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# **Post-pandemic outbound travel intentions and preparations of Chinese residents: the effects of media coverage and risk perception**

This study aims to explore Chinese residents' outbound travel intentions and preparations in the post-pandemic world that are influenced by media coverage and risk perception. A conceptual model is proposed to test the structural relationships among media coverage, risk perception, outbound travel intentions and preparations. This study administered an online survey to Chinese residents who had outbound travel experiences, and a total of 441 valid responses were collected for data analysis. The results indicated that media coverage exerted significant impact on cognitive and affective risk perceptions, outbound travel intentions and preparations. Furthermore, cognitive risk perception was positively related to affective risk perception, which significantly influenced outbound travel intentions and preparations. Outbound travel intentions were verified as the determinant of outbound travel preparations. Additionally, the mediating roles of affective risk perception and outbound travel intentions were confirmed. This study is amongst the first to introduce the concept of outbound travel preparations as a new research avenue for post-pandemic outbound travel behaviour.

Key words: Outbound travel intentions; outbound travel preparations; post-pandemic; media coverage; risk perception

## **1. Introduction**

COVID-19 was deemed a global pandemic by World Health Organization (WHO) on March 11, 2020 (WHO, 2020). It continues to cause long-term damage to the global economy, including job loss, bankruptcy, and economic recession (Bae & Chang, 2020). Various COVID-19-related travel restrictions and bans have severely affected the global tourism industry (Wen et al., 2020). The United Nations World Tourism Organisation ([UNWTO], 2020) finds that international tourist arrivals have fallen sharply by 74% from 1.5 billion in 2019 to 381 million in 2020.

Before the outbreak of COVID-19, Chinese outbound tourism experienced rapid development and was a major driver of the global tourism industry not only because of the

large number of outbound tourists but also the amount of international tourism spending (Huang & Xu, 2018; Law et al., 2016). According to UNWTO (2019), Chinese tourists contributed one fifth of the total international tourism spending in 2018, which was also the largest proportion of the global tourist economy. Although the pandemic has since been controlled within China, outbound tourism has been banned and Chinese residents have chosen to travel domestically instead (Liu et al., 2021; Wen et al., 2020). As the largest contributor to pre-pandemic international tourism spending, the recovery of Chinese outbound travel in the post-pandemic world will make a large contribution to sustain the development of global tourism. Therefore, in this context, the outbound travel intentions of Chinese residents in the post-pandemic world must be explored.

According to the theory of planned behaviour (Ajzen, 1985), attitude, subjective norms, and perceived behavioural control are determinants of intentions and behaviours. This theory is widely used to assess travel intentions and behaviours through the three influential factors (Bae & Chang, 2020; Huang et al., 2020; Liu et al., 2021; Sánchez-Cañizares et al., 2020). However, the Chinese are risk averse to the virus as a result of their domestic experiences of China's COVID-19 management (Chen et al., 2020), and risk perception, particularly of the outbreak of infectious diseases, is a determinant of their travel decision and behaviour (George, 2003; Schroeder et al., 2013; Seabra et al., 2013). In this manner, it is worthwhile to focus on the relationship between risk perception and post-pandemic travel intentions. Specifically, risk perception can be divided into cognitive risk perception and affective risk perception (Lowenstein et al., 2001; Shim & You, 2015; Sjöberg, 1998). Compared to cognitive risk perception, affective risk perception receives less academic attention (Shim & You, 2015). To extensively understand risk perception, it is necessary to investigate the relationship between cognitive risk perception and affective risk perception and the effects of affective risk perception on travel intentions. In addition, since the COVID-

19 outbreak there has been widespread media coverage of the pandemic, which has affected risk perception. Although media coverage influences people's travel awareness and shapes their behaviours, the concept of media coverage lacks comprehensive exploration in tourism research, particularly during a pandemic (Chemli et al., 2020; Chen et al., 2020; Karasneh et al., 2020).

Some experts predict that COVID-19 will not disappear completely in the short-term, and it is possible that COVID-19 will ultimately become an endemic disease (China News, 2021). With this potential scenario in mind, this study introduces the concept of outbound travel preparations to highlight that it is requisite to prepare a long time before outbound travel (e.g. taking the vaccination), to help the future recovery of the global tourism industry. However, it should be noted that vaccinations, such as yellow fever, have been a vital part of an outbound tourist's preparations for many years but the numbers of tourists involved, and the media attention to such vaccinations have been miniscule compared to that of COVID-19.

In this context, the purpose of this study is to explore outbound travel intentions and preparations of Chinese residents in the post-pandemic world. Specifically, three objectives are sought: (1) to assess the structural relationships between media coverage, risk perception, outbound travel intentions, and preparations; (2) to assess the mediating roles of cognitive risk perception, affective risk perception, and outbound travel intentions; (3) to provide meaningful suggestions to individual outbound travellers and destination operators.

## **2. Literature review**

### ***2.1 Risk perception***

Risk perception means to subjectively assess the possibility of danger in uncertain situations (Sjöberg et al., 2004). Bauer (1967) indicates that risk perception is the final determinant of a behaviour, and this explains why most studies research perceived risk as opposed to real risk.

In tourism, risk perception is viewed as ‘consumer perception of the probability that an action may expose them to a danger that can influence travel decisions if the perceived danger is deemed to be beyond an acceptable level’ (Chew & Jahari, 2014, pp. 383-384). Relevant literature asserts that risk perception is the primary concern for travel behaviours and decision making, particularly in outbound travel (Bae & Chang, 2020; George, 2003; Schroeder et al., 2013; Seabra et al., 2013). Due to the appearance of highly infectious diseases, such as SARS, H1N1, and MERS, risk perception related to disease has become an extensively researched topic in tourism (Bae & Chang, 2020; Garg, 2013). According to Floyd et al. (2000), risk perception of diseases is explained in two ways: perceived susceptibility and perceived severity. Susceptibility is the subjective perception of the possibility of infection, while severity concerns an individual’s perception of the seriousness of the disease. When individuals have higher perceptions of susceptibility and severity, their risk perception of travelling is stronger (Neuburger & Egger, 2020).

Furthermore, certain researchers (e.g. Loewenstein et al., 2001; Shim & You, 2015; Sjöberg, 1998) note that risk perception has other aspects. They find risk perception consists of both cognitive and affective dimensions: perceived susceptibility and severity are included within cognitive risk perception, while affective risk perception concerns individuals’ worry or anxiety of a risk happening to them. The risk-as-feelings theory (Loewenstein et al., 2001) and affect heuristic (Slovic et al. (2004) propose that the impact of affection on decision-making and behaviours is independent of cognitive assessment. In other words, the impacts of cognitive and affective risk perception on behaviours can be tested separately. Some previous studies provide empirical evidence (e.g. Bae & Chang, 2020; Shim & You, 2015). However, cognitive risk perception takes up the focus of literature on the subject (Leppin & Aro, 2009; Shim & You, 2015).

Sjöberg (1998) states that cognitive risk perception is weakly related to individual worry, which is the key dimension of affective risk perception. Klein et al. (2009) also indicate that worry is only moderately related to cognitive risk perception. However, Leppin & Aro (2009) argue that worry may be immediately triggered after experiencing cognitive risk perception during an influenza pandemic, due to lack of effective medicines and treatments and the high possibility of infection. The risk-as-feelings theory (Loewenstein et al., 2001) supports the view that cognitive assessment induces affective outcomes. Overall, affective risk perception may be easily triggered when cognitive assessment of risk is confirmed in a pandemic like COVID-19. Thus, the study proposes that:

*H1. Cognitive risk perception exerts a significant impact on affective risk perception*

## ***2.2 Outbound travel intentions***

Travel intention is defined as ‘the desires or intentions of tourists in making a tour’ (Wachyuni & Kusumaningrum, 2020, p. 69). The theory of planned behaviour has been commonly applied and extended to explain travel intention under the influence of a disease (Bae & Chang, 2020; Huang et al., 2020; Liu et al., 2021; Sánchez-Cañizares et al., 2020). However, few studies which employ the theory of planned behaviour explain the direct relationship between risk perception and travel intention. The confirmation of indirect, mediating, or moderating role of risk perception comprises a high proportion of the relevant literature (including research without the theory of planned behaviour). For example, in terms of research on COVID-19, Chua et al. (2021) present the indirect relationship between risk perception and post-pandemic outbound travel intentions. Liu et al. (2021) verify that risk tolerance plays a moderating role between the outbound travel intentions of Chinese residents and perception of COVID-19. As risk perception is found to be a primary determinant of behaviours and decision making (Bauer, 1967; Shim & You, 2015), the direct relationship

between risk perception and travel intentions should be further considered. Hsu et al. (2017) maintain that risk perception is directly related to travel decision making. Neuburger & Egger (2020) and Reisinger & Mavondo (2005) argue that strong risk perception weakens travel intentions and non-essential travel.

Furthermore, risk perception is divided into cognitive and affective risk perception as noted above, which can be considered as two independent constructs (Shim & You, 2015). Loewenstein et al. (2001) propose the ‘risk-as-feelings’ theory to indicate that affective reaction incurs a stronger impact on behaviours than cognitive perception at the time of individual exposure to a dreaded risk. Chinese anti-COVID-19 policies and civil life demonstrate that outbound travel is still dreadfully risky, therefore, it is worthwhile to separately assess the two constructs’ impacts on outbound travel intentions. Bae & Chang (2020) make an attempt to separately test the impacts of cognitive and affective risk perception on behavioural intentions during COVID-19 and confirm the direct relationship between cognitive risk perception and a behavioural intention. Additionally, Qiao et al. (2021) verify that individual worry, which is the key element of affective risk perception, has a direct relationship with behavioural intentions. Thus, the study proposes that:

*H2a.* Cognitive risk perception exerts a significant impact on outbound travel intentions

*H2b.* Affective risk perception exerts a significant impact on outbound travel intentions

### ***2.3 Outbound travel preparations***

According to the theory of planned behaviour, a particular type of behaviour is the final step, as well as the outcome, of an intention (Ajzen, 1991). Research indicates that risk perception



is a primary determinant of health behaviours (Janz & Becker, 1984; Shim & You, 2015). A health behaviour is any behaviour that may influence a person's physical health (Sutton, 2004). The health belief model has been prevalently used to explain health behaviours, particularly, those which evade a variety of health risks (Bae & Chang, 2020; Huang et al., 2020; Janz & Becker, 1984). Specifically, the health belief model emphasises that individuals are encouraged to avoid risk by performing preventative or health-promoting behaviours when perceived health risk is present, and its significance in the field of tourism and hospitality has been confirmed (Champion & Skinner, 2008; Chua et al., 2021). For example, Neuburger & Egger (2020) note that travel behaviours have changed to avoid the COVID-19 infection. In addition, as the risk-as-feelings theory by Loewenstein et al. (2001) proposes that the interaction of cognitive and affective risk perception is a more convincing determiner of behaviour, there have been some attempts to conduct relevant research in tourism and hospitality. Qiao et al. (2021) indicate that concern or worry influences behavioural intentions, and Bae & Chang (2020) verify that travel behaviour goes towards 'untact' tourism due to the influence of cognitive risk perception.

The above-mentioned preventive or health-promoting behaviours can be included in travel preparations. As Hung et al. (2014) note, travel preparations comprise a variety of activities related to health. However, travel preparations are carried out before travel (e.g. taking vaccine, organising face masks) and emphasise that individuals acquire or follow travel health advisories, such as vaccination knowledge (Balaban et al., 2014; Hung et al., 2014). Balaban et al. (2014) indicate that travel preparations concerning the risk of infectious diseases are crucial for international travel or tourists may be exposed to high-risk situations without adequate preparation. Currently, the concept of travel preparations is rarely addressed in tourism research (Bauder & Freytag, 2015). In the ongoing pandemic, very few Chinese tourists travel abroad; therefore, travel behaviours tend to focus on preparations. Chinese



culture and government policy advocate uncertainty avoidance (GLOBE, 2020), and strict and effective anti-COVID-19 regulations in China enable citizens to stay safe by encouraging a strong risk perception of COVID-19 (Liu et al., 2021; Wen et al., 2020). This means that Chinese tourists are well-prepared and consider travel risk from various perspectives, even though they do not intend to travel abroad until the pandemic is over (Wen et al., 2020). Pavli et al. (2014) indicate that tourists may lack or make inadequate travel preparations if they do not perceive risk when travelling to a destination. As wearing face masks and washing hands are frequently emphasised during the COVID-19 pandemic in China, thus, face masks and rinse-free hand sanitizers become necessities for post-pandemic travel (Liu et al., 2021). Moreover, Chinese residents are increasingly taking the COVID-19 vaccine, encouraged by the government (Lin, 2021), which may become the key preparation for post-pandemic outbound travel. In short, the study proposes that:

*H3a.* Cognitive risk perception exerts a significant impact on outbound travel preparations

*H3b.* Affective risk perception exerts a significant impact on outbound travel preparations

*H4.* Outbound travel intentions exert a significant impact on outbound travel preparations

## ***2.4 Media coverage***

We live in a highly developed information age and know what is happening in the world through a variety of media channels. Media coverage not only provides information but also reflects public opinion, including criticisms (Garg, 2013). According to the agenda-setting

theory (McCombs & Shaw, 1972), media coverage is a determinant of risk awareness, emphasising the significance of a specific issue. Moreover, based on the Social Amplification of Risk (Kasperson et al., 1988), Ali et al. (2019) propose a framework to argue that sensational media coverage leads to fear or affective reaction.

At the beginning of the outbreak, the volume of confirmed domestic COVID-19 cases caused China to be regarded as a high-risk country by the international community, therefore, race discrimination against people of Chinese appearance (e.g. refusing to serve Chinese people in some foreign restaurants) was frequently reported by media channels (Qiao et al., 2021; Yu et al., 2020). Certain media coverage directly used misleading headlines, i.e. ‘The Chinese Virus’ (Zheng et al., 2020). This negative and biased coverage caused Chinese citizens to worry about and fear outbound travel (Yu et al., 2020).

However, as China has now effectively controlled the transmission of the COVID-19 pandemic nationwide since mid-April 2020, international media channels are gradually decreasing the coverage of race discrimination and rather, focus on information and status of the pandemic worldwide (e.g. a dramatic increase of daily confirmed cases in foreign countries), which makes Chinese tourists worry about infection in the case of outbound travel (Qiao et al., 2021). Media coverage includes social media and official media, with social media demonstrating stronger power to shape risk perception by amplifying the severity of the crisis or misleading the public (Tsoy et al., 2021; Yu et al., 2020; Zheng et al., 2020). However, Chinese citizens’ worry and awareness of risk may be strengthened by frequent official coverage because official media use objective data and information (e.g. displaying new confirmed cases per day and Chinese achievements against COVID-19) to inform Chinese people that foreign countries are at high risk and have not controlled the transmission of COVID-19 (Tsoy et al., 2021). The research of Shim & You (2015)

demonstrates that media coverage is significantly related to both cognitive risk perception and affective risk perception. Qiao et al. (2021) and Yu et al. (2020) emphasise that media coverage about COVID-19 causes worry of infection, while some researchers (e.g. Karasneh et al., 2020; Tsoy et al., 2021) suggest that media coverage shapes the awareness of risk perception on COVID-19. Thus, the study proposes that:

*H5a.* Media coverage exerts a significant impact on cognitive risk perception

*H5b.* Media coverage exerts a significant impact on affective risk perception

Previous studies have indicated that media coverage has a large impact on tourists' decisions to travel (e.g. Garg, 2013; Zheng et al., 2020). When a destination reports the a risky incident, tourists tend to change their travel decisions and find a safe place instead (Neuburger & Egger, 2020). Most people had no knowledge of COVID-19 before its outbreak, therefore media coverage was the most important way for the public to acquire relevant knowledge (Chen et al., 2020). Since its outbreak, COVID-19 has been frequently and comprehensively reported by various media channels, such as China Central Television, NetEase News, and Tencent News. The public receives news about COVID-19 through WeChat and Weibo, which are among the most commonly used social media platforms in China. As the severity of COVID-19 and its control and prevention measures are constantly emphasised in media coverage, Chinese tourists are more likely to travel to destinations which have been largely unaffected by COVID-19 (Yu et al., 2020; Zhu & Deng, 2020). Bhati et al. (2020) and Chemli et al. (2020) indicate that media coverage influences visitors' travel behaviours, and Allington et al. (2020) and Karasneh et al. (2020) find that media coverage provides critical information on preventive behaviours. Thus, the study proposes that:

*H6. Media coverage exerts a significant impact on outbound travel intentions*

*H7. Media coverage exerts a significant impact on outbound travel preparations*

Figure 1 near here

## **2.5 Potential mediating effects**

To comprehensively understand the ‘true’ relationship between constructs, academics suggest mediation analysis (Hair et al., 2021). According to Rasoolimanesh et al. (2021), it is necessary to use either the transmittal or segmentation approaches to develop mediation hypotheses. In the conceptual model, H1-H7 are developed based on academic literature and theoretical analysis. Together, H1, H5a, and H5b propose that cognitive risk perception mediates the relationship between media coverage and affective risk perception. This mediating effect strengthens the reason media coverage influences affective risk perception. Similarly, affective risk perception and outbound travel intentions are considered as mediators in this study.

Garg (2013) indicates that media coverage indirectly influences travel decisions through risk perception during an epidemic. Qiao et al. (2021) state that media coverage directly relates to behavioural intention and indirectly influences behavioural intention through worry during the COVID-19 pandemic. Due to the COVID-19 outbreak, Chinese tourists focus on risk management (including travel preparations), as environmental factors have potentially influenced their outbound travel intentions (Wen et al., 2020). Thus, the study proposes that:

*H8. Cognitive risk perception mediates the relationship between media coverage and*

affective risk perception

*H9.* Cognitive risk perception mediates the relationship between media coverage and outbound travel intentions

*H10.* Affective risk perception mediates the relationship between media coverage and outbound travel intentions

*H11.* Cognitive risk perception mediates the relationship between media coverage and outbound travel preparations

*H12.* Affective risk perception mediates the relationship between media coverage and outbound travel preparations

*H13.* Outbound travel intentions mediate the relationship between media coverage and outbound travel preparations

Furthermore, the risk-as-feelings theory (Loewenstein et al., 2001) presents the hierarchy of effects in relation to risk perception, such as cognitive assessment-affective reaction-behaviour. In this theory, affective risk perception, which represents the middle layer, can be considered as a mediator (Loewenstein et al., 2001). In related empirical research, Reisinger & Mavondo (2005) demonstrate that risk assessment leads to individual worry, which in turn significantly influences travel intention. Thus, the study proposes that:

*H14.* Affective risk perception mediates the relationship between cognitive risk

perception and outbound travel intentions

*H15:* Affective risk perception mediates the relationship between cognitive risk perception and outbound travel preparations

*H16:* Outbound travel intentions mediate the relationship between cognitive risk perception and outbound travel preparations

*H17:* Outbound travel intentions mediate the relationship between affective risk perception and outbound travel preparations

### **3. Research method**

#### ***3.1 Measurements and questionnaire design***

The questionnaire consists of five sections. The first section is related to respondents' demographic profiles. The second section focuses on media coverage and contains four items adapted from the study of Karasneh et al. (2020). The third section seeks to analyse cognitive and affective risk perception. Referring to Bae & Chang (2020), three indicators of cognitive risk perception and four indicators of affective risk perception are developed. The fourth section focuses on outbound travel intentions. Two indicators are developed based on the studies of Neuburger & Egger (2020) and Reisinger & Mavondo (2005). The final section focuses on outbound travel preparations, which are measured by seven items, informed by the work of Allington et al. (2020), Chua et al. (2021), and Liu et al. (2021).

Except for the first section, all items are measured with a seven-point Likert scale (1 indicates 'strongly disagree' and 7 indicates 'strongly agree'). As the target population of this study is Chinese visitors, the questionnaire was translated into simplified Chinese. To

guarantee the consistency of the translation's meaning, the back-translation method by Brislin (1976) was employed.

### ***3.2 Data collection***

The sample of this study comprised Chinese residents who had outbound travel experience in the previous five years. Demographic profiles were considered for the initial sample selection such that the representation of each type of respondent is supported in this study. Each selected participant was enabled to invite other people who were similar to them to participate in this research.

The online survey was conducted through Wenjuanxing, which is an online survey platform for publishing and collecting questionnaires. Prior to its application, the questionnaire was piloted and refined with minor changes. The final version was distributed via WeChat. The snowball sampling method was adopted in this study, which allows participants to ask more individuals to join the survey. A total of 506 questionnaires were collected in February 2021. 65 were deleted either because these respondents had no outbound travel experience in the previous five years or their questionnaires were carelessly completed. Ultimately, 441 questionnaires were used for data analysis.

### ***3.3 Common-method variance (CMV)***

As the survey was self-reported in this study, CMV should be tested to avoid common method bias (Spector, 2019). Harman's one-factor test (1976) and Bagozzi's method were employed to confirm that there is no issue of CMV in this study. SPSS Statistics 24.0 was used to run Harman's one-factor test, and the results showed that only one factor was less than 50% of the variance (23.011%). Furthermore, according to Bagozzi's method, CMV is avoided because the SmartPLS 3.2.7 result indicates that the highest correlation between the study's constructs is 0.389 (correlation between cognitive risk perception and affective risk

perception), which is lower than the threshold of 0.90 (Bagozzi et al., 1991).

### ***3.4 Data analysis***

SPSS Statistics 24.0 was employed for the descriptive analysis of respondents' demographic profiles and data screening. In addition, partial least squares structural equation modelling was applied to test the research hypotheses, as it is suited to small sample sizes and complicated models (Hair et al., 2021). Prior to assessing the structural model, the validity and reliability of measurement models must be met. The software programme SmartPLS 3.2.7 was utilised to assess the measurement and structural models.

## **4. Findings**

### ***4.1 Profile of the sample***

Respondents' profiles are presented in Table 1, which indicates that most respondents are female (59.6%), between the ages of 20-39 (71.4%), and highly educated with a bachelor's degree or above (75.8%). The monthly income between CN¥ 5,000-10,000 comprises the highest proportion (36.5%), while few respondents have monthly income above CN¥ 20,000 (10.4%). In terms of outbound travel frequency, the predominant range is between 1 and 2 (47.2%).

Table 1 near here

### ***4.2 The assessment of the measurement models***

The assessment of the measurement models consists of four steps. First, all values of composite reliability are larger than the minimal requirement of 0.70, therefore, internal consistency reliability is supported as shown in Table 2. Second, to meet convergent validity, the values of average variance extracted (AVE) must be greater than 0.50 (Hair et al., 2021),



and Table 2 indicates that all values of AVE are above 0.50. Third, outer loadings should be larger than 0.70 to meet indicator reliability (Ringle et al., 2020). Although the outer loadings of the two indicators are between 0.40 and 0.70, deleting them does not lead to the increase of composite reliability and AVE over the thresholds (Hair et al., 2021). Thus, the two indicators are retained. Finally, Table 3 shows that discriminant validity is supported, as the cross loading of each indicator on the associated construct and the AVE square root on the diagonal have the highest values (Fornell & Larcker, 1981) and all Heterotrait-Monotrait Ratio values are smaller than 0.85 or 0.90 (Henseler et al., 2015). As the validity and reliability of the measurement models is confirmed, the study can assess the structural model.

Table 2 near here

Table 3 near here

#### ***4.3 The assessment of the structural model***

The structural model is assessed to test the relationships between constructs. First, all values of the variation inflation factor are below the threshold of 5; therefore, the structural models have no collinearity issues (Hair et al., 2021). Second, the coefficient of determination ( $R^2$ ) measures how the endogenous construct is accurately explained by its linked exogenous constructs (Ringle et al., 2020). In the structural model, except cognitive risk perception, all the  $R^2$  values are above the minimum limit of 0.10.

Finally, the significance and relevance of path coefficients is tested by the bootstrapping approach, and the results of hypotheses tests are presented in Table 4. Cognitive risk perception is significantly related to affective risk perception ( $\beta=0.389$ ,  $p=0.000$ ), thus, H1 is confirmed. Cognitive risk perception is not significantly related to outbound travel intentions ( $\beta=0.053$ ,  $p=0.255$ ) and preparations ( $\beta=0.023$ ,  $p=0.663$ ), while

affective risk perception is significantly related to outbound travel intentions ( $\beta=0.185$ ,  $p=0.001$ ) and preparations ( $\beta=0.166$ ,  $p=0.002$ ). Therefore, H2a and H3a are rejected but H2b and H3b are confirmed. As the results present a significant relationship between outbound travel intentions and preparations, H4 is confirmed. In addition, the study verifies that media coverage exerts significant impacts on cognitive risk perception ( $\beta=0.096$ ,  $p=0.043$ ), affective risk perception ( $\beta=0.145$ ,  $p=0.002$ ), outbound travel intentions ( $\beta=0.269$ ,  $p=0.000$ ), and preparations ( $\beta=0.255$ ,  $p=0.000$ ), therefore, H5a, H5b, H6, and H7 are confirmed. The full conceptual model is presented in Figure 2.

Table 4 near here

Figure 2 near here

#### ***4.4 Mediation analysis***

In this study, there are ten groups of potential mediating effects and the bootstrapping test results are presented in Table 5. For the mediation analysis, it is necessary to explain direct and indirect effects (Rasoolimanesh et al., 2021). SmartPLS was used for mediation analysis in the field of tourism and hospitality (e.g. Zhang & Huang, 2019). The test results confirm that affective risk perception partially mediates the relationship between media coverage and outbound travel intentions, as well as the relationship between media coverage and outbound travel preparations; partial mediation implies that both indirect and direct effects are significant (Hair et al., 2021). Similarly, outbound travel intentions partially mediate the relationship between affective risk perception and outbound travel preparations, and the relationship between media coverage and outbound travel preparations. Furthermore, full mediation occurs when the indirect effect is significant, but the direct effect is not (Hair et al., 2021). In this regard, this study's results verify that affective risk perception fully mediates the relationship between cognitive risk perception and outbound travel intentions, and the

relationship between cognitive risk perception and outbound travel preparations.

Table 5 near here

## **5. Discussion**

The confirmation of H1 is inconsistent with the work of Sjöberg (1998), which finds that there is a weak relationship between cognitive risk perception and worry. However, the present study's results can be explained by the argument of Leppin & Aro (2009) and Loewenstein et al. (2001), which states that affective consequence is triggered at the time of the confirmation of cognitive risk assessment. The results of H2a, H2b, H3a, and H3b oppose the findings of Bae & Chang (2020), who present that cognitive risk perception is significantly related to a behavioural intention but affective risk perception is not. These results also seem to contradict the argument of Leppin & Aro (2009) who highlight the dominance of cognitive risk perception in the related research. However, the study's results can be explained by the fact that in recent times most people have had in-depth cognition in relation to COVID-19 when compared to the early stages of the outbreak. As an increasing number of people are being vaccinated for personal safety and effective control over COVID-19 in China, their life is returning to normal. Consequently, individuals perceive less risk in terms of cognition than before. As Chinese people tend towards uncertainty avoidance (GLOBE, 2020) and the COVID-19 pandemic continues to spread worldwide, affective risk perception still largely influences individual travel intentions and behaviours. This agrees with the viewpoint of Loewenstein et al. (2001), which indicates that the impact of affective risk perception on behaviour is stronger than cognitive risk perception for a severe disease. Even though cognitive risk perception is not directly related to outbound travel intentions and preparations, this study's results present the indirect impact of cognitive risk perception on outbound travel intentions and preparations through the mediating role of affective risk

perception. This result resonates with the risk-as-feelings theory (Loewenstein et al., 2001), which confirms the validity of the transmittal approach for mediation analysis (Rasoolimanesh et al., 2021).

The verification of the significant relationship between outbound travel intentions and preparations reflects the fact that Chinese visitors tend towards uncertainty avoidance and will make sufficient preparations regarding outbound travel intentions (Liu et al., 2021; Wen et al., 2020). The confirmation of the significant impact of media coverage on outbound travel intentions and preparations reflects the viewpoints of Bhati et al. (2020), Chemli et al. (2020), Karasneh et al. (2020), Neuburger & Egger (2020), and Qiao et al. (2021). In addition, the confirmation of the relationship between media coverage and affective risk perception in the study is consistent with the findings of Qiao et al. (2021) and Yu et al. (2020). While the confirmation of the relationship between media coverage and cognitive risk perception highlights the argument by Karasneh et al. (2020) and Tsoy et al. (2021) that media coverage shapes the awareness of risk perception. The development of H10, H12, and H13 refers to the segmentation approach (Rasoolimanesh et al., 2021) and the hypotheses verification indicates the validity of this approach for mediation analysis. Additionally, the results also resonate with the research of Garg (2013), Qiao et al. (2021), and Wen et al. (2020).

## **6. Conclusion and implications**

To conclude, this study explores the outbound travel intentions and preparations of Chinese residents in the post-pandemic world. First, the study's results confirm that media coverage has exerted a significant impact on cognitive and affective risk perception, outbound travel intentions, and the preparations of Chinese residents. Second, cognitive risk perception is positively related to affective risk perception, which has a significant impact on outbound

travel intentions and preparations. Third, outbound travel intentions have significantly influenced preparations for outbound travel. Finally, the mediating roles of affective risk perception and outbound travel intentions are verified. The theoretical and practical implications are listed below.

### ***6.1 Theoretical implications***

First, the study provides persuasive evidence to explain how media coverage and risk perception are applied to assessing outbound travel intentions and preparations under the influence of the pandemic. The theory of planned behaviour has been widely used to research travel intention and behaviour in relevant studies (e.g. Bae & Chang, 2020; Huang et al., 2020; Liu et al., 2021; Sánchez-Cañizares et al., 2020). However, there is little research to comprehensively explain how media coverage and risk perception change and influence travel intentions and behaviours. The direct and mediating impacts between media coverage, risk perception, outbound travel intentions, and preparations satisfactorily address this research gap.

Second, this study updates the research on risk perception that focuses on cognitive risk perception (Leppin & Aro, 2009; Neuburger & Egger; Shim & You, 2015) by highlighting affective risk perception, which has attracted little academic attention. The results not only confirm the direct effects of affective risk perception on relevant constructs but also support all mediating roles of affective risk perception. In particular, the full mediating role of affective risk perception provides a new explanation on how cognitive risk perception impacts outbound travel intentions and preparations. In short, cognitive risk perception transforms the potential occurrence of risk into worry or anxiety before travel intentions and behaviours are influenced.

Finally, this study is one of the first to apply the concept of outbound travel preparations to reflect outbound visitors' potential behaviours related to healthy travel in the post-pandemic world. The role of travel preparations is often ignored in tourism research (Bauder & Freytag, 2015). Studies have focused on preventive behaviours, including health-promoting actions during travel (Chua et al., 2021). However, travel preparations, which are appropriate considering the current situation in China, are completed prior to travel (Balaban et al., 2014; Hung et al., 2014). Therefore, the verification of the significant relationships between outbound travel preparations, media coverage, risk perception, and travel intentions contributes to providing a new research avenue for outbound travel behaviours in the post-pandemic era.

## ***6.2 Practical implications***

This study provides practical implications for global tourism markets and destination operators. Certain experts predict that COVID-19 will not disappear in the short term or it may become a permanent virus (China News, 2021). Currently, Chinese citizens' risk perception for outbound travel focuses on infection rather than racial discrimination. In this regard, to minimise Chinese tourists' risk perception for outbound travel in the post pandemic world, destinations need to establish an effective and long-term mechanism to prevent tourists from being infected. The verification of the role of outbound travel preparations in this study suggests that travel destinations or tourist attractions must restrict the numbers of tourists who visit and require tourists to follow social distancing measures. Hotels should provide room service for each meal to minimise unnecessary contact (Liu et al., 2021). Bae & Chang (2020) also indicate that "untact" tourism is a new paradigm in the post-pandemic world. Furthermore, as the impact of media coverage on risk perception, outbound travel intentions, and preparations has been confirmed in this study, travel destinations are

recommended to provide positive travel information through media platforms in the post-pandemic world. For example, informing potential tourists about the policies and measures that are implemented in relation to health and safety at tourism destinations (e.g. limiting the numbers of tourists, asking people to wear a facial mask, checking International Travel Health Certificate) such that tourists perceive these destinations to be safe and understand the preparations required for their outbound travel (Neuburger & Egger, 2020).

This study emphasises that Chinese tourists should make adequate preparations if they have outbound travel intentions in the post pandemic world. The Chinese government has issued an International Travel Health Certificate to provide an individual's status in terms of serum IgG antibody test and vaccination (Lin, 2021). An individual's certificate may be considered as the access permit to a travel destination or a tourist attraction. A similar certification process, which shows that they have implemented effective preventative measures in the post-pandemic world, can provide a valuable reference for travel destinations. Key necessities such as face masks and rinse-free hand sanitizers must be prepared before outbound travel. For further preparations, visitors need to acquire or follow the travel health advisory (Balaban et al., 2014; Hung et al., 2014). To understand various destinations' COVID-19 situations and health safety policies, media coverage plays a significant role. Objective news obtained from official channels cannot be ignored (Chen et al., 2020), but it may be better to understand news by combining Chinese (e.g. China Central Television) and international official channels (e.g. World Health Organization).

### ***6.3 Limitations***

Although this study makes several contributions to the body of knowledge, there are certain limitations that should be considered as directions for future research. First, this study assessed cross-sectional data. However, tourists' outbound travel intentions and behaviours

may change when COVID-19 abates. Therefore, it would be worthwhile to collect additional data for longitudinal research. Second, the role of media coverage is significant under the influence of COVID-19 but it is not the sole influential factor for risk perception. Thus, more determinants of risk perception should be considered to extensively understand the influence of COVID-19. Finally, the concept of outbound travel preparations is rarely factored into relevant tourism research, thus, the validity of this concept needs more empirical support.

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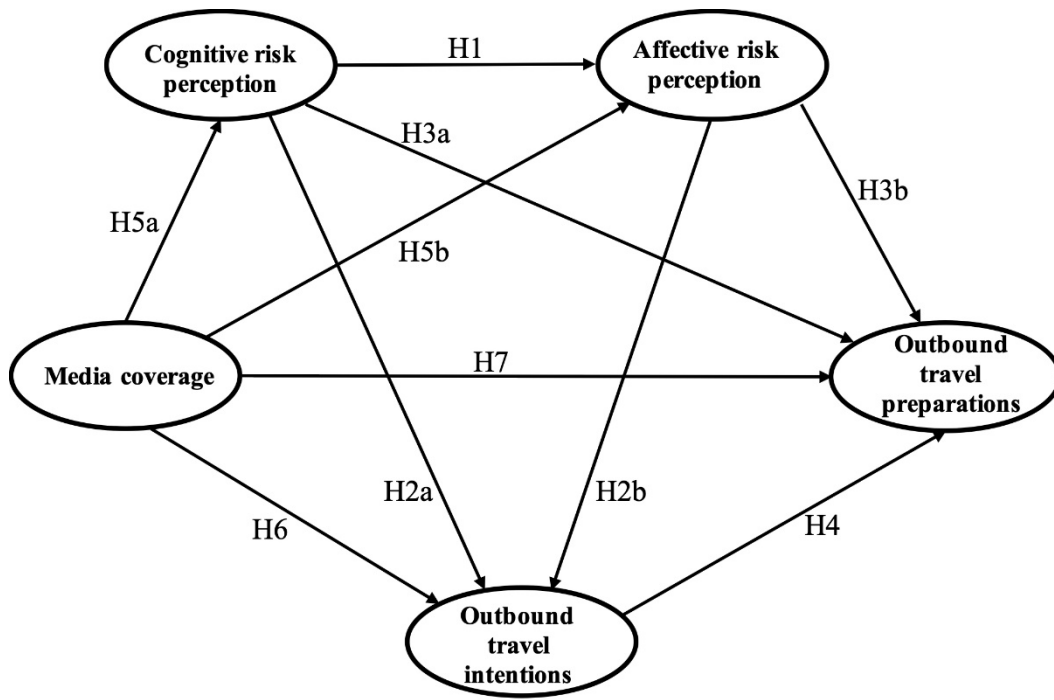
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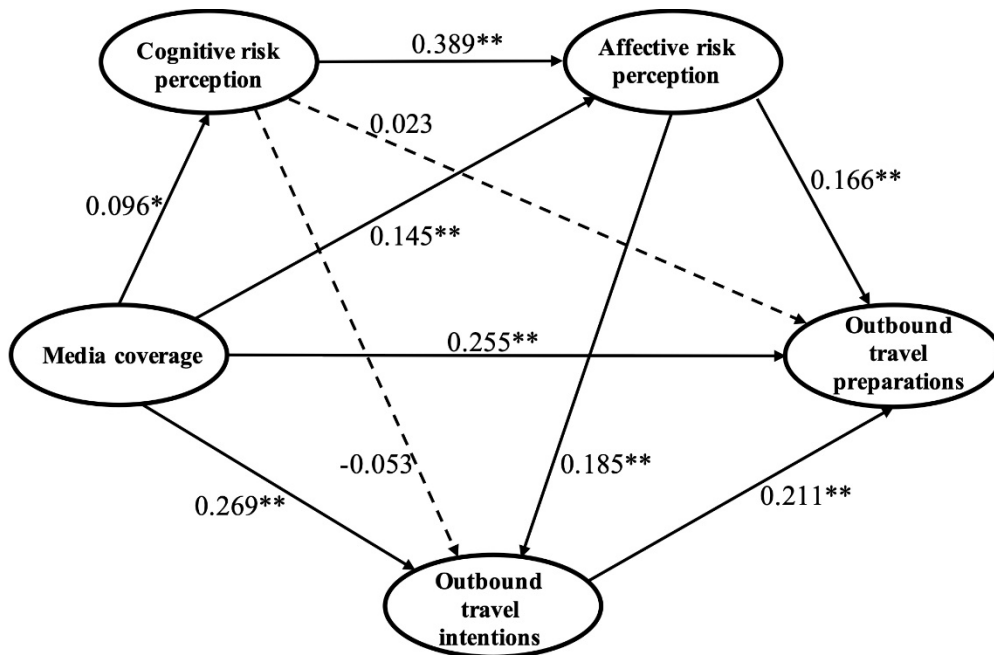


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**Figure 1.** The initial conceptual model



**Figure 2.** The full conceptual model. —→ Represents significant path; - -> Represent non-significant path; \*Significant at  $p < 0.05$ ; \*\*Significant at  $p < 0.01$ .

Table 1  
Demographic profiles of respondents

<b>Variable</b>	<b>Group</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Gender	Male	178	40.4
	Female	263	59.6
Age	Below 20	8	1.8
	20-29	175	39.7
	30-39	140	31.7
	40-49	34	7.7
	50-59	32	7.3
	60 or above	52	11.8
Education	Diploma or below	107	24.3
	Bachelor degree	201	45.6
	Master degree or above	133	30.2
Monthly income	Below CN¥5000	135	30.6
	CN¥5000-10000	161	36.5
	CN¥10000-20000	99	22.4
	Above CN¥20000	46	10.4
Outbound travel frequency	1-2	208	47.2
	3-5	126	28.6
	Above 5	107	24.3

Table 2

Results of internal consistency reliability, convergent validity, and indicator reliability

<b>Constructs and indicators</b>	<b>Outer loadings</b>	<b>Composite reliability</b>	<b>AVE</b>
<b>Media coverage</b>		0.856	0.602
Media often reports the severity of the COVID-19 pandemic abroad.	0.630		
Media educates people about the procedures to follow in the event of an outbreak and how to prepare for it.	0.834		
Media increases general preventive behaviours to control the infection.	0.879		
I trust what is posted about the COVID-19 pandemic abroad by Chinese media.	0.737		
<b>Cognitive risk perception</b>		0.842	0.641
There is a high likelihood of acquiring COVID-19 in general.	0.744		
There is a high likelihood of acquiring COVID-19 compared to other diseases.	0.826		
There is a high likelihood of dying from COVID-19.	0.829		
<b>Affective risk perception</b>		0.907	0.710
I am worried that I will contract COVID-19.	0.854		
I am worried about my family members contracting COVID-19.	0.852		
I am worried about COVID-19 occurring in my region.	0.871		
I am worried about COVID-19 emerging as a health issue.	0.793		
<b>Outbound travel intentions</b>		0.827	0.705
Currently, I have no outbound travel intention	0.809		
I would wait for 3-6 months before deciding to visit other countries, when the COVID-19 pandemic comes to an end.	0.870		
<b>Outbound travel preparations</b>		0.902	0.570
If I travel to other countries after COVID-19 ends, I will still minimise the contact with others.	0.756		
If I travel to other countries after COVID-19 ends, I will still keep social distance with others.	0.784		
If I travel to other countries after COVID-19 ends, I will tend to visit tourist destinations which limit the number.	0.763		
If I travel to other countries after COVID-19 ends, I will tend to visit tourist destinations where few people travel.	0.807		
If I travel to other countries after COVID-19 ends, I will prepare adequate facial masks with me.	0.809		
If I travel to other countries after COVID-19 ends, I will prepare adequate rinse-free hand sanitisers.	0.765		
If I travel to other countries after COVID-19 ends, I will take the vaccination before travel.	0.576		

Table 3  
Results of discriminant validity

		AR	CRP	MC	TI	TP
Fornell-Larcker Criterium	Affective risk perception (ARP)	0.84				
	Cognitive risk perception (CRP)	0.40	0.80			
	Media coverage (MC)	0.18	0.09	0.77		
	Outbound travel intentions (OTI)	0.21	0.04	0.29	0.84	
	Outbound travel preparations (OTP)	0.26	0.12	0.35	0.32	0.75
Heterotrait-Monotrait Ratio	Affective risk perception (ARP)	0.49				
	Cognitive risk perception (CRP)	0.22	0.14			
	Media coverage (MC)	0.29	0.10	0.43		
	Outbound travel intentions (OTI)	0.30	0.14	0.41	0.44	
	Outbound travel preparations (OTP)	0.21	0.04	0.29	0.84	0.75

Table 4  
Results of hypotheses testing

Hypotheses	Path coefficients	Results
H1: Cognitive risk perception → Affective risk perception	0.389**	Accepted
H2a: Cognitive risk perception → Outbound travel intentions	-0.053 n's.	Rejected
H2b: Affective risk perception → Outbound travel intentions	0.185**	Accepted
H3a: Cognitive risk perception → Outbound travel preparations	0.023 n's.	Rejected
H3b: Affective risk perception → Outbound travel preparations	0.166**	Accepted
H4: Outbound travel intentions → Outbound travel preparations	0.211**	Accepted

H5a: Media coverage → Cognitive risk perception	0.096*	Accepted
H5b: Media coverage → Affective risk perception	0.145**	Accepted
H6: Media coverage → Outbound travel intentions	0.269**	Accepted
H7: Media coverage → Outbound travel preparations	0.255**	Accepted

\*\*p<0.01, \*p<0.05, n's. p>0.05

Table 5. Results of mediation

	Mediator	Direct effect		Indirect effect		Mediation
		Coefficient	p value	Coefficient	p value	
H8. MC→ARP	CRP	0.145	0.002**	0.037	0.054 n's.	No mediation
H9. MC→OTI	CRP	0.269	0.000**	-0.005	0.331 n's.	No mediation
H10. MC→OTI	ARP	0.269	0.000**	0.027	0.021*	Partial mediation
H11. MC→OTP	CRP	0.255	0.000**	0.002	0.702 n's.	No mediation
H12. MC→OTP	ARP	0.255	0.000**	0.024	0.031*	Partial mediation
H13. MC→OTP	OTI	0.255	0.000**	0.057	0.002**	Partial mediation
H14. CRP→OTI	ARP	-0.053	0.255 n's.	0.072	0.001**	Full mediation
H15. CRP→OTP	ARP	0.023	0.663 n's.	0.065	0.004**	Full mediation
H16. CRP→OTP	OTI	0.023	0.663 n's.	-0.011	0.319 n's.	No mediation
H17. ARP→OTP	OTI	0.166	0.002**	0.039	0.015*	Partial mediation

\*\*p<0.01, \*p<0.05, n's. p>0.05; MC, media coverage; ARP, affective risk perception; CRP, cognitive risk perception; OTI, outbound travel intentions; OTP, outbound travel preparations.