, R.O.; Cheng, C.K.; Fang, V.J.; Chan, K.H.; Seto, W.H.; Yung, R.; Chiu, B.; Lee, P.; Uyeki, T.M.; et al. Preliminary findings of a randomized trial of non-pharmaceutical interventions to prevent influenza transmission in households. *PLoS ONE* **2008**, *3*, e2101.
66. Mniszewski, S.; Del Valle, S.; Priedhorsky, R.; Hyman, J.; Hickman, K. Understanding the Impact of Face Mask Usage Through Epidemic Simulation of Large Social Networks. *Theor. Simul. Complex Soc. Syst.* **2013**, *52*, 97–115.
67. Stutt, R.O.J.H.; Retkute, R.; Bradley, M.; Gilligan, C.A.; Colvin, J. A modelling framework to assess the likely effectiveness of facemasks in combination with 'lock-down' in managing the covid-19 pandemic. *Proc. R. Soc. A Math. Phys. Eng. Sci.* **2020**, *476*, 20200376.
68. Ngonghala, C.N.; Iboi, E.; Eikenberry, S.; Scotch, M.; MacIntyre, C.R.; Bonds, M.H.; Gumel, A.B. Mathematical assessment of the impact of non-pharmaceutical interventions on curtailing the 2019 novel coronavirus. *Math. Biosci.* **2020**, *325*, 108364.
69. Lee, C.K.; Song, H.J.; Bendle, L.J.; Kim, M.J.; Han, H. The impact of non-pharmaceutical interventions for 2009 H1N1 influenza on travel intentions: A model of goal-directed behavior. *Tour. Manag.* **2012**, *33*, 89–99. [CrossRef]
70. Kim, M.J.; Lee, C.K.; Petrick, J.F.; Kim, Y.S. The influence of perceived risk and intervention on international tourists' behavior during the Hong Kong protest: Application of an extended model of goal-directed behavior. *J. Hosp. Tour. Manag.* **2020**, *45*, 622–632.
71. Zucker, H. The Emotional Attachment of Children to their parents as Related to Standards of Behavior and Delinquency. *J. Psychol.* **1943**, *15*, 31–40. [CrossRef]
72. Hsiang, S.; Allen, D.; Annan-Phan, S.; Bell, K.; Bolliger, I.; Chong, T.; Druckenmiller, H.; Huang, L.Y.; Hultgren, A.; Krasovich, E.; et al. The effect of large-scale anti-contagion policies on the COVID-19 pandemic. *Nature* **2020**, *584*, 262–267.
73. Eikenberry, S.E.; Mancuso, M.; Iboi, E.; Phan, T.; Eikenberry, K.; Kuang, Y.; Kostelich, E.; Gumel, A.B. To mask or not to mask: Modeling the potential for face mask use by the general public to curtail the COVID-19 pandemic. *Infect. Dis. Model.* **2020**, *5*, 293–308. [CrossRef]
74. Ainsworth, M. The Bowlby-Ainsworth attachment theory. *Behav. Brain Sci.* **1978**, *1*, 436–438. [CrossRef]
75. Escalas, J.E.; Bettman, J.R. Self-Construal Reference Groups and Brand Meaning. *J. Consum. Res.* **2005**, *32*, 378–389. [CrossRef]
76. Hazan, C.; Shaver, P. Attachment as an Organizational Framework for Research on Close Relationships. *Psychol. Inq.* **1994**, *5*, 1–22. [CrossRef]
77. Thomson, M.; MacInnis, D.J.; Park, C.W. The ties that bind: Measuring the strength of consumers' emotional attachments to brands. *J. Consum. Psychol.* **2005**, *15*, 77–91.
78. Fournier, S. Consumers and Their Brands: Developing Relationship Theory in Consumer Research. *J. Consum. Res.* **1998**, *24*, 343–353. [CrossRef]
79. Lee, J.; Kyle, G.; Scott, D. The mediating effect of place attachment on the relationship between festival satisfaction and loyalty to the festival hosting destination. *J. Travel Res.* **2012**, *51*, 754–767. [CrossRef]
80. Kil, N.; Holland, S.M.; Stein, T.V.; Ko, Y.J. Place attachment as a mediator of the relationship between nature-based recreation benefits and future visit intentions. *J. Sustain. Tour.* **2012**, *20*, 603–626.
81. Trauer, B.; Ryan, C. Destination Image, Romance and Place Experience—An Application of Intimacy Theory in Tourism. *Tour. Manag.* **2005**, *26*, 481–491.
82. Rajkumar, R.P. COVID-19 and Mental Health: A Review of the Existing Literature. *Asian J. Psychiatry* **2020**, *52*, 102066. [CrossRef]
83. Ajzen, I. Attitude structure and behavior. In *Attitude Structure and Function*; Pratkanis, A.R., Breckler, S.J., Greenwald, A.G., Eds.; Lawrence Erlbaum Associates, Inc.: Mahwah, NJ, USA, 1989; pp. 241–274.
84. Cong, G.; Zhang, H.; Chen, T. A Study on the Perception of Authenticity of Tourist Destinations and the Place Attachment of Potential Tourists—The Case of Ding Zhen's Endorsement of Ganzi, Sichuan. *Sustainability* **2022**, *14*, 7151. [CrossRef]
85. Mousavi, S.H.; Delshad, M.H.; Acuti Martellucci, C.; Bhandari, D.; Ozaki, A.; Pourhaji, F.; Pourhaji, F.; Reza Hosseini, S.M.; Roien, R.; Ramozi, A.A.; et al. Community Behavioral and Perceived Responses in the COVID-19 Outbreak in Afghanistan: A Cross-Sectional Study. *Disaster Med. Public Health Prep.* **2021**, 1–7, *advance online publication*.
86. Dunn, L.H.; Hoegg, J. The Impact of Fear on Emotional Brand Attachment. *J. Consum. Res.* **2014**, *41*, 152–168. [CrossRef]
87. Kuroki, M.; Yamamoto, K.; Goldfinch, S. Factors influencing the adoption of voluntary nonpharmaceutical interventions to control COVID-19 in japan: Cross-sectional study. *JMIR Form. Res.* **2022**, *6*, e34268.
88. Hang, H.; Aroean, L.; Chen, Z. Building emotional attaching during COVID-19. *Ann. Tour. Res.* **2020**, *83*, 103006. [CrossRef]
89. Ullah, F.; Saqib, S.E.; Ahmad, M.M.; Fadlallah, M.A. Flood Risk Perception and its Determinants Among Rural Households in Two Communities in Khyber Pakhtunkhwa, Pakistan. *Nat. Hazards* **2020**, *104*, 225–247.
90. Ajzen, I.; Fishbein, M. The prediction of behavioral intentions in a choice situation. *J. Exp. Soc. Psychol.* **1969**, *5*, 400–416. [CrossRef]

91. Venkatesh, V.; Thong, J.Y.; Xu, X. Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Q.* **2012**, *36*, 157–178.
92. Bock, G.; Zmud, R.W.; Kim, Y.; Lee, J. Behavioral Intention Formation in Knowledge Sharing: Examining the Roles of Extrinsic Motivators, Social-Psychological Factors, and Organizational Climate. *MIS Q.* **2005**, *29*, 87–111.
93. Cao, S.; Gao, X.; Niu, S.; Wei, Q. A Comparison Study of Doctor-Patient Internet Interactions in Traditional and Modern Medicine: Empirical Evidence from Online Healthcare Communities. *Evid.-Based Complement. Altern. Med.* **2022**, *2022*, 4619914. [CrossRef]
94. Lam, T.; Hsu, C.H. Predicting behavioral intention of choosing a travel destination. *Tour. Manag.* **2006**, *27*, 589–599.
95. Yang, Y.; Sun, S. Tourism demand forecasting and tourists' search behavior: Evidence from segmented Baidu search volume. *Data Sci. Manag.* **2021**, *4*, 1–9. [CrossRef]
96. Gotham, K.F.; Campanella, R.; Lauve-Moon, K.; Powers, B. Hazard Experience, Geophysical Vulnerability, and Flood Risk Perceptions in a Postdisaster City, the Case of New Orleans. *Risk Anal.* **2018**, *38*, 345–356. [CrossRef]
97. Haverila, M.J.; McLaughlin, C.; Haverila, K. The impact of social influence on perceived usefulness and behavioral intentions in the usage of non-pharmaceutical interventions (NPIs). *Int. J. Healthc. Manag.* **2022**, 1–12. [CrossRef]
98. Xu, W.; Youn, H.-J.; Lee, C.-K. Role of Non-Pharmaceutical Interventions for COVID-19 in Cruise Tourists' Decision-Making Process: An Extended Model of Goal-Directed Behavior. *Sustainability* **2021**, *13*, 5552.
99. Yıldırım, M.; Güler, A. Factor analysis of the COVID-19 Perceived Risk Scale: A preliminary study. *Death Stud.* **2022**, *46*, 1065–1072.
100. Gao, Y.; Chen, L. Impact of COVID-19 risk perception on residents' behavioural intention towards forest therapy tourism. *Sustainability* **2022**, *14*, 11590.
101. Song, H.; You, G.J.; Reisinger, Y.; Lee, C.K.; Lee, S.K. Behavioral intention of visitors to an Oriental medicine festival: An extended model of goal directed behavior. *Tour. Manag.* **2014**, *42*, 101–113.
102. Schoofs, L.; Claeys, A. Communicating sadness: The impact of emotional crisis communication on the organizational post-crisis reputation. *J. Bus. Res.* **2021**, *130*, 271–282. [CrossRef]
103. Steenkamp, J.-B.E.M.; Baumgartner, H. On the use of structural equation models for marketing modeling. *Int. J. Res. Mark.* **2000**, *17*, 195–202. [CrossRef]
104. Anderson, J.C.; Gerbing, D.W. Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychol. Bull.* **1988**, *103*, 411–423. [CrossRef]
105. Kelloway, K.E. *Using LISREL for Structural Equation Modeling: A Researcher's Guide*; Sage Publications: Thousand Oaks, CA, USA, 1998.
106. Matiza, T.; Kruger, M. Ceding to their fears: A taxonomic analysis of the heterogeneity in COVID-19 associated perceived risk and intended travel behaviour. *Tour. Recreat. Res.* **2021**, *46*, 158–174. [CrossRef]
107. Nunnally, J.C.; Bernstein, I.H. The Assessment of Reliability. *Psychom. Theory* **1994**, *3*, 248–292.
108. Bagozzi, R.P.; Yi, Y. On the Evaluation of Structure Equation Models. *J. Acad. Mark. Sci.* **1998**, *16*, 76–94.
109. Fornell, C.; Larcker, D.F. Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *J. Mark. Res.* **1981**, *18*, 382–388. [CrossRef]
110. Yang, J.; Luo, J.M.; Yao, R. How fear of COVID-19 affects the behavioral intention of festival Participants—A case of the HANFU festival. *Int. J. Environ. Res. Public Health* **2022**, *19*, 2133. [CrossRef] [PubMed]
111. Schneiders, M.L.; Naemiratch, B.; Cheah, P.K.; Cuman, G.; Poomchaichote, T.; Ruangkajorn, S.; Stoppa, S.; Osterrieder, A.; Cheah, P.K.; Ongkili, D.; et al. The impact of COVID-19 non-pharmaceutical interventions on the lived experiences of people living in Thailand, Malaysia, Italy and the United Kingdom: A cross-country qualitative study. *PLoS ONE* **2022**, *17*, e0262421.
112. Oltra González, I. SOS to my followers!: The role of marketing communications in reinforcing online travel community value during times of crisis. *Tour. Manag. Perspect. TMP* **2021**, *39*, 100843.