Seeing the invisible hand: Underlying effects of COVID-19 on tourists' behavioral patterns

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ABSTRACT

Given growing attention toward the effects on COVID-19 on tourism, a number of institutions have made macro-level predictions related to the disease. More micro-level research are, however, needed. This study seeks to advance the understanding of tourists' potential behavioral transformation by reviewing psychological distance and construal level theory, as well as the relationship between psychological distance and perceived risk. Multiple dimensions of psychological distance and perceived risk are summarized with respect to COVID-19. The discussion suggests that global health emergencies evoke three types of tourism pattern: from general to elaborate, from open-hearted to closed, and from radical to conservative. These categories provide a conceptual foundation for empirical research considering contextual and individual stimuli. Practically, this paper highlights strategies to reduce individuals' risk perceptions, encourage specific types of tourism, and regulate unethical consumption. The recommendations also encourage the analysis of crisis recovery and relevant market analysis by tourism professionals and marketers.

1. Introduction

On December 1, 2019, a case of novel coronavirus pneumonia (COVID-19) was reported in Wuhan, China (Huang et al., 2020), and subsequently sparked a public health emergency of international concern. The World Health Organization (WHO) classified COVID-19 as a pandemic on March 11, 2020 (WHO, 2020a). A WHO-issued situation report published on March 27, 2020 indicated that COVID-19 had affected more than 200 countries and regions around the world, with the total number of COVID-19 cases surpassing 500,000 globally (WHO, 2020b).

The tourism industry is particularly vulnerable to crises or disasters (Cró & Martins, 2017). Travel is influenced by myriad external factors, such as political instability, economic conditions, the environment, and weather (Okumus, Altinay, & Arasli, 2005). According to Yang and Nair (2014), a key research trend in tourism involves risk and crisis management (Ritchie & Jiang, 2019), which includes terrorism (Massey, 2005; Sönmez, 1998), political instability (Zenker, Von Wallpach, Braun, & Vallaster, 2019), economic crises (Bodosca, Gheorghe, & Nistoreanu, 2014; Okumus et al., 2005), financial problems (U & So, 2020), natural disasters (Ruan & Li, 2018), and infectious diseases (Okuyama, 2018; Zeng, Carter, & De Lacy, 2005).

Historically, disease outbreaks have forced countries to close their borders, suspend visa-on-arrival policies, and institute travel bans. Such measures have brought irrefutable losses to tourism. For example, in 2003, China officially cancelled its May Day Holiday to limit the spread of SARS (Zeng et al., 2005). During the bird flu outbreak in Miyazaki, Japan in 2010, the Japanese government prohibited visitor entry into infectious areas, resulting in lost revenue of approximately ¥8.1 billion (Miyazaki Prefecture, 2011). Because COVID-19 is transmitted through human-to-human contact (Chan et al., 2020), many countries have announced short-term travel restrictions. International tourism shrank as countries closed their borders. UNWTO predicted that global international tourist arrivals could decline between 20 and 30% in 2020 due to the pandemic, leading to US$300–450 billion less in international tourism receipts (UNWTO, 2020). Public officials have encouraged people to avoid mass gatherings and have postponed or cancelled large public events (The State Council of the People's Republic of China, 2020). Hotel and restaurant operations have also been suspended in many countries, spiking the unemployment rate across the globe.

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The impact of COVID-19 on the tourism industry is reflected not only in lower revenue on the supply side but also in individuals' inherent risk perceptions on the demand side. Safety concerns are a key factor in tourists' willingness to travel and heavily influence tourism demand (Simon, 2009). Moreover, tourists' risk perceptions vary (Reisinger & Mavondo, 2005) on the basis of complex psychological characteristics. While institutions have recently sought to provide macro-level predictions relating to COVID-19 (e.g. UNWTO, 2020), few studies have focused on the outbreak's potential personal impacts. Tourism, which is highly reliant on tourist flows, is shaped by individuals' responses. More research on tourist behavior is therefore needed amid this pandemic. This paper was therefore carried out to address this knowledge gap by exploring how tourist transformations occur across types of perceived risk during COVID-19 based on the theory of psychological distance and levels of construal.

Psychological distance is defined as "the subjective distance of an event in the actor's psychological space, and the theory posits that different distance dimensions can be unified under one psychological space" (Kyeongheui, Zhang, & Li, 2008, p. 707). This concept includes the following four dimensions: temporal distance, namely how much time separates 'now' from the target event; spatial distance, or how distal a target is in space from 'here'; social distance, specifically how distinct the social target is from the 'self'; and hypotheticality, referring to the likelihood of a target event occurring or how close it is to 'reality' (Bar-Anan, Liberman, & Trope, 2006). The construal level refers to "the perception of what will occur: the processes that give rise to the representation of the event itself" (Trope & Liberman, 2010, p. 442). Representations of cognitive objects have different levels of abstraction (i.e. levels of interpretation), which depend on perceived psychological distance from the target event and can influence people's judgment and decision making (Li, Zhou, & Zhou, 2009).

A review of studies on psychological distance, perceived risk, and tourism crises facilitates the building of a theoretical foundation for the research context. This study therefore presents and critically discusses major theories guiding earlier studies to consolidate the conceptual framework. Particular attention is given to how tourists' psychology and behavior may change based on interactions between their internal state (i.e. consciousness) and surroundings (i.e. environment). Drawing upon the proposed conceptual model, the following questions are raised:

- How can psychological distance and construal level theory be incorporated into tourism research on COVID-19?
- How are psychological distance dimensions related to COVID-19?
- What risks do potential tourists perceive relative to the COVID-19 outbreak?
- How to explain the mechanism between psychological distance and perceived risk?
- How do identified dimensions of psychological distance and perceived risk influence tourism behavior?
- What research opportunities can be proposed based on the conceptual model put forth in this paper?

2. Literature review

2.1. Psychological distance and construal level theory

Psychological distance is "a subjective construction that something is close or far away from the self, here, and now" (Trope & Liberman, 2010, p. 440). From an egocentric viewpoint, four dimensions characterize overall psychological distance (Brügger, Morton, & Dessai, 2016) as noted earlier: temporal distance, spatial distance, social distance, and hypotheticality. Temporal distance refers to the perceived proximity of an event in time (e.g. Tan, Wong-Parodi, & Xu, 2020; Trope & Liberman, 2010). Spatial distance refers to how far an object is from the perceiver (e.g. local vs. 10 miles away; Tan et al., 2020; Trope & Liberman, 2010). Social distance describes closeness in terms of social relationships (e.g.

self vs. others or in-group vs. out-group members; Tan et al., 2020; Trope & Liberman, 2010). Hypothetical distance defines the probability that an event will occur (Tan et al., 2020; Trope & Liberman, 2010), including durability, level of influence, controllability, familiarity, likelihood, and outcome severity (Huang & Wu, 2017). Researchers have examined probability as one example of psychological distance and argued that low-probability events can be perceived as psychologically distant while high-probability events can be perceived as proximate (Todorov, Goren, & Trope, 2007; Wakslak, Trope, Liberman, & Alony, 2006).

Construal level theory proposes that mental construal involves abstraction (Liberman, Sagristano, & Trope, 2002) and that psychological distance is one factor determining the level of abstraction (Liberman & Trope, 1998; Trope & Liberman, 2000). Construal levels can thus be adjusted to the target's psychological distance (Bar-Anan et al., 2006). Generally, construal level theory suggests that people tend to describe events using high-level construal (i.e. abstract construal) when the perceived psychological distance is distal and low-level construal (i.e. concrete construal) when an event is perceived as psychologically close (Geng, Liu, Zhou, & Yang, 2018; Tan et al., 2020). Further, more abstract construal is accompanied by a gradual reduction in the detail and complexity of representations (Liberman et al., 2002). Compared to low-level construal, high-level construal is simpler, decontextualized, and more coherent (Liberman et al., 2002; Liberman & Trope, 1998; Trope & Liberman, 2010). Information about superordinate goals (i.e. 'why' aspects of action) is furthermore emphasized in high-level construal, whereas low-level construal involves subordinate means of reaching those goals (i.e. 'how' aspects of action) (Liberman & Trope, 1998).

Bar-Anan et al. (2006) conducted eight experiments using the Implicit Association Test to demonstrate associations between construal levels and the four dimensions of psychological distance. Their findings suggested that people intuitively associate proximate objects with indicators of low-level construal, which does not require conscious involvement. Furthermore, implicit associations may unconsciously affect explicit relevant judgments and decisions. In addition, consistent with previous studies (Darke, Brady, Benedicktus, & Wilson, 2016; Kyeongheui et al., 2008; Trope & Liberman, 2010), several assumptions of construal level theory have been supported: the four dimensions influence each other; the four dimensions have similar mechanisms and are unified in terms of psychological distance, leading to parallel effects on judgment; and the intervention of the four dimensions of psychological distance can have an interactive influence on judgment.

Psychological distance and construal level theory have implications for evaluation, prediction, and choice (Liberman & Trope, 1998). As such, they are popular in cognitive psychology (e.g. Bar-Anan, Liberman, Trope, & Algom, 2007) and have recently permeated studies in marketing (e.g. Hernández-Ortega, 2018; Kim, Zhang, & Li, 2008) and environmental risk (e.g. Fox, Mcknight, Sun, Maung, & Crawfis, 2020; Geng et al., 2018; Wang, Marinova, Wang, & Wei, 2020). Studies related to tourism and crisis have confirmed that the effects of SARS on tourism were generally immediate and extreme but rather time-limited (Li, 2009; Zeng et al., 2005). This phenomenon could be explained by psychological distance: once temporal and spatial distance are perceived as distant enough, and the hypotheticality of an event occurring is low, the epidemic will appear controllable to tourists.

2.2. Psychological distance of COVID-19

This paper focuses on the COVID-19 outbreak, an event featuring relatively severe consequences. Pandemics can evoke considerable anxiety in addition to material losses, especially when individuals face treatment-related challenges or high mortality in densely populated areas (Li, 2009). Psychological distance can be described in the context of COVID-19 as follows.

Temporal Distance: For now, the temporal distance of COVID-19 is

proximate. Given that proximate psychological distance primes low construal (Geng et al., 2018), people are likely to pay attention to the immediate pandemic-related context and details.

Spatial Distance: Considering the widespread impact of the COVID-19 outbreak, people around the world are facing relatively close spatial distance, especially in severely affected countries and regions. Therefore, in terms of spatial distance, people perceive COVID-19 as psychologically close, which primes low construal. Because COVID-19 is primarily transmitted through close contact with infected individuals, and people are more sensitive to spatial distance between strangers, a larger spatial distance could reflect a larger social distance (Stephan, Liberman, & Trope, 2010; Trope & Liberman, 2010). Concrete construal can then lead people to minimize close spatial distance with others, particularly those from areas where COVID-19 is especially prevalent. This type of construal can also reflect a larger social distance from strangers.

Social Distance: Social distance describes closeness in terms of social relationships. Briefly, in an intergroup context (Harris, Middleton, & Joiner, 2000), an 'in-group' maintains close social distance while an 'out-group' maintains far social distance (Ahmed, 2007; Corkalo & Kamenov, 2003; Harris et al., 2000; Kim et al., 2008). Individuals generally tend to care more about their in-group, which includes their family and friends, than others (Trope & Liberman, 2010). Thus, in the time of COVID-19, many are fearful that their families and friends might contract the illness. People have therefore begun taking protective measures to keep themselves and their loved ones safe. Many countries have also enforced quarantine measures to prevent the situation from escalating. For example, Spain was under a 15-day emergency beginning on March 14, 2020 and required people to stay home (BBC News, 2020). Colombia forced people over the age of 70 to shelter in place from 20 March to 31 May (U.S. News, 2020). These regulations have expanded residents' social distance through reduced social contact.

Hypotheticality: COVID-19 can be transmitted rapidly via person-to-person contact (Shereen, Khan, Kazmi, Bashir, & Siddique, 2020). Even so, people will inevitably come into contact with others, thus increasing the probability of viral transmission if individuals are exposed to COVID-19 through respiratory droplets (e.g. coughing or sneezing). Additionally, no proven treatment is available for COVID-19, and the infection can have serious consequences for those who become ill.

2.3. Psychological distance and tourists' perceived risk

Different from objective risk, perceived risk refers to consumers' sense of uncertainty and potential negative consequences related to products or services (Featherman & Pavlou, 2003). In this case, consumers are not facing risk at the moment: theoretically, it is impossible to experience the past and the future, other people, and other places (Stamolampros & Korfiatis, 2018; Trope & Liberman, 2010). Yet individuals still seek to predict the future, recall the past, imagine other people's reactions, or infer outcomes based on their mental construal processes by relating distant objects to the present (Trope & Liberman, 2010).

Many studies have indicated that closer psychological distance can be explained by concrete construal and carries more perceived risk. Liu, Batra, and Wang (2017) contended that consumers can acquire tactile product attributes (e.g. softness, heaviness, and smoothness) through touch to judge product quality and represent a product through concrete construal. When purchasing items online, consumers are often uncertain about product quality and face greater perceived risk. In a crisis context, Geng et al. (2018) introduced power as a component of psychological distance to examine whether power influenced environmentally minded individuals' risk perceptions and attitudes towards nuclear energy. Their findings suggested that high-power representations of nuclear energy resulted in abstract construal, which was coherent and superordinate: in this case, people perceived less risk and were more optimistic about the development of nuclear energy compared to those with

low-power representations. In a similar vein, Fox et al. (2020) revealed that people who feel psychologically close to environmental pollution perceive pollution as a more concrete threat, resulting in greater perceived risk.

The current study proposes that psychological distance and construal level theory can enhance the understanding of tourists' perceived risk amid COVID-19. According to construal level theory, individuals 'zoom into' their experiences as they move closer to an event and focus on concrete aspects, including minute details (Stamolampros & Korfiatis, 2018). Thus, people may experience proximate psychological distance and use low-level construal to represent COVID-19 (Geng et al., 2018; Trope & Liberman, 2010). Moreover, when facing risky events with psychologically proximal distance, concrete background information including perceived risks and benefits is vital (Boudet, Zanocco, Howe, & Clarke, 2018; Trope & Liberman, 2000).

2.4. Tourists' risk perceptions of COVID-19

In a travel context, subjective perceived risk can affect tourists' destination choices and travel behavior (Reichel, Fuchs, & Uriely, 2007). Perceived risk has drawn extensive attention from tourism researchers. The tourism industry is highly susceptible to internal and external stimuli (Faulkner, 2001), and a growing number of studies have focused on perceived risk in crisis contexts (Korstanje, 2009). For instance, Fischhoff, De Bruin, Perrin, and Downs (2004) examined respondents' willingness to travel shortly after the 2002 terrorist attacks in Bali based on estimates of travelers' perceived risk in different destinations. In comparing the post-SARS recovery patterns of in-inbound tourism from Japan, Hong Kong, and the USA in Taiwan, Mao, Ding, and Lee (2010) indicated that these markets exhibited significantly different recovery patterns. According to Smith (2006), people's health concerns about SARS went beyond reality: the perceived uncertainty of infection and negative outcomes, coupled with person-to-person transmission and ambiguity over SARS identification and control, collectively contributed to public panic. By investigating the impact of perceived risk on people's tendencies to travel internationally to Hong Kong after SARS, Kozak, Crotts, and Law (2007) indicated that affected areas, as well as neighboring countries, were vulnerable to crisis events and could suffer from an overall negative destination image.

According to Law (2006), tourists' views of risk tend to be distinct from those of policymakers and industry practitioners. Thus, research on tourists' perceived risk is needed to facilitate risk communication and risk management (Huang & Wu, 2017; Law, 2006; Smith, 2006). As a pandemic, COVID-19 has evoked panic among people worldwide. Based on the construal level of psychological distance, tourists who experience a psychologically close event generally demonstrate higher risk perceptions (Trope & Liberman, 2010). Generally, in the case of COVID-19, three assessments can be made. First, because the pandemic is still severe, temporal distance to COVID-19 is proximate. Second, although disease outbreaks can differ in magnitude and scale, most people encounter close spatial distance in modern times due to globalization. Third, considering the features of COVID-19 (e.g. high transmissibility and serious outcomes), the hypotheticality dimension is also proximate. People's psychological distance to an epidemic event is close in the temporal, spatial, and hypotheticality dimensions. As such, people form concrete construal and perceive greater risk (Fox et al., 2020; Liu et al., 2017). Six risk perception attributes derived from psychological distance were considered in the present study.

Health Risk: Health risk refers to the perceived possibility of becoming ill (Han, 2005). Safety is an innate human need according to Maslow's hierarchy of needs (Kozak et al., 2007). Proximity in the three aforementioned dimensions influences people's health risk perceptions, leading individuals to develop concrete construal and greater perceived risk (Fox et al., 2020; Liu et al., 2017). Furthermore, as distal social distance provokes less trust, people coming into contact with strangers will likely perceive a higher possibility of COVID-19 infection. Thus,

tourists mingling with out-group members may perceive greater health risk than those remaining with in-group members. Additionally, spatially distant destinations are also socially distant: compared with one's place of residence, tourism destinations are socially distal, and tourists perceive higher risks in unfamiliar environments (Lepp & Gibson, 2003). In sum, COVID-19 is psychologically proximate in terms of temporal distance, spatial distance, and hypotheticality. People will thus perceive high health risk (Fox et al., 2020; Liu et al., 2017), with a large social distance from out-group members and destinations further contributing to strong health-related risk perceptions.

Psychological Risk: Psychological risk is "undesirable [and] might signify a disappointing travel experience" (Sönmez & Graefe, 1998a, p. 171), such as anxiety about missing a flight (Simpson & Siguaw, 2008; Sönmez & Graefe, 1998a). COVID-19 is psychologically proximate in temporal distance, spatial distance, and hypotheticality. Along with far social distance from out-group members and destinations, the four dimensions of psychological distance each contribute to high health-related risk perceptions: safety is a prime concern among tourists during disease outbreaks (Simon, 2009; Wen, Wang, Kozak, Liu, & Hou, 2020), causing these four dimensions to evoke pandemic-related anxiety: the most significant psychological element influencing risk perceptions (Chien, Sharifpour, Ritchie, & Watson, 2017). Tourists therefore perceive high psychological risk during COVID-19.

Social Risk: Social risk refers to the "perception of how others will react to one's purchase" (Jacoby & Kaplan, 1972, p. 2), which entails negative changes in others' opinions and attitudes towards travelers in a tourism context (Keh & Sun, 2008; Kushwaha & Shankar, 2013; Sun, 2014). Social risk also includes the extent to which a trip suits tourists' social status (Fuchs & Reichel, 2006; Kim, Kim, & Leong, 2005; Sun, 2014). In the present case, social risk can be contextualized as the possibility that one's friends, family members, or associates may express negative attitudes toward a person's tourism activities (Sönmez & Graefe, 1998a) during the COVID-19 outbreak, leading to a potential loss of esteem, respect, and even friendship due to one's decision to travel.

By definition, people perceive social risk from in-group members because in-home quarantine has been recommended as a preventative strategy, and many governmental authorities have enacted policies to restrain mass gatherings and travel (e.g. Burke, 2020; Foreign & Commonwealth Office & The Rt Hon Dominic Raab MP, 2020). Tourists will presumably be discouraged by family, friends, and colleagues if they choose to travel. Doing so would violate these stringent travel policies. In addition, because spatial distance influences social distance (Stephan et al., 2010), geographical shifts during travel also contribute to a higher risk of infection and could exacerbate people's negative reactions to such behavior. Thus, tourists may feel alienated upon returning home, leading to greater social risk.

Performance Risk: In a tourism context, performance risk refers to tourists not receiving anticipated vacation-related benefits due to a travel product or service not performing well (Khan, Chelliah, & Ahmed, 2017; Sönmez & Graefe, 1998a). In other words, this type of risk is based on the performance of products and services. Social distance is irrelevant when analyzing perceived performance risk. For related industries and small businesses, the COVID-19 outbreak and corresponding government-imposed travel restrictions can increase tourists' performance risk during crisis situations.

Image Risk: Country image refers to "an overall, diversified impression that people have of a particular country," containing elements of culture, traditions, history, economy, politics, and technology (Zhang, Wu, Morrison, Tseng, & Chen, 2018, p. 906). This image is an

established determinant of destination choice and evaluation (Keating & Kriz, 2008; Zhang, Xu, Leung, & Cai, 2016), which is often fueled by media coverage and graphic imagery (Kozak et al., 2007; Mason, Grabowski, & Du, 2005; Schroeder & Pennington-Gray, 2014).

According to Brown (2000), image risk is related to negative publicity, poor public relations, and unfounded rumors. As people's psychological distance to the pandemic is close in temporal, spatial, and hypotheticality dimensions, COVID-19 becomes a dominant concern. Based on social distance, people care less about their out-group and can easily ignore related information. Meanwhile, the features leading to an epidemic can contribute to enduring perceptions, especially when these characteristics are emphasized through misleading media coverage. The connection between spatial and social distance can also lead individuals to perceive high image risk toward tourism destinations, especially long-haul destinations. For instance, Joffe and Haarhoff (2002) investigated UK media coverage of the Ebola outbreak, which was initially (and wrongly) described as an African health issue. Consequently, misrepresentation and public misinterpretation negatively influenced international tourism to all of Africa (Novelli, Burgess, Jones, & Ritchie, 2018). According to Novelli et al. (2018), although no Ebola cases were reported in Gambia, the virus led to an Ebola-induced tourism crisis during the 2014/2015 season. In addition, during the SARS outbreak, media coverage and its sensationalist tone exacerbated global panic (Joffe & Haarhoff, 2002; Mason et al., 2005; Washer, 2004). Perceptions of some destinations, such as Toronto, were adversely affected and influenced area tourism industries (Mason et al., 2005).

According to Wen, Aston, Liu, and Ying (2020), some media outlets have inappropriately labeled the coronavirus as 'Chinese virus pandemonium'. Such stigma and misleading coverage can adversely affect China's country image and destination image in terms of tourism marketing and tourist behavior during COVID-19 (Wen et al., 2020). Thus, labels based on the virus's origins can compromise China's outbound and inbound tourism market. While outbound tourists could be worried about facing discrimination and even violence while traveling, inbound tourists' fear of infection will hamper their visits to China or other affected areas. Generally, the media can affect risk perceptions (Mason et al., 2005; Novelli et al., 2018) in that inappropriate coverage can compromise the destination image and tourism market of certain regions.

Time Risk: Time risk refers to the possibility that travel will take too much time or that services will not occur as scheduled (Sönmez & Graefe, 1998a). Considering the on-going epidemic, quarantine-related measures are necessary but come with time-related costs; some services may not be available as scheduled due to travel policies during the pandemic. These frustrations can in turn influence travelers' post-experience behavior, such as one's intentions to recommend or revisit a destination (Susskind, 2005; Swanson & Hsu, 2009). Overall, the proximity of temporal distance, spatial distance, and hypotheticality could help explain time risk during COVID-19. Social distance is not especially relevant to time risk perceptions.

The preceding review of the literature confirms the influence of psychological distance on tourists' risk perceptions; corresponding mechanisms are summarized in Table 1. Upon reviewing mechanism-related studies (e.g. Power, Di Domenico, & Miller, 2019; Ruan, Li, Zhang, & Liu, 2019; Tsai & Chen, 2010), it was concluded that a 'mechanism' is a method or a system of organizing different variables to clarify the relationships among them and solve certain problems or achieve a goal. In the current study, 'mechanism' refers to the connecting logic between psychological distance and perceived risk.

Table 1
Mechanisms between psychological distance and COVID-19-related risk perceptions.

Perceived Risk	Psychological Distance to COVID-19				Mechanism
	Temporal Distance	Spatial Distance	Social Distance	Hypotheticality	
Health risk	Temporally ongoing	Spatially near	· In-group travel partners vs. out-group tourists · Out-group destinations	· Great impact · Long duration · Low controllability · High likelihood · Serious outcomes · Unfamiliar experience	COVID-19 is perceived as proximate based on the three dimensions of psychological distance, represented as a serious disease that can affect the 'self', thus leading to higher perceived risks. In terms of social distance, in-groups may carry lower health-risk perceptions while out-groups carry higher health-risk perceptions. Tourism destinations can furthermore be socially distal, which also contributes to health risk perceptions.
Psychological risk	Temporally ongoing	Spatially near	· In-group travel partners vs. out-group tourists · Out-group destinations	· Great impact · Long duration · Low controllability · High likelihood · Serious outcomes · Unfamiliar experience	COVID-19 is psychologically proximate in terms of temporal distance, spatial distance, and hypotheticality. With a large social distance from out-group members and destinations, the four dimensions can evoke pandemic-related anxiety and lead to high perceived psychological risks in tourism contexts.
Social risk	Temporally ongoing	Spatially near	In-group	· Great impact · Long duration · Low controllability · High likelihood · Serious outcomes · Unfamiliar experience	The proximity of temporal distance, spatial distance, and hypotheticality leads people to form concrete construal and perceive greater risk. According to social distance, people care more about their close relationships. As travel currently opposes precautionary principles to some extent, tourists may be dissuaded from traveling by the people around them.
Performance risk	Temporally ongoing	Spatially near	–	· Strong impact · Long duration · Low controllability · High likelihood · Serious outcomes · Unfamiliar experience	Proximity in temporal distance, spatial distance, and hypotheticality can lead people to form concrete construal and perceive more risk. Related industries and small businesses may struggle with the pandemic and corresponding travel restrictions, which may give rise to performance risks among tourists. Social distance is irrelevant when analyzing perceived performance risk.
Image risk	Temporally ongoing	Spatially distal	Out-group	· Great impact · Long duration · Low controllability · High likelihood · Serious outcomes · Unfamiliar experience	COVID-19 is a major concern due to proximity in temporal distance, spatial distance, and hypotheticality. When tourism destinations are perceived as socially distal, people care less about their out-group. Construal is highly abstract and less detail-oriented. In comparison, features that may lead to illness attract close attention, especially when fueled by misleading media coverage. These characteristics can exacerbate tourists' perceived image risk.
Time risk	Temporally ongoing	Spatially near	–	· Great impact · Long duration · Low controllability · High likelihood · Serious outcomes · Unfamiliar experience	Proximity in temporal distance, spatial distance, and hypotheticality necessitate quarantine measures amid COVID-19. These actions carry time-related costs. Social distance is not especially relevant to time risk perceptions.

2.5. Tourists' behavioral changes in response to risk perceptions

In the light of the foregoing literature review, a common opinion is that consumers aim to mitigate risk and uncertainty when purchasing a product or service and that these choices result in behavioral changes (Fuchs & Reichel, 2011). In a travel context, once tourists reach their maximum risk tolerance, they strive to reduce risk (Fischhoff et al., 2004; Fuchs & Reichel, 2011). Furthermore, the greater the perceived risk, the more rational tourists generally become in their decision making (Fuchs & Reichel, 2011). Numerous scholars (Fuchs & Reichel, 2011) have investigated people's responses to perceived risk (e.g. Chien et al., 2017; Slevitch & Sharma, 2008; Wang, Liu-Lastres, Ritchie, & Mills, 2019).

Destination choice is an important stage of travel planning (Bodosca et al., 2014; Karl, Reintinger, & Schmude, 2015), and most researchers agree that perceived risk plays a role in destination choices (Fuchs & Reichel, 2011; Karl et al., 2015; Lepp & Gibson, 2008). Tourists are highly likely to avoid visiting high-risk areas (Kozak et al., 2007; Law, 2006; McKercher & Hui, 2003; Uriely, Maoz, & Reichel, 2007), especially during times of crisis (Kozak et al., 2007; Pizam & Fleischer, 2002; Rittichainuwat & Chakraborty, 2009). When encountering strong perceived risk, rather than acting as a 'General' tourist with no particular purpose other than recreation, tourists more often "select the destination which best matches their needs by offering the most benefits for the least cost (or risk)" (Sönmez & Graefe, 1998b, p. 125). For instance, after SARS, tourists' destination-related preferences changed: they began to favor nature-based settings (Zeng et al., 2005), little contact with others, and open and airy facilities (Cai, 2003).

Tourists can also be particular about trip length. McKercher (2008) noted that travelers would take multi-destination trips with increased distance from their place of residence to reduce risk. Tideswell and Faulkner (1999) similarly suggested that a 'portfolio' of destinations could reduce risk associated with long-haul destinations. Fuchs and Reichel (2006) indicated tourists' preference for short trips (Lo, Cheung, & Law, 2011; McKercher, 2008) and attractions that surround the areas travelers typically stay (Li & Ji, 2003). In terms of transportation, post-SARS tourists favored traveling by land or self-driving (Wen, Huimin, & Kavanaugh, 2005). Moreover, other behavioral changes could also apply to COVID-19, such as searching for more information prior to travel (Fuchs & Reichel, 2011), purchasing travel insurance (Fuchs & Reichel, 2006; Lo et al., 2011; Mitchell & Vassos, 1997), and receiving immunizations (Lo et al., 2011; Yeung, Abdullah, McGhee, & Hedley, 2005).

Importantly, the impacts of perceived risk on tourists' behavior are expected to vary demographically (Lo et al., 2011; Wen et al., 2005), including culturally (Reisinger & Mavondo, 2005) and socio-psychologically (Elsrud, 2001). For example, studies have confirmed that adventurous tourists may be more 'radical': that is, they seek novel, exotic, and even risky experiences (Plog, 2001). Most tourists during COVID-19 will presumably express prudent (Wen et al., 2005) and 'conservative' attitudes, showing less propensity to change and seek novelty along with a certain degree of behavioral change.

3. Discussion

Based on Construal Level theory, several studies (Fox et al., 2020; Spence, Poortinga, & Pidgeon, 2012; Tan et al., 2020; Wang et al., 2020) have suggested that lower psychological proximity is associated with higher perceived risk and may be a critical predictor of individuals' evaluations and behavior (Fox et al., 2020; Liberman & Trope, 2008; Trope & Liberman, 2010). As a result, by employing psychological distance and construal level theory (Trope & Liberman, 2003, 2010), this paper sought to propose an explanation for tourists' risk perceptions and accompanying behavior from the perspectives of psychological distance and construal level theory (see Fig. 1). By focusing on COVID-19, the current study has categorized tourists' behavioral changes and suggested that tourists will express three tendencies in their behavioral patterns – from general to elaborate, from open-hearted to closed, and from radical to conservative: based on psychological distance, construal level, and perceived risk. These patterns offer a conceptual foundation for empirical research and practical management of tourism crises.

3.1. From general to elaborate

In the current context, the term 'general' refers to tourists with a General trip purpose, "including the most important aspects of something, but not exact or detailed" (Oxford Learner's Dictionaries). Johnson (1998) proposed a typology of wine tourists based on "general

tourists" versus "specialists" (Mitchell & Hall, 2003, p. 69). "General wine tourists" are those who visit a vineyard, winery, wine festival, or wine show for recreational purposes, while "specialists" are primarily motivated by "a specific interest in grape wine or grape wine-related phenomena" (Mitchell & Hall, 2003, p. 69). 'General tourists' do not have a specific purpose, which applies to our model. By contrast, 'elaborate' refers to a task or process that is "very complicated and detailed, carefully prepared and organized" (Oxford Learner's Dictionaries).

In the model, this paper propose that tourists will be more 'elaborate' when specifying their travel locations rather than selecting a broad destination and spending a short time at multiple attractions. Previous studies have shown that risk related to individuals' well-being is a strong determinant of destination choice (Gray & Wilson, 2009). Tourists' construal of psychological distance affects perceived risk, and according to construal level theory, manipulating the dimensions of psychological distance could influence individuals' judgment (Darke et al., 2016; Kyeongheui et al., 2008; Trope & Liberman, 2010). Accordingly, several selection principles will apply to the COVID-19 pandemic, embodied in subjective adjustment of distance. By choosing a destination where the disease has been controlled, tourists can create greater time distance. In terms of spatial distance, 'distance equals safety' (Williams & Bargh, 2008), tourists will be more interested in areas that have been less affected by COVID-19 or destinations that can offer spatial distance from others.

In terms of hypotheticality, because the virus is spread through human-to-human transmission, as temporal and spatial distance become larger, the likelihood of infection will diminish. Regarding the construal of temporal distance, tourists who perceive travel-related health risks may cancel their trip or minimize their travel time. Image risk could also influence their destination choices. Thus, tourists would balance motives/benefits and risk perceptions when making decisions (Defranco & Morosan, 2017; Khan, Chelliah, Haron, & Ahmed, 2017; Yüksel & Yüksel, 2007) and "select the destination which best matches their needs" (Sönmez & Graefe, 1998b, p. 125). When facing heightened psychological risk, social risk, performance risk, or time risk, tourists would be deliberate in their travel plans and choose locations that satisfy specific motivations. Selected attractions will meet visitors' travel needs and include a level of risk that travelers deem acceptable and controllable.

3.2. From open-hearted to closed

Briefly defined, 'open-hearted' is similar to being "friendly" or "approachable" (Buddhabhumbhitak, 2010, p. 29; Rekom & Go, 2006, p. 81), conveying a positive attitude when encountering or interacting with people. By contrast, a 'closed' tourist may be "[un]willing to accept outside influences or new ideas" (Oxford Learner's Dictionaries) and have a negative attitude when interacting with others.

Travelers' psychological reservations are reflected in their
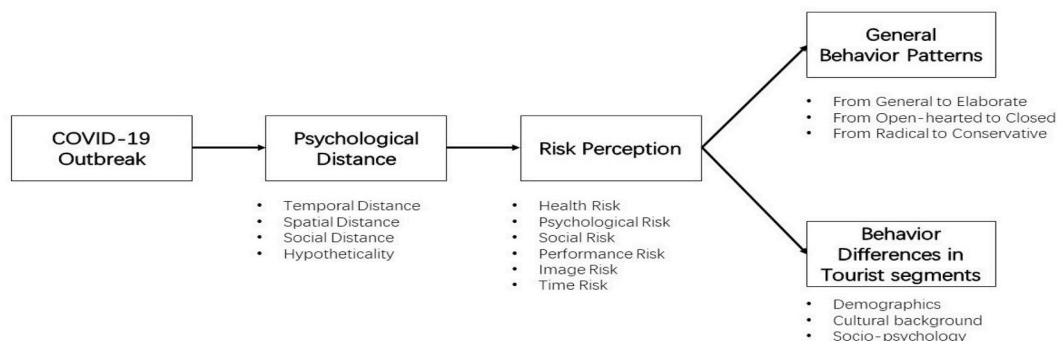

Fig. 1. Proposed conceptual model.

destination choices. Because of how COVID-19 is transmitted, closer spatial distance implies greater health risk. Sparsely populated destinations could increase physical distance and effectively guarantee a low likelihood of infection by forming a psychologically 'closed' area. Zeng et al. (2005) found that nature-based areas, including nature reserves, national parks, and other sites, were common post-SARS destinations. Furthermore, because close spatial distance reflects close social distance (and thus elicits more positive affect and trust) (Ahmed, 2007; Kramer & Brewer, 1984), tourists' preferences for short trips (Fuchs & Reichel, 2006) and attractions around which they typically stay (Lo et al., 2011; McKercher, 2008) could also relieve tourists' risk perceptions and operate jointly with a tendency to be 'closed'. In general, perceived risk can compel travelers to modify their destination preferences and reduce the probability of disease transmission.

Based on the assumption of social distance, people may also elect to travel with companions who are socially close to them rather than with strangers. Individuals show more positive affect and trust toward those with whom they are familiar (Ahmed, 2007; Kramer & Brewer, 1984). Instead, tourists may be react more negatively to traveling with strangers on tour packages and be more guarded during the pandemic; that is, people will not be as 'open-hearted' or friendly to strangers as usual during the pandemic.

As individuals are most concerned with their family and friends based on social distance (Trope & Liberman, 2010), individuals tend to be particularly anxious about their loved ones contracting illnesses. These worries may lead tourists to modify their transportation modes, causing them to prefer self-driving tours or recreational vehicles. A survey from Ivy Alliance Tourism Consulting, China Comfort Travel Group and Pacific Asia Travel Association (PATA) (2020) showed that people in crisis are careful about public transport. The spread of COVID-19 on several cruise ships has adversely affected many tourists, with 52% doubting whether they will take cruises in the future; 36% have decided not to take a cruise at all in 2020. While perceived risk is not necessarily analogous to non-participation (Fischhoff et al., 2004; Li, Wen, & Ying, 2018; Schmiege, Bryan, & Klein, 2009), it does tend to involve precautionary action. For instance, private car services offer tourists and their companions a psychologically 'closed' space and allow visitors to enjoy the benefits of travel while protecting themselves.

Warm service with more interaction will presumably decrease tourists' social distance. Because psychological distance dimensions are interrelated (Trope & Liberman, 2010), closer social distance may contribute to hypotheticality reduction. When traveling after COVID-19, people will likely choose to stay in smaller units or those that cater mostly to smaller groups such as friends and family. Staying at rental homes, apartments, or boutique hotels will generally carry less perceived risk of infection than hotels. For example, these sites may see less foot traffic than large hotels. Several advantages of peer-to-peer accommodations have been well documented in the literature, including economic benefits (Tussyadiah & Pesonen, 2018), novel experiences and diversity (Guttentag, Smith, Potwarka, & Havitz, 2018), and authenticity (Birinci, Berezina, & Cobanoglu, 2018). More importantly, trust between buyers and hosts is of great importance in facilitating successful short-term rental transactions. When building trust, hosts display trustworthiness and thus reduce guests' perceived risk (Wu, Ma, & Xie, 2017). Guests and hosts can also communicate about infection prevention measures (e.g. cleaning procedures) and other disease-related concerns to alleviate potential anxiety.

3.3. From radical to conservative

Previous literature has indicated that 'conventional mass tourism' would be more 'conservative', they may be "highly organized, less flexible, specialized and non-adventurous" (Torres, 2002, p. 285). 'Radical' tourists, who favor "risk" and "adventure" (Baptista, 2017; Foley, Frew, & McGillivray, 2003, p. 149), exhibit a high propensity to seek novelty.

However, as a dominant tourism motivation (Crompton, 1979), this novelty-seeking tendency requires travelers to accept a certain level of risk (Chien et al., 2017). Yet traveling during a disease outbreak involves great perceived risk. Tourists are likely to modify their behavior to mitigate a threat if they believe they are at risk of contracting COVID-19 (Park, Ju, Ohs, & Hinsley, 2020). Examples include delaying purchases or considering alternative products (Dayour, Park, & Kimbu, 2019). These, along with other risk reduction strategies, could help travelers control potential negative outcomes and uncertainty, and partially alleviate travel- and destination-related risks (Bodosca et al., 2014; Dayour et al., 2019; Fuchs & Reichel, 2011). The current paper thus presumes that tourists will adopt a more conservative, rather than radical, approach to travel.

Food is an essential aspect of tourism production and consumption (Ying, Wen, Law, Wang, & Norman, 2018). One example of novelty seeking is tourists' pursuit of delicacies, such as wildlife consumption. Ying, Wang, Liu, Wen, and Goh (2020) suggested that tourism may stimulate tourists' hunger for wild animals: however, wild and exotic game may be virus reservoirs that trigger global health epidemics. Due to the high perceived risks of wildlife consumption, tourists will likely suppress their curiosity during disease outbreaks and instead focus on familiar foods to reduce health-related and psychological risks. The potential zoonotic origins of COVID-19 have already ignited public concern about wildlife consumption, resulting in heated debates and criticism of such behavior (Wen et al., 2020). Tourists could confront substantial social risk when consuming foreign or otherwise exotic foods and may even be blamed for disease transmission.

3.4. Travel patterns of different types of tourists

In summarizing the general trends, individual uniqueness should never be ignored. Studies have examined risk perception differences in a crisis context. For instance, Kozak et al. (2007) interviewed 1180 tourists after the SARS crisis and noted that culture can influence tourists' perceived risk based on individuals' propensity to avoid uncertainty. According to Park et al. (2020), people express biased risk perceptions of COVID-19, such that an individual may estimate their own risk for disease to be lower than others. In conclusion, tourists' behavioral differences manifest through three aspects: (1) demographic characteristics, (2) cultural background, and (3) socio-psychological features.

The demographic characteristics of tourists which may have impacts on risk perceptions include individuals' age, gender, education, income, nationality, and prior travel experience (Reichel et al., 2007). These characteristics may differentially affect visitors' travel intentions and performance during disease outbreaks. A two-way analysis of variance revealed that men's mean risk perceptions were lower than that of women for orienteering, mountain biking, rowing, surfing, sailing, skiing, parachuting, and cliff jumping (Demirhan, 2005). Also, experienced tourists' risk perceptions were lower compared to tourists with less experience (Sharifpour, Walters, & Ritchie, 2014). Younger people perceived greater risk than older people (Floyd & Pennington-Gray, 2004). Compared with other types of tourists, older male tourists with rich experience may change their travel behavior less drastically amid the COVID-19 outbreak.

Reisinger and Mavondo (2005) confirmed that national culture significantly influenced travel-related risk perceptions. Visiting a destination with a culture which is distinct from one's own can create challenges in learning and interaction (Manev & Stevenson, 2001). This fact can be explained by the Hofstede model, in which national culture is composed of five dimensions: power distance, individualism and collectivism, masculinity and femininity, control of uncertainty or risk aversion, and long- and short-term orientation (Hofstede, 1980, 2001; Martinez-Fiestas, Rodríguez-Garzón, Delgado-Padial, & Lucas-Ruiz, 2016). Specifically, cultures characterized by high uncertainty avoidance are traditionally uncomfortable with unpredictable situations. They prize structure and feel threatened by the unknown and the

ambiguous. By contrast, cultures featuring low uncertainty avoidance accept risk more willingly (Litvin, Crotts, & Hefner, 2004). Thus, tourists from cultures with low uncertainty avoidance may be less prone to behavioral modification during the COVID-19 outbreak.

From a socio-psychology standpoint, Plog (2001) classified tourists into three types: psychocentric tourists, who seek familiar, safe, and secure experiences; allocentric tourists, who seek novelty, exotic experiences, and occasionally risky experiences; and mid-centric tourists, who fall between these two extremes. Generally, novelty-seeking backpackers, the exemplar of exotic tourists, are attracted to destinations featuring risk. Adventure and risk are central to the construction of backpackers' identities and travel narratives (Elsrud, 2001; Noy, 2007). These tourists are therefore unlikely to follow common trends; they may even travel to infected areas deliberately in pursuit of excitement.

4. Conclusion

This paper comes in response to a call for recovery strategies during tourism-related disasters and crises (Ritchie & Jiang, 2019). The review of perceived risk in tourism and crisis management, coupled with the fact that perceived risk can inform travelers' destination choices and travel behavior (Fischhoff et al., 2004; Kozak et al., 2007; Reichel et al., 2007; Ritchie & Jiang, 2019), suggests that psychological distance and construal level theory can promote understanding of tourists' perceived risks and shifting travel patterns. The discussion provides theoretical contributions to the literature. This study also apply the psychological distance and construal level theory to develop a valuable conceptual framework delineating specific risks individuals may perceive in tourism activities during the COVID-19 outbreak. This research lays an empirical foundation with strong application potential and fills a knowledge gap around threatened consumers' behavior in tourism and hospitality settings.

The three identified tourism patterns reflect the intermediation of tourists' psychological distance and perceived risk related to COVID-19. These patterns provide several useful marketing implications.

First, health risks and psychological risks are important entry points. Health risks represent major concerns for tourists (Lepp & Gibson, 2003). These risks can potentially influence individuals' well-being (Chien et al., 2017; Wang et al., 2019) and are major inhibitors to travel (Quintal, Lee, & Soutar, 2010). Psychological risks also reflect anxiety or mental discomfort anticipated from post-purchase affective reactions, such as worry and regret (Roehl & Fesenmaier, 1992). In terms of the pandemic, the higher is travelers' perceived risk of COVID-19, the more likely they are to experience anxiety and fear about this disease (Park et al., 2020). According to Smith (2006), some features of SARS (e.g. relatively high fatality rate, person-to-person transmission, unfamiliarity, and uncertainty over epidemic identification and control) affected individuals' mental well-being. Destinations should therefore focus on reducing individuals' health and psychological risk perceptions by emphasizing spatial distance and hypotheticality. In the case of the Mutianyu Great Wall, a Chinese attraction, several measures have helped control tourists' risk perceptions: (1) tourists book visits online or purchase tickets through QR codes; (2) before entering, the staff checks tourists' health codes to confirm visitors are outside a 14-day quarantine; (3) when queuing, 1-m lines demarcate the waiting area; and (4) the transport shuttle only allows one passenger per row and requests that visitors sit in a Z-shaped pattern on the bus. A six-passenger cable car is only available for one passenger, and up to two when family and friends are traveling together (Zhou, Wang, Tang, & Li, 2020). By implementing similar measures, destination organizations and marketers could intervene psychological and spatial distance to reduce travelers' overall perceived risk.

Second, as discussed above, tourists may shift preferences as tourism recovers from COVID-19. In terms of destinations, travelers may aim to choose locations that suit their needs (Sönmez & Graefe, 1998b) and prefer wide-open, natural settings (Cai, 2003; Zeng et al., 2005).

Therefore, niche markets should be emphasized in publicity releases; sparsely populated and nature-based attractions, as well as places that are temporally distal, should promote relevant advantages. As for transportation preferences, Li and Ji (2003) found that 81.1% of tourists were careful about transportation modes after SARS, especially transport involving a high density of people. Additionally, previous survey indicated that more Americans chose to drive cars when traveling after SARS (Wen et al., 2005). Under COVID-19, for promotional purposes, stakeholders should pay attention to the self-driving market. With respect to accommodations, and based on social distance, small accommodation units should attempt to build trust and shorten social distance with tourists. If consumers begin to entertain themselves at home more frequently (Bodosca et al., 2014), then industry and government officials may need introduce policy and measures to rebuild travelers' tourism confidence. Shifting food preferences may occur as well, such as becoming more 'conservative'. Rather than focusing on simply meeting demand, however, suppliers should pay more attention to ethics from a safety standpoint. For instance, in the case of wildlife consumption, stakeholders should become more aware of ethical and safety issues. Industry practitioners and tourists should particularly discourage unethical or excessive food consumption. Relevant laws, regulations, and policies need to be further improved, industry stakeholders should also comply with trends not to supply wildlife (e.g. due to health and safety risks). Awareness campaigns should advocate strongly for the protection of wild animals in tourism and emphasize the importance of sustainable development.

4.1. Future research directions

Three directions for future research deserve consideration: (1) testing a conceptual model that incorporates psychological distance through empirical studies; (2) comparing differences in risk perceptions among tourist segments and exploring relevant effects on the tourism industry; and (3) examining the impact of social media on potential tourists' psychological distance construal and perceived risk.

First, Ritchie and Jiang (2019) recommended tourism crisis management researchers to focus on conceptual model building, empirical testing, and adaptation of models from other disciplines. Studies of the antecedents of perceived risk remain a major theme in tourism (Khan, Chelliah, & Ahmed, 2017; Kozak et al., 2007; Reisinger & Mavondo, 2005). For example, from a health psychology perspective, Chien et al. (2017) developed and tested a conceptual model integrating multilevel psychological constructs (e.g. worry, perceived control, and sensation-seeking propensity) to explore these factors' effects on travelers' health risk perceptions and protective behavior. As psychological distance theory and construal level theory may each influence perceived risk in tourism contexts, this paper suggests scholars to verify the relationships among these variables as well as their influences on tourists' behavioral patterns. Future research should consider psychological distance in empirical investigations of COVID-19.

Second, as individuals tend to differ drastically in their construal of psychological distance and COVID-19-related risk perceptions, their travel willingness and preferences will vary as well. Although different forms of travel (e.g. cruise tourism, volunteer tourism, self-driving tourism, and food tourism) can inhibit negative sentiments and help people recover mentally and physically from COVID-19, these activities also carry risks. Therefore, the nuances of tourism segments should be explored in greater detail to identify the catalysts and inhibitors of specific psychological dimensions and perceived risk. Such insight can inform targeted tourism industry marketing and revival after the COVID-19 outbreak.

Third, tourists' perceptions of objective risks are based on information, including information on safety, pricing, and travel campaigns, all of which can mitigate anxiety and foster tourism recovery (Okuyama, 2018). Luo and Zhai (2017) argued that social media outlets can disseminate negative messages and exacerbate country image problems

and crises. Considering the proximity in temporal, spatial and hypotheticality dimensions of the COVID-19, the epidemic is the major concern. According to social distance, people care less about the out-group, they would ignore much information. Thus, the features which may lead to an epidemic are central features in many people's mind. Presumably, when tourism destinations have a large psychological distance, people will be less detail-oriented and generate spontaneous trait inferences (Trope & Liberman, 2010). For instance, some communication channels have referred to COVID-19 by race, which has adversely influenced China's country image and destination image; potential tourists' risk perceptions are likely to increase as a result (Wen et al., 2020). Consequently, studies advocating for accurate and efficient information management are urgently needed for tourism recovery (Ritchie & Jiang, 2019).

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References

Ahmed, A. M. (2007). Group identity, social distance and intergroup bias. *Journal of Economic Psychology, 28*(3), 324–337.

Baptista, M. (2017). Adventure tourism in a land of wine: The case of Melgaço. *Worldwide Hospitality and Tourism Themes, 9*(6), 663–668.

Bar-Anan, Y., Liberman, N., & Trope, Y. (2006). The association between psychological distance and construal level: Evidence from an Implicit Association Test. *Journal of Experimental Psychology: General, 135*(4), 609–622.

Bar-Anan, Y., Liberman, N., Trope, Y., & Algom, D. (2007). Automatic processing of psychological distance: Evidence from a stroop task. *Journal of Experimental Psychology: General, 136*(4), 610–622.

BBC News. (2020). March, 14). *Coronavirus: Spain set to declare national lockdown.* https://www.bbc.com/news/world-europe-51888936. (Accessed 18 April 2020).

Birinci, H., Berezina, K., & Cobanoglu, C. (2018). Comparing customer perceptions of hotel and peer-to-peer accommodation advantages and disadvantages. *International Journal of Contemporary Hospitality Management, 30*(2), 1190–1210.

Bodosca, S., Gheorghe, G., & Nistoreanu, P. (2014). Tourist consumption behaviour before and after the crisis from 2008. *Procedia Economics and Finance, 16*(C), 77–87.

Boudet, H. S., Zanocco, C. M., Howe, P. D., & Clarke, C. E. (2018). The effect of geographic proximity to unconventional oil and gas development on public support for hydraulic fracturing. *Risk Analysis, 38*(9), 1871–1890.

Brown, D. (2000). Political risk and other barriers to tourism promotion in Africa: Perceptions of US-based travel intermediaries. *Journal of Vacation Marketing, 6*(3), 197–210.

Brügger, A., Morton, T., & Dessai, S. (2016). "Proximising" climate change reconsidered: A construal level theory perspective. *Journal of Environmental Psychology, 46,* 125–142.

Buddhabhumbhitak, K. (2010). Tourist immersion or tourist gaze: The backpacker experience. In P. M. Burns, C. Palmer, & J. Lester (Eds.), *Tourism and visual culture: Theories and concepts* (pp. 139–149). Wallingford: CABI.

Burke, K. (2020). *March 17). Coronavirus Australia: Scott Morrison announces ban on non-essential indoor gatherings and overseas travel.* 7NEWS. https://7news.com.au/lifestyle /health-wellbeing/coronavirus-australia-scott-morrison-announces-b an-on-non-essential-indoor-gatherings-and-overseas-travel-c-750438. (Accessed 18 April 2020).

Cai, J. (2003). Pay attention to the influences of SARS on the psychological changes of tourists. In G. Zhang, & X. Wei (Eds.), *Tourism in China: The impact of SARS and comprehensive revitalization* (pp. 173–177). Beijing: Social Sciences Academic Press.

Chan, J., Yuan, S., Kok, K., To, K., Chu, H., Yang, J., & Hui, C. (2020). A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: A study of a family cluster. *The Lancet, 395*(10223), 514–523.

Chien, P., Sharifpour, M., Ritchie, B., & Watson, B. (2017). Travelers' health risk perceptions and protective behavior: A psychological approach. *Journal of Travel Research, 56*(6), 744–759.

Corkalo, D., & Kamenov, Z. (2003). National identity and social distance: Does in-group loyalty lead to outgroup hostility. *Review of Psychology, 10*(2), 85–94.

Cró, S., & Martins, A. (2017). Structural breaks in international tourism demand: Are they caused by crises or disasters? *Tourism Management, 63,* 3–9.

Crompton, J. (1979). Motivations for pleasure vacation. *Annals of Tourism Research, 6*(4), 408–424.

Darke, P., Brady, M., Benedicktus, R., & Wilson, A. (2016). Feeling close from Afar: The role of psychological distance in offsetting distrust in unfamiliar online retailers. *Journal of Retailing, 92*(3), 287–299.

Dayour, F., Park, S., & Kimbu, A. (2019). Backpackers' perceived risks towards smartphone usage and risk reduction strategies: A mixed methods study. *Tourism Management, 72,* 52–68.

Defranco, A., & Morosan, C. (2017). Coping with the risk of internet connectivity in hotels: Perspectives from American consumers traveling internationally. *Tourism Management, 61,* 380–393.

Demirhan, G. (2005). Mountaineers' risk perception in outdoor-adventure sports: A study of sex and sports experience. *Perceptual & Motor Skills, 100*(suppl. 3), 1155–1160.

Elsrud, T. (2001). Risk creation in traveling: Backpacker adventure narration. *Annals of Tourism Research, 28,* 597–617.

Faulkner, B. (2001). Towards a framework for tourism disaster management. *Tourism Management, 22*(2), 135–147.

Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: A perceived risk facets perspective. *International Journal of Human-Computer Studies, 59*(4), 451–474.

Fischhoff, B., De Bruin, W., Perrin, W., & Downs, J. (2004). Travel risks in a time of terror: Judgments and choices. *Risk Analysis, 24*(5), 1301–1309.

Floyd, M. F., & Pennington-Gray, L. (2004). Profiling risk perceptions of tourists. *Annals of Tourism Research, 31*(4), 1051–1054.

Foley, M., Frew, M., & McGillivray, D. (2003). Rough comfort: Consuming adventure on the 'edge'. In B. Humberstone, H. Brown, & K. Richards (Eds.), *Whose journeys? The outdoors and adventure as social and cultural phenomena* (pp. 149–160). Penrith: Institute for Outdoor Learning.

Foreign Commonwealth Office, The Rt Hon Dominic Raab Mp. (2020). *March 17). Travel advice against all non-essential travel: Foreign Secretary's statement.* UK: GOV. htt ps://www.gov.uk/government/news/travel-advice-foreign-secreatary-statement-17-march-2020. (Accessed 12 June 2020).

Fox, J., Mcknight, J., Sun, Y., Maung, D., & Crawfis, R. (2020). Using a serious game to communicate risk and minimize psychological distance regarding environmental pollution. *Telematics and Informatics, 46*(2020), 101320.

Fuchs, G., & Reichel, A. (2006). Tourist destination risk perception: The case of Israel. *Journal of Hospitality & Leisure Marketing, 14*(2), 83–108.

Fuchs, G., & Reichel, A. (2011). An exploratory inquiry into destination risk perceptions and risk reduction strategies of first time vs. repeat visitors to a highly volatile destination. *Tourism Management, 32,* 266–276.

General. Oxford Learner's Dictionaries. Retrieved 01.08.2020 from https://www.oxfordl earnersdictionaries.com/definition/english/general_1?q=general.

Geng, L., Liu, T., Zhou, K., & Yang, G. (2018). Can power affect environmental risk attitude toward nuclear energy? *Energy Policy, 113,* 87–93.

Gray, J., & Wilson, M. (2009). The relative risk perception of travel hazards. *Environment and Behavior, 41*(2), 185–204.

Guttentag, D., Smith, S., Potwarka, L., & Havitz, M. (2018). Why tourists choose airbnb: A motivation-based segmentation study. *Journal of Travel Research, 57*(3), 342–359.

Han, J. Y. (2005). *The relationships of perceived risk to personal factors, knowledge of destination, and travel purchase decisions in international leisure travel (Doctoral dissertation, Virginia Tech)* (p. 3164113). Available from Proquest database, 2005.

Harris, P., Middleton, W., & Joiner, R. (2000). The typical student as an in-group member: Eliminating optimistic bias by reducing social distance. *European Journal of Social Psychology, 30*(2), 235–253.

Hernández-Ortega, B. (2018). Don't believe strangers: Online consumer reviews and the role of social psychological distance. *Information & Management, 55*(1), 31–50.

Hofstede, G. (1980). *Cultural consequences.* Beverly Hills, CA: Sage.

Hofstede, G. (2001). *Cultural consequences* (2nd ed.). Thousand Oaks, CA: Sage.

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., & Xiao, Y. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet, 395* (10223), 497–506.

Huang, L., & Wu, C. (2017). Conceptual modelling of risk perception deviation mechanism. *Journal of Natural Disasters, 26*, 60–66, 01.

Ivy Alliance Tourism Consulting. (2020). Survey report on Chinese tourists' travel intent after the end of COVID-19 epidemic. *China Comfort travel group & Pacific Asia travel association (PATA)* (Accessed 18th April 2020) https://www.pata.org/s urvey-report-on-chinese-tourists-travel-intent-after-the-end-of-covid-19-%ef%bb% bf/#sthash.gsAiiVrQ.dpuf.

Jacoby, J., & Kaplan, L. (1972). The components of perceived risk. *Advances in Consumer Research, 1–19*.

Joffe, H., & Haarhoff, G. (2002). Representation of far-flung illnesses: The case of Ebola in Britain. *Social Science & Medicine, 54*, 955–969.

Karl, M., Reintinger, C., & Schmude, J. (2015). Reject or select: Mapping destination choice. *Annals of Tourism Research, 54*, 48–64.

Keating, B., & Kriz, A. (2008). Outbound tourism from China: Literature review and research agenda. *Journal of Hospitality and Tourism Management, 15*(1), 32–41.

Keh, H. T., & Sun, J. (2008). The complexities of perceived risk in cross-cultural services marketing. *Journal of International Marketing, 16*(1), 120–146.

Khan, M., Chelliah, S., & Ahmed, S. (2017a). Factors influencing destination image and visit intention among young women travellers: Role of travel motivation, perceived risks, and travel constraints. *Asia Pacific Journal of Tourism Research, 22*(11), 1139–1155.

Khan, M., Chelliah, S., Haron, M., & Ahmed, S. (2017b). Role of travel motivations, perceived risks and travel constraints on destination image and visit intention in medical tourism: Theoretical model. *Sultan Qaboos University Medical Journal, 17*(1), e11–17.

Kim, L. H., Kim, D. J., & Leong, J. K. (2005). The effect of perceived risk on purchase intention in purchasing airline tickets online. *Journal of Hospitality & Leisure Marketing, 13*(2), 33–53.

Kim, K., Zhang, M., & Li, X. (2008). Effects of temporal and social distance on consumer evaluations. *Journal of Consumer Research, 35*(4), 706–713.

Korstanje, M. (2009). Re-visiting risk perception theory in the context of travel. *E-Review of Tourism Research (eRTR), 7*(4), 68–81.

Kozak, M., Crotts, J., & Law, R. (2007). The impact of the perception of risk on international travellers. *International Journal of Tourism Research, 9*(4), 233–242.

Kramer, R. M., & Brewer, M. B. (1984). Effects of group identity on resource use in a simulated commons dilemma. *Journal of Personality and Social Psychology, 46*(5), 1044–1057.

Kushwaha, T., & Shankar, V. (2013). Are multichannel customers really more valuable? The moderating role of product category characteristics. *Journal of Marketing, 77* (July), 67–85.

Kyeongheui, K., Zhang, M., & Li, X. (2008). Effects of temporal and social distance on consumer evaluations. *Journal of Consumer Research, 35*(4), 706–713.

Law, R. (2006). The perceived impact of risks on travel decisions. *International Journal of Tourism Research, 8*, 289–300.

Lepp, A., & Gibson, H. (2003). Tourist roles, perceived risk and international tourism. *Annals of Tourism Research, 30*(3), 606–624.

Li, F. (2009). A comparative study on the effect of tourism crisis events with different nature based on background line: A case study of four tourism crisis. *Tourism Tribune*, 73–78, 024(004.

Liberman, N., Sagristano, M., & Trope, Y. (2002). The effect of temporal distance on level of mental construal. *Journal of Experimental Social Psychology, 38*(6), 523–534.

Liberman, N., & Trope, Y. (1998). The role of feasibility and desirability considerations in near and distant future decisions: A test of temporal construal theory. *Journal of Personality and Social Psychology, 75*, 5–18.

Liberman, N., & Trope, Y. (2008). The psychology of transcending the here and now. *Science (New York, N.Y.), 322*(5905), 1201–1205.

Li, J., & Ji, Q. (2003). June 14). *Whether will citizen consumption recover in an intense bounce model or not after SARS*. Beijing Youth Daily. http://www.sina.com.cn. (Accessed 12 June 2020).

Litvin, S. W., Crotts, J. C., & Hefner, F. L. (2004). Cross-cultural tourist behaviour: A replication and extension involving hofstede's uncertainty avoidance dimension. *International Journal of Tourism Research, 6*(1), 29–37.

Liu, W., Batra, R., & Wang, H. (2017). Product touch and consumers' online and offline buying: The role of mental representation. *Journal of Retailing, 93*(3), 369–381.

Li, F., Wen, J., & Ying, T. (2018). The influence of crisis on tourists' perceived destination image and revisit intention: An exploratory study of Chinese tourists to North Korea. *Journal of Destination Marketing & Management, 9*, 104–111.

Li, Y., Zhou, T., & Zhou, X. (2009). Construal level theory: From temporal distance to psychological distance. *Advances in Psychological Science, 4*, 667–677.

Lo, A. S., Cheung, C., & Law, R. (2011). Hong Kong residents' adoption of risk reduction strategies in leisure travel. *Journal of Travel & Tourism Marketing, 28*(3), 240–260.

Luo, Q., & Zhai, X. (2017). "I will never go to Hong Kong again!" How the secondary crisis communication of "occupy central" on Weibo shifted to a tourism boycott. *Tourism Management, 62*, 159–172.

Manev, M., & Stevenson, W. B. (2001). Nationality, cultural distance, and expatriate status: Effects on the managerial network in a multinational enterprise. *Journal of International Business Studies, 32*(2), 285–303.

Mao, C. K., Ding, C. G., & Lee, H. Y. (2010). Post-SARS tourist arrival recovery patterns: An analysis based on a catastrophe theory. *Tourism Management, 31*(6), 855–861.

Martinez-Fiestas, M., Rodríguez-Garzón, I., Delgado-Padial, A., & Lucas-Ruiz, V. (2016). Analysis of perceived risk among construction workers: A cross-cultural study and reflection on the Hofstede model. *International Journal of Occupational Safety and Ergonomics, 23*(3), 307–317.

Mason, P., Grabowski, P., & Du, W. (2005). Severe acute respiratory syndrome, tourism and the media. *International Journal of Tourism Research, 7*(1), 11–21.

Massey, J. (2005). Public relations in the airline industry: The crisis response to the September 11th attacks. *Journal of Hospitality & Leisure Marketing, 12*(1–2), 97–114.

McKercher, B. (2008). The implicit effect of distance on tourist behavior: A comparison of short and long-haul pleasure tourist to Hong Kong. *Journal of Travel & Tourism Marketing, 25*(3–4), 367–381.

McKercher, B., & Hui, E. L. L. (2003). Terrorism, economic uncertainty and outbound travel from Hong Kong. *Journal of Travel & Tourism Marketing, 15*(2–3), 99–115.

Mitchell, R., & Hall, C. M. (2003). Consuming tourists: Food tourism consumer behaviour. In C. H. Hall, L. Sharples, R. Mitchell, N. Macionis, & B.(Cambourne (Eds.), *Food tourism around the world* (pp. 72–92). Abingdon: Routledge.

Mitchell, V. W., & Vassos, V. (1997). Perceived risk and risk reduction in holiday purchases: A cross-cultural and gender analysis. *Journal of Euromarketing, 6*(3), 47–97.

Miyazaki Prefecture. (2011). *Critical events in Miyazaki prefecture (Miyazaki-ken nougoki 2011 kikijishou)*. Miyazaki no ugoki 2011, website of Miyazaki Prefectural Office. Retrieved 16.04.2020. from http://www.pref.miyazaki.lg.jp/sogoseisaku/k ense/koho/index005-04.html.

Novelli, M., Burgess, L. G., Jones, A., & Ritchie, B. W. (2018). 'No Ebola…still doomed' – the Ebola-induced tourism crisis. *Annals of Tourism Research, 70*, 76–87.

Noy, C. (2007). Travelling for masculinity: The construction of bodies/spaces in Israeli backpackers' narratives. In A. Pritchard, N. Morgan, I. Ateljevic, & C. Harris (Eds.), *Tourism and gender; embodiment, sensuality and experience* (pp. 47–73). CABI Publications.

Okumus, F., Altinay, M., & Arasli, H. (2005). The impact of Turkey's economic crisis of February 2001 on the tourism industry in Northern Cyprus. *Tourism Management, 26* (1), 95–104.

Okuyama, T. (2018). Analysis of optimal timing of tourism demand recovery policies from natural disaster using the contingent behavior method. *Tourism Management, 64*, 37–54.

Park, T., Ju, I., Ohs, J. E., & Hinsley, A. (2020). Optimistic bias and preventive behavioral engagement in the context of COVID-19. *Research in social & Administrative Pharmacy*.

Pizam, A., & Fleischer, A. (2002). Severity versus frequency of acts of terrorism: Which has a larger impact on tourism demand? *Journal of Travel Research, 40*(3), 337–339.

Plog, S. (2001). Why destination areas rise and fall in popularity: An update of a Cornell Quarterly classic. *Cornell Hotel and Restaurant Administration Quarterly, 42*(3), 13–24.

Power, S., Di Domenico, M., & Miller, G. (2019). Risk types and coping mechanisms for ethical tourism entrepreneurs: A new conceptual framework. *Journal of Travel Research.* https://doi.org/10.1177/0047287519874126

Quintal, V., Lee, J., & Soutar, G. (2010). Risk, uncertainty and the theory of planned behavior: A tourism example. *Tourism Management, 31*(6), 797–805.

Reichel, A., Fuchs, G., & Uriely, N. (2007). Perceived risk and the non-institutionalized tourist role: The case of Israeli student ex-backpackers. *Journal of Travel Research, 46* (2), 217–226.

Reisinger, Y., & Mavondo, F. (2005). Travel anxiety and intentions to travel internationally: Implications of travel risk perception. *Journal of Travel Research, 43* (3), 212–225.

Rekom, J., & Go, F. (2006). Cultural identities in a globalizing world: Conditions for sustainability of intercultural tourism. In P. M. Burns, & M. Novelli (Eds.), *Tourism and social identities* (pp. 79–90). Abingdon: Routledge.

Ritchie, B. W., & Jiang, Y. (2019). A review of research on tourism risk, crisis and disaster management: Launching the annals of tourism research curated collection on tourism risk, crisis and disaster management. *Annals of Tourism Research, 79*, 102812.

Rittichainuwat, B. N., & Chakraborty, G. (2009). Perceived travel risks regarding terrorism and disease: The case of Thailand. *Tourism Management, 30*(3), 410–418.

Roehl, W., & Fesenmaier, D. (1992). Risk perceptions and pleasure travel: An exploratory analysis. *Journal of Travel Research, 30*(4), 17–26.

Ruan, W., & Li, Y. (2018). The impact and spatial difference of natural disaster crisis on tourist demand. *Economic Geography*, 214–223, 038(008.

Ruan, W., Li, Y., Zhang, S., & Liu, C.-H. (2019). Evaluation and drive mechanism of tourism ecological security based on the DPSIR-DEA model. *Tourism Management, 75*, 609–625.

Schmiege, S. J., Bryan, A., & Klein, W. M. P. (2009). Distinctions between worry and perceived risk in the context of the Theory of Planned Behavior. *Journal of Applied Social Psychology, 39*(1), 95–119.

Schroeder, A., & Pennington-Gray, L. (2014). Perceptions of crime at the Olympic Games: What role does media, travel advisories, and social media play? *Journal of Vacation Marketing, 20*(3), 225–237.

Sharifpour, M., Walters, G., & Ritchie, B. W. (2014). Risk perception, prior knowledge, and willingness to travel. *Journal of Vacation Marketing, 20*(2), 111–123.

Shereen, M. A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). COVID-19 infection: Origin, transmission, and characteristics of human coronaviruses. *Journal of Advanced Research, 24*, 91–98.

Simon, H. (2009). The crisis and customer behaviour: Eight quick solutions. *Journal of Customer Behaviour, 8*(2), 177–186.

Simpson, P. M., & Siguaw, J. A. (2008). Perceived travel risks: The traveller perspective and manageability. *International Journal of Tourism Research, 10*(4), 315–327.

Slevitch, L., & Sharma, A. (2008). Management of perceived risk in the context of destination choice. *International Journal of Hospitality & Tourism Administration, 9*(1), 85–103.

Smith, R. (2006). Responding to global infectious disease outbreaks: Lessons from SARS on the role of risk perception, communication and management. *Social Science & Medicine, 63*, 3113–3123.

Sönmez, S. F. (1998). Tourism, terrorism, and political instability. *Annals of Tourism Research, 25*(2), 416–456.

Sönmez, S. F., & Graefe, A. R. (1998a). Determining future travel behavior from past travel experience and perceptions of risk and safety. *Journal of Travel Research, 37* (2), 171–177.

Sönmez, S., & Graefe, A. (1998b). Influence of terrorism risk on foreign tourism decisions. *Annals of Tourism Research, 25*(1), 112–144.

Spence, A., Poortinga, W., & Pidgeon, N. (2012). The psychological distance of climate change. *Risk Analysis, 32*(6), 957–972.

Stamolampros, P., & Korfiatis, N. (2018). Exploring the behavioral drivers of review valence: The direct and indirect effects of multiple psychological distances. *International Journal of Contemporary Hospitality Management, 30*(10), 3083–3099.

Stephan, E., Liberman, N., & Trope, Y. (2010). Politeness and psychological distance: A construal level perspective. *Journal of Personality and Social Psychology, 98*(2), 268–280.

Sun, J. (2014). How risky are services? An empirical investigation on the antecedents and consequences of perceived risk for hotel service. *International Journal of Hospitality Management, 37*, 171–179.

Susskind, A. M. (2005). A content analysis of consumer complaints, remedies, and repatronage intentions regarding dissatisfying service experiences. *Journal of Hospitality & Tourism Research, 29*(2), 150–169.

Swanson, S. R., & Hsu, M. K. (2009). Critical incidents in tourism: Failure, recovery, customer switching, and word-of-mouth behaviors. *Journal of Travel & Tourism Marketing, 26*(2), 180–194.

Tan, H., Wong-Parodi, G., & Xu, J. (2020). Not under my backyard? Psychological distance, local acceptance, and shale gas development in China. *Energy Research & Social Science, 61*, 101336.

The State Council of the People's Republic of China. (2020). *The State Council's announcement on the arrangement of public holidays in 2020*. http://www.gov.cn/zhengce/content/2019-11/21/content_5454164.html. (Accessed 18 April 2020).

Tideswell, C., & Faulkner, B. (1999). Multi-destination travel patterns of international visitors to Queensland. *Journal of Travel Research, 37*(4), 364–375.

Todorov, A., Goren, A., & Trope, Y. (2007). Probability as a psychological distance: Construal and preferences. *Journal of Experimental Social Psychology, 43*(3), 473–482.

Torres, R. (2002). Toward a better understanding of tourism and agriculture linkages in the Yucatan: Tourist food consumption and preferences. *Tourism Geographies, 4*(3), 282–306.

Trope, Y., & Liberman, N. (2000). Temporal construal and time-dependent changes in preference. *Journal of Personality and Social Psychology, 79*, 876–889.

Trope, Y., & Liberman, N. (2003). Temporal construal. *Psychological Review, 110*(3), 403–421.

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review, 117*(2), 440–463.

Tsai, C.-H., & Chen, C.-W. (2010). An earthquake disaster management mechanism based on risk assessment information for the tourism industry: A case study from the island of taiwan. *Tourism Management, 31*(4), 470–481.

Tussyadiah, I., & Pesonen, J. (2018). Drivers and barriers of peer-to-peer accommodation stay.: An exploratory study with American and Finnish travellers. *Current Issues in Tourism, 21*(6), 703–720.

UNWTO. (2020). *Impact assessment of the COVID-19 outbreak on international tourism*. https://webunwto.s3.eu-west-1.amazonaws.com/s3fs-public/2020-03/24-03Coronavirus.pdf. (Accessed 10 April 2020).

Uriely, N., Maoz, D., & Reichel, A. (2007). Rationalizing terror-related risks: The case of Israeli tourists in Sinai. *International Journal of Tourism Research, 9*(1), 1–8.

U.S. News. (2020). *March 17). Colombia declares coronavirus state of emergency, orders elderly to stay home*. https://www.usnews.com/news/world/articles/2020-03-17/colombia-orders-senior-citizens-to-self-isolate-from-march-20. (Accessed 12 June 2020).

U, S.-C., & So, Y.-C. (2020). The impacts of financial and non-financial crises on tourism: Evidence from Macao and Hong Kong. *Tourism Management Perspectives, 33*, 100628.

Wakslak, C., Trope, Y., Liberman, N., & Alony, R. (2006). Seeing the forest when entry is unlikely: Probability and the mental representation of events. *Journal of Experimental Psychology: General, 135*(4), 641–653.

Wang, J., Liu-Lastres, B., Ritchie, B., & Mills, D. (2019). Travellers' self-protections against health risks: An application of the full protection motivation theory. *Annals of Tourism Research, 78*, 102743.

Wang, A., Marinova, D., Wang, F., & Wei, J. (2020). Corporate investor confidence in the aftermath of a mega natural disaster: An empirical study of the 2008 Wenchuan earthquake. *Safety Science, 125*, 104620.

Washer, P. (2004). Representation of SARS in the British newspapers. *Social Science & Medicine, 59*, 2561–2571.

Wen, J., Aston, J., Liu, X., & Ying, T. (2020). Effects of misleading media coverage on public health crisis: A case of the 2019 novel coronavirus outbreak in China. *Anatolia, 1–6*.

Wen, J., Wang, W., Kozak, M., Liu, X., & Hou, H. (2020). Many brains are better than one: the importance of interdisciplinary studies on COVID-19 in and beyond tourism. *Tourism Recreation Research, 1-4*.

Wen, Z., Huimin, G., & Kavanaugh, R. R. (2005). The impacts of SARS on the consumer behaviour of Chinese domestic tourists. *Current Issues in Tourism, 8*(1), 22–38.

WHO. (2020a). *Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020*. https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19—11-march-2020. (Accessed 16 April 2020).

WHO. (2020b). *Coronavirus disease 2019 (COVID-19) situation report – 67*. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200327-sitrep-67-covid-19.pdf?sfvrsn=b65f68eb_4.

Williams, L. E., & Bargh, J. A. (2008). Keeping one's distance: The influence of spatial distance cues on affect and evaluation. *Psychological Science, 19*(3), 302–308.

Wu, J., Ma, P., & Xie, K. (2017). In sharing economy we trust: The effects of host attributes on short-term rental purchases. *International Journal of Contemporary Hospitality Management, 29*(11), 2962–2976.

Yang, E., & Nair, V. (2014). Tourism at risk: A review of risk and perceived risk in tourism. *Asia-Pacific Journal of Innovation in Hospitality and Tourism, 3*(2), 1–21.

Yeung, R., Abdullah, A. S. M., McGhee, S. M., & Hedley, A. J. (2005). Willingness to pay for preventive travel health measures among Hong Kong Chinese residents. *Journal of Travel Medicine, 12*(2), 66–71.

Ying, T., Wang, K., Liu, X., Wen, J., & Goh, E. (2020). Rethinking game consumption in tourism: A case of the 2019 novel coronavirus pneumonia outbreak in China. *Tourism Recreation Research*, 1–6.

Ying, T., Wen, J., Law, R., Wang, L., & Norman, W. C. (2018). Examining the efficacy of self-classification approach in segmenting special-interest tourists: Food tourism case. *Asia Pacific Journal of Tourism Research, 23*(10), 961–974.

Yüksel, A., & Yüksel, F. (2007). Shopping risk perceptions: Effects on tourists' emotions, satisfaction and expressed loyalty intentions. *Tourism Management, 28*(3), 703–713.

Zeng, B., Carter, R. W., & De Lacy, T. (2005). Short-term perturbations and tourism effects: The case of SARS in China. *Current Issues in Tourism, 8*(4), 306–322.

Zenker, S., Von Wallpach, S., Braun, E., & Vallaster, C. (2019). How the refugee crisis impacts the decision structure of tourists: A cross-country scenario study. *Tourism Management, 71*, 197–212.

Zhang, J., Wu, B., Morrison, A. M., Tseng, C., & Chen, Y. C. (2018). How country image affects tourists' destination evaluations: A moderated mediation approach. *Journal of Hospitality & Tourism Research, 42*(6), 904–930.

Zhang, H., Xu, F., Leung, H. H., & Cai, L. A. (2016). The influence of destination-country image on prospective tourists' visit intention: Testing three competing models. *Asia Pacific Journal of Tourism Research, 21*(7), 811–835.

Zhou, H., Wang, Y., Tang, Z., & Li, S. (2020). *April 10)*. The Beijing News. http://www.bjnews.com.cn/feature/2020/04/10/715574.html. (Accessed 18 April 2020).

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