

2022

Impact Assessment of Covid-19 Pandemic on Perception and Travel Behavior of Tourists with Strategies for Resilient Recovery of Jammu And Kashmir, India

Danish Iqbal Raina

Baba Ghulam Shah Badshah University Rajouri J&K, danishiqbal@bgsbu.ac.in

Tanveer Nasir

Baba Ghulam Shah Badshah University, tanveernasir33phd@bgsbu.ac.in

Taniya Qazi

SSM College of Engineering Pattan, J&K, qazitaniya14@gmail.com

Follow this and additional works at: <https://scholarworks.gvsu.edu/jti>



Part of the [Tourism and Travel Commons](#)

Recommended Citation

Raina, Danish Iqbal; Nasir, Tanveer; and Qazi, Taniya (2022) "Impact Assessment of Covid-19 Pandemic on Perception and Travel Behavior of Tourists with Strategies for Resilient Recovery of Jammu And Kashmir, India," *Journal of Tourism Insights*: Vol. 12: Iss. 1, Article 5.

Available at: <https://doi.org/10.9707/2328-0824.1253>

Available at: <https://scholarworks.gvsu.edu/jti/vol12/iss1/5>

This Article is brought to you for free and open access by ScholarWorks@GVSU. It has been accepted for inclusion in *Journal of Tourism Insights* by an authorized editor of ScholarWorks@GVSU. For more information, please contact scholarworks@gvsu.edu.

Introduction

In the continuing situation, the worldwide corona virus epidemic has become a part of everyday life. Tourists who have been infected with the Covid-19 virus, both non-vaccinated and vaccinated, have been forced to reconsider their travel choices, and the danger associated with that decision is directly tied to perception and behaviour. The way people think and act about things like travel patterns, destination preferences, living standards, health, and hygiene, and so on. In the ongoing uproar produced by the covid-19 pandemic, tourists' travel behaviours and perceptions are critical in determining and changing destination preferences, as well as the length of stay at a certain destination (Banos-Pino et al., 2021). In this climate of uncertainty, tourism marketers must have a solid awareness of all the important aspects that promote and restrict travel in order to develop strategies that will help attract passengers during and after the pandemic. Furthermore, it is critical to evaluate the significance of attitude determinants in travel decisions, as an anticipated 'new normal' during and after the pandemic may call into question certain assumptions about travel behaviour that have previously been assumed (Kock et al., 2020). Many tourism studies have focused on health risk perception as one of the travel-related risk factors (Fuchs & Reichel, 2006; Larsen et al., 2011; Reisinger & Mavondo, 2005; Reisinger & Mavondo, 2006). Studies in health psychology have found a link between risk perception and protective action. Individuals who perceive a higher health risk are more likely to avoid travel and work to lower their risk (Chien et al., 2017). Tourists' willingness to travel lowers when they perceive risk. As a result, they are more likely to postpone or cancel travel plans to places they consider unsafe (Pizam & Mansfeld, 2006; Sonmez & Graefe, 1998). The Protection Motivation Theory can explain this occurrence. According to the theory, people's attitudes and behaviours can change depending on the severity of the incident, the risk of being exposed to danger, the effectiveness of preventive measures, and their self-efficacy perceptions. Furthermore, the theory first determines how likely the risk threat is to occur and then assesses the steps taken in light of the threat's severity (Maddux & Rogers, 1983). As a result, if tourists believe they will face these risks in the destinations they intend to visit and find the preventive measures insufficient, they may postpone or cancel their trip. Roehl and Fesenmaier (1992) discovered a major categorization of travellers based on their risk perception. In leisure travel, they found three risk groups: risk-neutral, functional risk, and place risk. The risk-averse group, as expected, continues their journey regardless of the circumstances. Travelers in the functional risk category perceive greater physical and equipment risk and travel in small and large groups. Vacations and destinations are considered risky by the place risk group. As a result, individuals are more likely to return to places they have already been and prefer to spend their vacations visiting relatives and friends. Risks cannot be avoided in today's global environment (Fletcher et al., 2013). As a result, while tourist behaviour has changed to some degree, the fact that they consider the places to be risky has not yet deterred individuals from pursuing their desire to travel. Indeed, despite recurrent crises and regional decreases, international tourism has steadily increased over the years until COVID-19 exploded (UNWTO, 2021). Despite the fact that the world has seen large-scale outbreaks such as SARS, Avian influenza, Swine influenza, MERS, Ebola, and Zika viruses, the ongoing COVID-19 pandemic had/has an economic, sociological, psychological, and other impact (Baum & Hai, 2020; Dube et al., 2020; Gossling et al., 2020; Gretzel et al., 2020; Hall et al., 2020; ILO, 2021). International visitor arrivals fell by 73 percent in 2020, and the steep downturn continued in 2021, with a reduction of 87% (UNWTO, 2021). Travel and tourism as an essential component of global mobility has led to the rapid spread of the pandemic's (Hall et al., 2020).

Nonpharmaceutical measures, such as aircraft cancellations, travel bans and limitations, home isolations, obligatory testing, quarantines, and border controls, were implemented first after COVID-19 (Gossling et al., 2020). Different vaccinations have since been developed, rolled out, and distributed in a number of countries. However, because tourism is such a sensitive business, the global impact on tourism continues to be severe, as effective vaccinations take time to develop and widespread immunization is taking longer than projected (UNWTO, 2021). Furthermore, there are still insufficient vaccines for the entire planet, and the virus's variations have been expanding over time, making it impossible to build a vaccine that is compatible with all mutants. Furthermore, certain countries' borders remain closed, or quarantine responsibilities persist after international travel to specific places, implying that even if travellers wish to travel overseas, they do not have the right to do so. The COVID-19 pandemic and accompanying quarantine procedures have cost tourism service providers, transportation firms, and state budgets a lot of money (Gossling et al., 2020).

Literature Review

Although coronaviruses were first detected on the globe in the 1930s and in humans in the 1960s (Ye et al., 2020), the latest form of the virus, Severe Acute Respiratory Syndrome Coronavirus 2 (SARSCoV2), has piqued researchers' curiosity. Coronavirus Disease 2019 (COVID19) is a virus that was first discovered in December 2019 in Wuhan, Hubei, China. Since then, the virus has spread swiftly throughout the world. On January 13, 2020, Thailand reported the first worldwide case of COVID-19 (Andersen et al., 2021). Understanding visitor behaviour is critical for the tourism industry's growth, as it aids in tourist destination selection, appraisal, and future tourist behaviour intentions. Travel behaviour refers to a traveler's complex decision-making process during a trip, which includes selecting a mode of transportation, a route, a departure time, and a destination, among other things (Li et al., 2019). Consumers are distinct individuals with a diverse set of behaviours impacted by both internal and external factors. Internal elements (motivation, attitudes, beliefs, and so forth) interact with environmental factors to produce tourist behaviour (economic environment, security, socio-cultural environment, etc.) (Caldito et al., 2015). When clients make a purchasing decision, they will think about the dangers involved. Risk perception influences consumer behaviour, which in turn influences purchase decisions. In the tourism industry, five significant risk factors were identified: war and political instability, terrorist attacks, criminality, natural disasters, and health issues (Chebli et al., 2020). When the Middle East Respiratory Syndrome (MERS) outbreak in South Korea was first reported in 2015, those who were able to adjust their lifestyle modified their daily routines and travelled more. Fear of a pandemic disease can have a considerable impact on travel behaviour (Kim et al., 2017). Risk perception, trait anxiety, and social influence all had a substantial impact on the frequency of in-store purchases, eating out, and leisure activities in the Kanto Region of Japan. Risk perception influenced travel behaviour considerably during the COVID-19 outbreak in the United States (Irawan et al., 2021). According to a recent study conducted in Budapest, Hungary, demand for public transportation has declined by about 80%, while car usage has surged from 43% to 65% (Bucsky, 2020). According to a study done in Turkey (Yldrm et al., 2020), avoiding public transportation was one of the most widely adopted preventative behaviours during COVID-19.

Tourists' travel risk perception

The examination of how tourists interpret the concepts of danger and safety is one global problem of interest in tourism. Roehl and Fesenmaier (1992) divided tourists into three groups based on their risk perceptions: operational risk, neutral risk, and place risk. The probability of organisational equipment and mechanical difficulties is the basic foundation of tourism-related hazards for tourists with functional risk categories. Tourists in the neutral risk category are unconcerned about any potential risks associated with tourism or the place. Tourists in high-risk groups, on the other hand, are considering visiting dangerous regions. A study by Pizam et al., (2004) looked at travelers' danger while on the road. Similarly, Roehl and Fesenmaier (1992) stated that risk affects people's perceptions of their decision-making processes, especially when the decisions' results are uncertain. Risk elicits emotions such as worry and fear, which have unclear implications and inhibit people from making travel decisions (Reisinger & Mavondo, 2006). The evaluation of a scenario about the risk of making travel decisions in destinations is referred to as travel risk management.

Behaviour Change

The COVID-19 pandemic, according to Romagosa (2020), has already had a substantial influence on tourism, causing considerable changes in transportation, social behaviour, consumption patterns, and leisure. This is predicated on the hypothesis that as social and environmental concerns rise (Lew, 2020), post-crisis tourists will prefer sites closer to their homes. Many potential visitors may view adjacent places as less risky in a climate of increased instability and uncertainty, especially if their purchasing power has been impacted by the pandemic-related economic crisis. Furthermore, based on the scenario in the second quarter of 2020, significant limits on international long-distance travel are expected to be enforced for some time. One of the repercussions of the COVID-19 crisis, according to Romagosa and Cabello et al., (2020), has been the increase in proximity tourism, whether within a country (i.e., domestic tourism), in a region, or in some sections of the border territories between one's home country and neighbouring ones. Vacations may have been cut short, with vacations lasting only a day, a few days, or a week. Parents, classmates, the media, important economic and social events, and popular culture all have an impact on each generation, forming shared value systems that set them apart from people of different ages. Every generational cohort has a shared cultural worldview and standards (Noble & Schewe, 2003) as well as a collective memory (Schuman & Scott, 1989). This is strengthened when threats such as an epidemic, natural or man-made disasters, or terrorism bring attention to the safety and security of travellers (Rittichainuwat & Chakraborty, 2009; Fuchs & Reichel, 2006). As a result, perceived risk may influence travel behaviour (Reichel et al., 2007) and travel intention (Floyd et al., 2003). This is particularly true in the case of disease, which is closely linked to changes in travel plans (Kozak et al., 2007). International travel in the Asia-Pacific region was impacted a few years ago by serious and sad occurrences like the SARS pandemic. McKercher and Chon (2004) found that the perceived risk of SARS had a greater impact on tourists' behaviour than the disease itself, and that this effect was observed not only in countries where SARS cases had been reported but also in countries bordering countries where no infections had been reported. Perceived risk is the strongest predictor of the propensity to avoid travel, according to Cahyanto et al., (2016). Tourists make judgments based on these (biased) risk perceptions (Roehl and Fesenmaier 1992), which may or may not reflect the real situation at the location (Fuchs & Reichel 2006). Floyd

et al., (2003) created a four-dimensional risk perception measure. The first dimension has to do with the risk of travel. Because travel is one of the activities most exposed to global risk variables, this perceived travel risk is critical in the tourist industry (Ritchie, 2004). The second factor, perceived safety risk, is linked to safety concerns, which have a significant impact on tourist decision-making (Seabra et al., 2013). Distance perception is the third dimension when comparing international and domestic travel. This geographic effect will encourage post-crisis tourists to visit sites that are closer to their homes (Lew, 2020). A lack of public health infrastructure, a large population, and a large geographic area led to the impact of the COVID-19 pandemic on low- and low-middle-income nations like India. Even though the Indian government implemented the most strict and rapid statewide lockdown to prevent community transmission, India now has the second largest number of cases registered (Pai et al., 2020). In addition, the long lockdown made the people who live there feel even more uncomfortable (Dubey et al., 2020). In the aftermath of COVID-19, this pilot study intends to provide a form of reflection by assessing intentions for change in tourist behaviour. After a crisis, predicting the behaviour of tourism consumers is particularly difficult (Vo Thanh, 2006). As a result, an empirical study was conducted to better understand the sensitivity of tourists confronted with a health crisis like Covid-19, with the goal of gathering data from travellers to identify any potential changes in their consumption because of COVID-19. From a time, viewpoint, the evolution of these behaviours was also investigated. Preconceptions formulated by researchers in their published work (Gossling et al., 2020; Higgins-Desbiolles, 2020; Hoque et al., 2020) and concerns expressed by tourists on social media about the general perception of the impacts of COVID-19 on tourists formed the basis of the hypotheses of the present study. As a result, following the COVID-19 problem, for their next journey:

H.a. Tourists will prefer to curtail the duration of their trip due to Covid-19.

H.b. Tourists will shun overpriced and overcrowded destinations.

H.c. Tourists will be more concerned than ever about the host destination's health care.

H.d. Tourists will pay very close attention to the host destination's sanitary (hygienic) standards.

H.e. Tourists will prefer domestic destinations over overseas destinations,

H.f. Tourists will choose to shop online.

H.g. Tourists will be increasingly concerned with the selection of travel insurance.

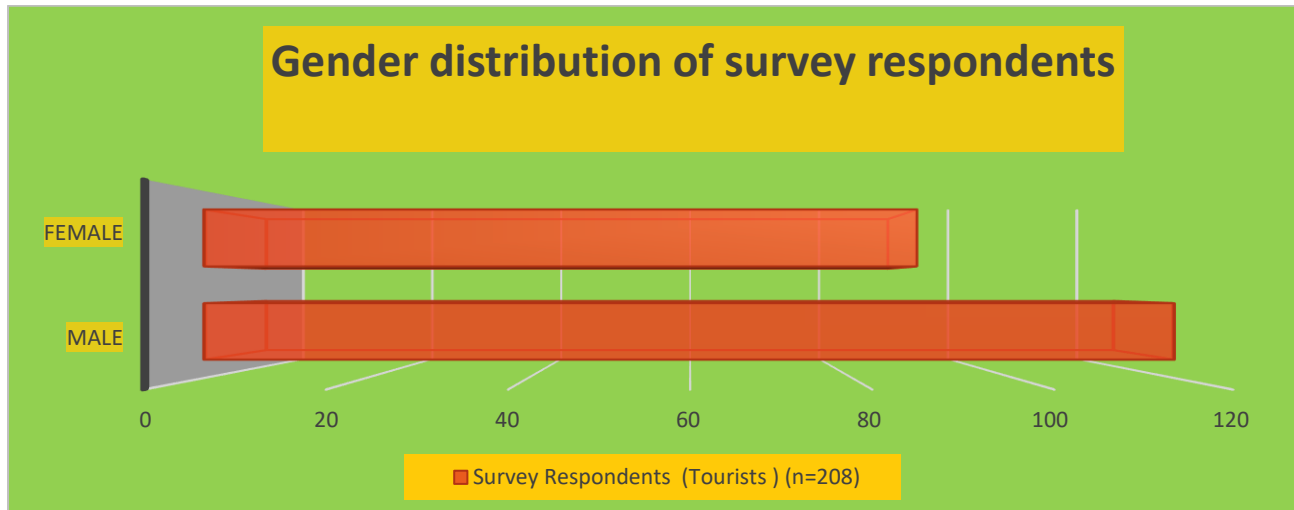
H.h. Tourists will avoid using public transportation (buses, shearing tempos, etc.).

H.i. Tourists will prefer to travel solo.

These hypotheses were tested through a survey and statistical analysis of the data.

Methodology

This research is qualitative research. Two research methods were used to achieve the defined hypotheses. The first was a questionnaire survey, and the second was a content analysis. Non-probability sampling was thought to be the best way to get samples for this type of study at this early stage of the investigation and before doing more research (Nonprobability Sampling, 2008).



Survey Instrument

A self-administered questionnaire was used as the survey tool. This choice made it possible to interview a large number of people visiting Jammu & Kashmir during the unlocking phase of COVID-19. The method of distribution was via the Internet (social networks) as well as in offline mode. The questionnaire was divided into three sections. In the first section, factual questions were asked, which made it possible to identify the socio-economic dimensions of the tourists studied. The second section aimed to identify possible changes in tourist behaviour. A 5-point Likert rating scale was used, where 1 = not at all important, 2 = not important, 3 = no opinion, 4 = important, and 5 = very important. Respondents were asked to rate the level of importance based on their judgment, but in the face of the unknown, it is difficult to predict all the changes that will occur in the case of online. In the third section, respondents were asked to answer an open-ended question about how their behaviour might change. This was done to find new leads.

Selection of Study Variables

The decision was taken in two steps, the first of which was an examination of the available documentation on the subject. Second, a content analysis of publications and opinions produced by travellers in groups on social networks that were relevant to general concerns about the effects of COVID-19 on perception and behavioural modification was conducted. Because it is more convenient and less expensive than primary field data, the use of the web as a source of information in the academic subject of tourism has proven to be a reliable alternative (Wood et al., 2013). Finally, nine study variables were established, representing potential changes in visitor behaviour and perception caused by COVID-19.

Sampling and Study Population

A survey was conducted from the 1st of December 2021 to the 13th of February 2022 using a non-probability method. A total of 208 travellers took part in the study, which was advertised on social media. The survey's goal was to track and contribute to a better understanding of COVID-19's effects on tourism. Furthermore, because this was a pilot study, the goal was to gather preliminary data and better understand the likely effects of COVID-19 on tourist perception and behaviour change. Non-probability sampling was thought to be the best way to get samples for this type of study at this early stage of the investigation and before doing more research (Nonprobability Sampling, 2008).

Outcomes and Data Analysis

Non-Parametric Statistical Test of Chi-Square

First, the ordinal variable, which is coded using the Likert scale, is converted into a binary variable, which has a value of 1 if the tourist values the variable studied and zero otherwise. "I don't have an opinion." In our Bernoulli variable, a response is defined as a response that takes the value zero. By comparing proportions between groups in the dichotomous categorical variable, the non-parametric Chi square test of goodness-of-fit was employed to investigate changes in visitor behaviour. A hypothesis test was conducted for each key hypothesis.

Hypothesis testing:

H0. No importance will be given.

H1. Considerable importance will be attached to a = 1%.

The Chi-square value obtained is compared to a 1% significance level. If the value obtained is greater than the one predicted, the null hypothesis is rejected. Table 1 shows the variables that tourists value the most, based on the results of a non-parametric Chi-square test of goodness of fit.

Table 1 shows the percentage and significance of behavioural change.

		Test hypotheses	Category	Observed Prop.	Chi- Square	P-value
Ha	Prefer to reduce the duration of trip	H0	Not Important	23.38%		
		H1	Important	76.62%	82.844	0.000*
Hb	Choose a less well-known Destination, where there will be less crowded.	H0	Not Important	48.37%		
		H1	Important	51.62%	59.695	0.000*
Hc	Be informed about the quality of the health care system in the	H0	Not Important	38.96%		
		H1	Important	61.04%	58.299	0.000*

	host destination					
Hd	Check on the sanitary conditions (hygiene, cleanliness) of the host destination	H0	Not Important	26.62%		
		H1	Important	73.38%	149.240	0.000*
He	Choose a destination close to Your region of origin (proximity)	H0	Not Important	33.44%		
		H1	Important	66.56%	93.688	0.000*
Hf	Choose online shopping	H0	Not Important	31.82%		
		H1	Important	68.18%	107.357	0.000*
Hg	A carefully considered choice of your travel insurance	H0	Not Important	38.96%		
		H1	Important	61.04%	58.299	0.000*
Hh	Choose travel by Private car over Local Transport.	H0	Not Important	48.37%		
		H1	Important	51.62%	59.695	0.000*
Hi	Avoid group travel with Friends Family, etc.	H0	Not Important	23.38%		
		H1	Important	76.62%	82.844	0.000*

Note: * Significant difference at 0.01%.

However, the value calculated for the alternative hypothesis H1 for each of the main hypotheses Ha (Chi-square = 23.844, $p = 0.000$), Hb (Chi-square = 59.695, $p = 0.000$), Hc (Chi-square = 58.299, $p = 0.000$), Hd (Chi-square = 149.240, $p = 0.000$), He (Chi-square = 93.688, $p = 0.000$), Hf (Chi-square = 107.357, $p = 0.000$), Hg (Chi-square = 58.299, $p = 0.000$), Hh (Chi-square = 59.695, $p = 0.000$), Hi (Chi-square = 82.844, $p = 0.000$), is below a significance level of 1%. As a result, the alternative hypothesis (H1) for these hypotheses is accepted.

Out of the 208 tourists who answered the questionnaire, 116 answered the open-ended question: "In addition to the changes mentioned above, do you think you will change anything else in your tourism behaviour? This represents a response rate of 37.6%. A statistical representation of the content was established using the Alyze software, based on the verbatim reports of the respondents. Table 2 is a frequency table of terms, which allowed to identify the most recurrent expressions, indicated by the respondents.

Table-2. Frequency table of terms with most recurrent expressions indicated by the respondents

S. No.	Expressions	Weighted (%)	Gross density (%)	Occ.
1.	Social distancing	0.89	1.42	8
2.	Covid-19 testing	0.89	1.42	8

3.	Avoid people as much as possible	0.84	1.89	7
4.	Less money spent	0.82	0.95	7
5.	Limit bus travel	0.82	0.95	7
6.	Avoid food outdoors	0.82	0.95	7
7.	Reduce my travel budget	0.74	1.26	7
8.	Wear a mask	0.6	0.95	7
9.	Vaccination available	0.6	0.95	7
10.	Not dining out	0.57	1.26	7
11.	Reduce impact on the environment	0.55	1.26	7
12.	Look for more information	0.55	1.26	7
13.	Avoid peak season	0.47	0.95	3
14.	Crowded places	0.47	0.95	3
15.	Pay more attention	0.47	0.95	3
16.	Checking the covid updates	0.47	0.95	3

17.	SOPs	0.3	0.63	2
18.	Air travel low-cost	03	0.63	2
19.	Sanitizers	0.3	0.47	3

This content analysis enabled the substance of the responses to be analysed and key words to be identified. The widespread use of these terms could also refer to the potential changes in tourist perceptions and behaviours as a result of this health issue. The gross density and weighted indices in Table 1 reveal that, statements such as "less money spent" (0.82) or "lower my travel budget" (0.74) pertain to the financial element; where, "travel more environmentally" (0.6) and "reduce the influence on the environment" (0.55) refer to travel behaviours. Additionally, idioms such as "avoid food outdoors" (0.82) and "do not dine out" (0.57) allude to eating habits, but "avoid the peak season" (0.47) refers to the peak tourist season. The expressions "seeking additional information" (0.55), "checking for covid-19 updates" (0.47), "wearing a mask" (0.95), "Social Distancing" (0.89), and "Covid-19 Testing" (0.89) are likewise the most frequent, appearing in the majority of tourist responses.

Discussion

Intentions Regarding Changes in Tourism Behaviour

Choosing a Close Destination

With a percentage of 66.56%, the response to the question, whether tourists will pick a location closer to their home region in the future, appears to be negative. This finding implies that the COVID-19 outbreak has had little effect on people's inclination to leave their homes and travel across borders. The pandemic doesn't seem to be instilling a drive to learn. This finding also shows that if travel restrictions are eased, long-distance travel will resume, which is good news for the tourism industry. Tourists' willingness to travel continues to be encouraging, even though they are "a little more careful and sensitive" to the recovery. Some preventative mechanisms, such as wearing a mask or disinfecting gel, and avoiding crowds, appear to be reflected in people's behaviour, as seen in Table 1. In light of this readiness to go despite concerns, industry officials should work to increase visitor confidence by improving sanitation and tightening disinfection procedures (means of transport, tourist attractions). They could also encourage them to travel more by making visas for temporary tourism more accessible, making use of more digital procedures, electronic visas, and avoiding delays and interactions with large groups of people. Another idea is to provide tour operators with a variety of credit formulae at favourable rates. The previous study by Li et al., (2021) supported and indicated that tourists' behaviour due to the COVID-19 Pandemic leads to a negative relationship between travel distance and tourism demand. Tourists prefer those destinations close to home after experiencing the pandemic.

Selecting a Lesser-Known Location

Many travellers think that their next vacation should be to a less popular location. Table 1 shows that 51.62 percent of those polled believe this is a critical decision. It may be argued that this decision is the result of a combination of psychological reasons, such as anxiety and worry, fear of being contaminated or of contracting a disease by finding oneself among a crowd of strangers whose health status is unknown. Traveling to less congested regions, as the results demonstrate, may be the next trend. This desire to get away from the crowds in an unusual destination could be an opportunity for new destinations to arise, whose managers could leverage this condition to sell themselves and establish a unique and unusual destination image. Rural tourism may be a viable option in the future. This situation can also be understood as a desire on the part of travellers to abandon mass tourism activities, and hence as a forerunner to the end of mass tourism. Overtourism-affected cities should adapt to the new requirements by rethinking their economic model, moving toward a softer economy, and putting an end to mass tourism, possibly through measures such as a daily visitor quota. Managers, on the other hand, could take advantage of this chance to start a new job in more responsible tourism. Kulkarni et al., (2021) tourists are likely to choose lesser-known destinations where they perceive the least chances of getting infected by COVID-19.

Traveling in a Groups

According to the findings of the survey, the COVID-19 will have an impact on tourists' willingness to travel in groups and their willingness to purchase tour packages. The fear of being trapped in a closed space (bus, boat, etc.) can explain the strong agreement of 76.62% of respondents to temporarily halt group travel in the present study. This stance is also a state of mind after being confined to their houses for months during COVID-19. People would have a great yearning for independence, free will, and control throughout this time period. Individual independence is limited and subject to the limits of a planned programme. This conclusion is similar to (Wen et al., 2020) who observed that travel patterns can lead to solo travel or small group tours, fewer group meals, undertourism destinations, and diversity such as unique outdoor activities, smart tourism, and nature-based travel.

The destination's sanitary condition and quality of care

The COVID-19 pandemic has elevated the need for sanitation and public health care. Table 1. According to the findings of this poll, one of the key consequences of this health catastrophe is a lack of hygiene and health knowledge. This suggests that, for their next trip, travellers will be more concerned about the cleanliness of airports, public spaces, hotels, restaurants, tourist attractions, and daily necessities, among other things, as well as the destination's access and care quality. 73.38% of tourists showed their interest regarding the destination's sanitary condition and quality of care as very important. As a result, health standards and the functioning of the host destination's health system become influencing elements in travel decisions. According to the World Health Organization (WHO), people do not prefer certain parts of Asia and Africa for safaris, hiking, and other adventures owing to their weak health systems and poor hygiene standards. The spread of COVID-19 has increased the travel risk and thus greatly affected the travel decisions of tourists and their perceptions of safety and hygiene (Wen et al., 2020). The results of this study align with the previous study, which stated tourist

attitudes regarding health and hygiene are viewed as essential factors in boosting destination competitiveness and attracting tourists (Williams & Bala, 2013; Frost et al., 2019).

Travel Protection Insurance

Purchasing travel insurance is not always a priority. According to Hajibaba et al., (2015) purchasing travel insurance is not always a priority. Tourists are sometimes hesitant to purchase travel insurance, either due to ignorance or a desire to save money. Table 1 shows that, following the crisis, this indifference will change as tourists will no longer be willing to take risks. The great desire of respondents (61.04 percent) to make informed decisions on proper travel insurance for their future trips could be related to a variety of causes (external and internal). As the number of epidemics caused by infectious diseases has increased fivefold in a few decades, what is happening now has the potential to happen again, albeit on a temporary basis (Bedford et al., 2019). In a connected world, epidemics don't stay localized; they spread to neighbouring countries. Individuals are not immune. There is a fear of being in a severe situation owing to an unanticipated health condition or infection on one's next trip and having to pay exorbitantly costly treatment costs in a foreign nation. Additionally, feedback from people who booked trips before the crisis (hotel reservations, ticket sales) and found themselves losing a significant amount of money due to trip cancellation and interruption insurance is a factor in boosting awareness. On the other hand, the dissatisfaction of travellers who have purchased non-refundable or non-changeable tickets from low-cost airlines. These travellers are at a disadvantage because they do not have flight cancellation insurance (Table No. 1). The study's results were also backed up by previous research (Rahman et al., 2021) that said tourists can buy travel insurance when they book trips to make sure they are covered in case they get sick, including COVID-19.

Preference for online shopping

According to the findings of this poll, it suggests that for their next trip, travellers will be more concerned with online shopping than shopping at the tourist destination. 68.18% of respondents strongly agreed regarding going for online shopping rather than preferring shopping at the selected destination due to the threat of the COVID-19 pandemic. As a result, tourists who are on a trip to Jammu and Kashmir will avoid shopping in the busy markets of J & K. According to Jilkova and Kralova (2021), Baby Boomers played a significant role in the e-commerce growth during the second wave of COVID-19. They found out that 43% of all their respondents had purchased online since the pandemic appeared. In terms of teleshopping, studies have shown that the more months spent on the internet, the greater the frequency of online shopping and the more money spent (Joewono et al. 2019).

Prefer to reduce the duration of trip

According to the data analysis of this study, which reveals that the tourists agreed with this behaviour, they will make curtailments in their trip duration due to the COVID-19 pandemic. 76.62% of respondents agreed that is a behavioural change that will affect the duration of their trip. As per the results, tourists who have planned a tour with a particular number of days at a destination may be reduced or cancelled due to the threat of getting infected by COVID-19, as was proven from the data analysis. This sort of change has been observed in tourists' behaviour and perception due to the

COVID-19 pandemic. The results of the study were also supported by previous literature (Maltseva et al., 2020; Wachyuni & Kusumaningrum, 2020; Nazneen et al., 2020) which indicated that tourists would prefer to shorten the time duration or cancel their tour due to the threat of getting affected by COVID-19.

Other Predictable Behavior

Purchasing Power

Another expected trend is a reduction in the amount of money set aside for vacations. The economic crisis brought on by COVID-19 will have an impact on purchasing power. Tourists will try to decrease their travel expenses as a result of the economic crisis, according to the results of the open-ended question, either by picking more affordable destinations, seeking special offers, or shortening their stay (Table 2). This is a common and well-documented pattern of behaviour following a financial crisis. Consumers develop different attitudes after an economic crisis, according to Bronner and De Hoog (2012), savings, new ways of spending money, changing travel planning techniques, and changing consumer practices. Such a shift could help to stimulate domestic tourism and strengthen customer loyalty. Travelers will save money on transportation, which is especially important given the possibility that plane rates will rise once flights begin. Ticket prices could rise by 50%, according to projections from the International Air Transport Association (IATA).

Environmental sensitivity

Tourists are becoming more environmentally sensitive as a result of the pandemic. Travelers say they wish to travel in the future in a more "ecological," "responsible," "minimalist," and "nomadic" style, according to the responses to the open-ended question. These are the major adjectives used to describe their greener tourism objectives in the future. People's sensitivity to ecotourism and support for outdoor activities is expanding as a result of the health crisis. (Wen et al., 2005) noted the appearance of similar behaviours in the aftermath of the SARS (severe acute respiratory syndrome) epidemic. A rise in environmental consciousness could lead to an increase in ecotourism demand. Ecotourism is anticipated to grow increasingly popular in the future. As a result, it is important for destinations in this growing market segment to think about the huge pressures these places might face and make sure that development is reasonable and environmentally conscious.

The Information Seeking Process

Tourists also stated a desire to study more about the travel destination and keep up with current facts before making a final decision regarding their future trip (Table No. 2). It is critical to provide tourists with clear, accessible, and up-to-date information in order to attract them and influence their judgments (Lehto et al., 2008). After such a global panic, it is conceivable for a destination to act and influence the mental representations connected with its area through a great amount of advertising and marketing in order to attract tourists and restore their confidence. Indeed, extensive communication strategies are required to combat the numerous misunderstandings that can arise in the aftermath of disasters (Carlsen & Hughes, 2008). Following the SARS pandemic, various Asian destinations (Singapore,

Thailand, Vietnam, and Hong Kong) developed a policy of focusing on, promoting, and distributing a safe and responsible country. This method has allowed them to restore a stereotype-plagued image and re-engage visitors (Avraham & Ketter, 2017). The image that a destination projects is a major deciding element (Chon, 1990). Tourist managers should try to communicate more through many different channels as part of their plan to be more resilient.

Traveling in the Off-Season

The last likely tourist behaviour highlighted by this survey is travelers' desire to avoid travelling during peak season. Table 2, which could be due to a number of variables noted in the study, including a desire to avoid crowds and, possibly, the high cost of travel at this time of year. Tourist management should make use of this potential travel period orientation as a windfall to mitigate the negative consequences of tourism seasonality. These are primarily economic in nature and have an impact on corporate profitability (Pegg et al., 2012). The desire to travel during the off-season (a push factor) exists, and tourism management should consider the following techniques to attract additional tourists (pull factors): Increase marketing efforts and improve offer structuring with season-specific packages of one-of-a-kind experiences.

Strategies for sustainable and resilient recovery of the tourism industry against COVID-19 for J & K

As can be seen, the current crisis will take a long time to pass, and the consequences will be severe. Our paper has six ideas for destinations to think about when they build their structures so that they can deal with the aftermath of the pandemic and be ready for any unplanned disasters in the future.

1 - Don't compete on pricing

Price competition should be avoided. When asked what the main reason for not travelling for pleasure was, studies have revealed that few respondents said money. Tourists' key concerns are less congested sites and improved healthcare systems. Destinations should not use price competition as a major way to stand out in order to attract tourists in the next year.

2 - Rethink and rebrand your tourism offering

Tourism should be redesigned and redefined. Tourist preferences and behaviour have shifted. Make sure the destination's brand strategy stresses how desirable and safe it is. The product offering must be modified to meet the changing expectations and demands of tourists. Tourists will be on the lookout for new attractions with less crowded areas and good sanitation systems. Smaller places will be able to draw tourists as well, providing a balance and preventing crowds from flocking to major destinations. Previous tourist strategies must also be reviewed because they may be outdated. The goal is to create a long-term, sustainable approach that shows visitors that the location is prepared for any unexpected incidents.

3 - Extend your sphere of impact and data collection

Extend the reach of your impact and data. Government activity is at the heart of how people see destinations, and it will play a key part in their promotion. DMOs are responsible for tracking and measuring public perceptions, government actions, activities, and policies. Tourist preferences are influenced by these perceptions when choosing a destination. It is critical that they collaborate to incorporate high-quality healthcare for anxious visitors into their offerings since this is becoming increasingly valuable. Governments and DMOs can start reviewing their brand-nought and tracking digital identity to avoid further damage in the event of future crises. The brand strategy must be taken into consideration as the foundation for its ability to respond quickly.

4 – Make changes to your current structure

Prepare a crisis management strategy. DMOs must have a team or plan in place that is capable of adapting, analyzing, and responding to a new normal or any emergent crisis. Fear and uncertainty will increasingly play a role in tourists' decisions about whether to visit or not to visit a country.

5 – Availably of covid-19 Vaccine at famous tourist destinations

The Covid-19 has created a threat in the minds of tourists and has impacted on their behaviour, which has led to a behavioural change in selecting the destination for vacation. So, to mitigate this threat in the minds of tourists, the government should make it possible that the COVID-19 vaccine is available at each health centre near a famous tourist destination, so that it will create a good image in the minds of tourists and they will choose Jammu and Kashmir for their trip as safe destination.

6 – Permit only vaccinated tourists to visit famous destinations in J & K

As per the results of this study, tourist's behaviour has changed a lot regarding the destination carrying capacity concept, which is related to the crowdedness of the destination. Tourists will prefer those destinations which are less crowded because the more crowded a destination is, the greater the risk of getting infected with COVID-19. So, it would be a great imitative if only vaccinated tourists were allowed to visit the famous destinations of Jammu and Kashmir to reduce the threat of getting infected by non-vaccinated tourists.

CONCLUSION

The pandemic is having an impact on travel plans as a result of the global hysteria induced by COVID-19. As a result, tourism industry stakeholders must be resilient and determine how to overcome all of the doomsday forecasts. The goal of this study was to present an exploratory review of changing visitor behaviour in a vulnerable community. One of the goals of this study was to forecast potential changes in travel behaviour in the aftermath of the COVID-19 health disaster. Understanding shifting tourist behaviour serves as a backdrop for developing strategies and activities that will help the tourism industry recover. The findings of this study could potentially be used as a springboard for destination marketers and crisis managers looking to recover from this disaster. A total of nine potential behavioural alterations were detected in the study. These findings are consistent with earlier research, which has shown that tourists are sensitive to disasters. Statistical analysis revealed that the study's nine variables were significant predictors of future intention to change. As a result, COVID-19 will

have an impact on travel behaviours. People will avoid travelling in groups and being surrounded by others. They'll also steer clear of the dangers of travelling without travel insurance. The public's attention has been drawn to the issue of hygiene and health as a result of this pandemic. The host destination's hygiene and health conditions will become major determinants in travel decisions. People who work for tourism businesses (transportation, lodging, catering, and tourist attraction facilities) should improve their hygiene standards in order to regain the trust of their customers.

Limitations and Future Research Recommendations

This study has some flaws, one of which is that there is always a gap between intentions and actual behaviour (McKercher & Hui, 2004). As a result, it is critical to perform future consumer psychology research in order to better understand and forecast the direction in which behaviour change will occur. Furthermore, future studies will enable a better understanding of the crisis' (Covid-19) impact on travel intentions (identified) and actual behaviour (that will occur). Second, the goal of this study is exploration, not generalization; the goal of this publication is not to determine the impact of COVID-19 on tourism behaviour in a larger population. As a result, the sampling technique chosen for this study is non-probability sampling, which implies a lack of representativeness and limits the generalizability of the findings. It is therefore recommended to conduct a probability-based survey of selected respondents for a more credible and broad interpretation. Other behaviours that were not discovered during this investigation may be revealed in the context of future studies. Finally, internal factors such as socio-demographic factors (Beerli & Martn, 2004; Chebli et al., 2020) influence tourism behaviour (age, gender, origin). As a result, researching the behaviour of each segment separately in future studies will enable managers to act more specifically in response to expectations based on age, gender, and origin. Recovery measures could be more regulated and targeted to guarantee optimum effectiveness as projections become more precise, better defined, and better understood.

References

1. Avraham, E., & Ketter, E. (2017). Destination marketing during and following crises: Combating negative images in Asia. *Journal of Travel & Tourism Marketing*, 34(6), 709–718. Available at: <https://doi.org/10.1080/10548408.2016.1237926>.
2. Baños-Pino, J. F., Boto-García, D., Del Valle, E., & Sustacha, I. (2021). The impact of COVID-19 on tourists' length of stay and daily expenditures. *Tourism Economics*, 13548166211053419.
3. Baum, T., & Hai, N. T. T. (2020). Hospitality, tourism, human rights and the impact of COVID-19. *International Journal of Contemporary Hospitality Management*.
4. Bedford, J., Farrar, J., Ihekweazu, C., Kang, G., Koopmans, M., & Nkengasong, J. (2019). A new twenty-first century science for effective epidemic response. *Nature*, 575(7781), 130-136.
5. Beerli, A., & Martin, J. D. (2004). Factors influencing destination image. *Annals of tourism research*, 31(3), 657-681.
6. Bronner, F., & de Hoog, R. (2016). Crisis resistance of tourist demand: the importance of quality of life. *Journal of travel research*, 55(2), 190-204.
7. Bucsky, P. (2020). Modal share changes due to COVID-19: The case of Budapest. *Transportation Research Interdisciplinary Perspectives*, 8, 100141.

8. Cabello, J. M., Navarro-Jurado, E., Thiel-Ellul, D., Rodríguez-Díaz, B., & Ruiz, F. (2021). Assessing environmental sustainability by the double reference point methodology: the case of the provinces of Andalusia (Spain). *International Journal of Sustainable Development & World Ecology*, 28(1), 4-17.
9. Cahyanto, I., Wiblishauser, M., Pennington-Gray, L., & Schroeder, A. (2016). The dynamics of travel avoidance: The case of Ebola in the US. *Tourism Management Perspectives*, 20, 195-203.
10. Caldito, L. A., Dimanche, F., & Ilkevich, S. (2015). Tourist behaviour and trends. *Tourism in Russia: A Management Handbook*, Emerald Group Publishing Limited, Bingley, West Yorkshire, 101-130.
11. Carlsen, J. C., & Hughes, M. (2008). Tourism market recovery in the Maldives after the 2004 Indian Ocean tsunami. *Journal of Travel & Tourism Marketing*, 23(2-4), 139-149.
12. Chebli, A. (2020). The impact of Covis-19 on tourist consumption behaviour: a perspective article.
13. Chien, P. M., Sharifpour, M., Ritchie, B. W., & Watson, B. (2017). Travelers' health risk perceptions and protective behavior: A psychological approach. *Journal of Travel Research*, 56(6), 744-759.
14. Chon, K. S. (1990). The role of destination image in tourism: A review and discussion. *The tourist review*.
15. Dube, K., Nhamo, G., & Chikodzi, D. (2021). COVID-19 cripples global restaurant and hospitality industry. *Current Issues in Tourism*, 24(11), 1487-1490.
16. Dubey, M. J., Ghosh, R., Chatterjee, S., Biswas, P., Chatterjee, S., & Dubey, S. (2020). COVID-19 and addiction. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 14(5), 817-823.
17. Floyd, M. F., Gibson, H., Pennington-Gray, L., & Thapa, B. (2004). The effect of risk perceptions on intentions to travel in the aftermath of September 11, 2001. *Journal of Travel & Tourism Marketing*, 15(2-3), 19-38.
18. Floyd, M. F., Gibson, H., Pennington-Gray, L., & Thapa, B. (2004). The effect of risk perceptions on intentions to travel in the aftermath of September 11, 2001. *Journal of Travel & Tourism Marketing*, 15(2-3), 19-38.
19. Frost, I., Van Boeckel, T. P., Pires, J., Craig, J., & Laxminarayan, R. (2019). Global geographic trends in antimicrobial resistance: the role of international travel. *Journal of travel medicine*, 26(8), taz036.
20. Fuchs, G., & Reichel, A. (2006). Tourist destination risk perception: The case of Israel. *Journal of Hospitality & Leisure Marketing*, 14(2), 83-108.
21. Fyall, A., & Wanhill, S. (2013). *Destinations. 2013) Tourism. Principles and Practice*. Harlow: Pearson Education Limited, 117-143.
22. Given, L. M. (Ed.). (2008). *The Sage encyclopedia of qualitative research methods*. Sage publications.
23. Goffman, E. (2020). In the wake of COVID-19, is glocalization our sustainability future?. *Sustainability: Science, Practice and Policy*, 16(1), 48-52.
24. Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of sustainable tourism*, 29(1), 1-20.

25. Gretzel, U., Fuchs, M., Baggio, R., Hoepken, W., Law, R., Neidhardt, J., ... & Xiang, Z. (2020). e-Tourism beyond COVID-19: a call for transformative research. *Information Technology & Tourism*, 22(2), 187-203.
26. Hajibaba, H., Gretzel, U., Leisch, F., & Dolnicar, S. (2015). Crisis-resistant tourists. *Annals of Tourism Research*, 53, 46-60.
27. Hall C.M., Scott D., Gössling S. Pandemics, transformations and tourism: be careful what you wish for. *Tourism Geographies*. 2020;22(3):577–598.
28. Higgins-Desbiolles, F. (2020). Socialising tourism for social and ecological justice after COVID-19. *Tourism Geographies*, 22(3), 610-623.
29. Hoque, A., Shikha, F. A., Hasanat, M. W., Arif, I., & Hamid, A. B. A. (2020). The effect of Coronavirus (COVID-19) in the tourism industry in China. *Asian Journal of Multidisciplinary Studies*, 3(1), 52-58.
30. Irawan, M. Z., Belgiawan, P. F., Joewono, T. B., Bastianto, F. F., Rizki, M., & Ilahi, A. (2022). Exploring activity-travel behavior changes during the beginning of COVID-19 pandemic in Indonesia. *Transportation*, 49(2), 529-553.
31. Jílková, P., & Králová, P. (2021). Digital consumer behaviour and ecommerce trends during the COVID-19 crisis. *International Advances in Economic Research*, 27(1), 83-85.
32. Kim, C., Cheon, S. H., Choi, K., Joh, C. H., & Lee, H. J. (2017). Exposure to fear: Changes in travel behavior during MERS outbreak in Seoul. *KSCE Journal of Civil Engineering*, 21(7), 2888-2895.
33. Kim, C., Cheon, S. H., Choi, K., Joh, C. H., & Lee, H. J. (2017). Exposure to fear: Changes in travel behavior during MERS outbreak in Seoul. *KSCE Journal of Civil Engineering*, 21(7), 2888-2895.
34. Kock, F., Nørfelt, A., Josiassen, A., Assaf, A. G., & Tsionas, M. G. (2020). Understanding the COVID-19 tourist psyche: The evolutionary tourism paradigm. *Annals of tourism research*, 85, 103053.
35. Kozak, M., Crotts, J. C., & Law, R. (2007). The impact of the perception of risk on international travellers. *International Journal of Tourism Research*, 9(4), 233-242.
36. Kulkarni, P. M., Kumar, P., Jana, S., Singh, S., & Kanade, V. (2021). A STUDY OF CHANGE IN CONSUMER BUYING BEHAVIOR TOWARDS TOURISM DUE TO COVID-19. *International Interdisciplinary Research Journal*, 1, 528-531.
37. Larsen, S., Brun, W., øgaard, T., & Selstad, L. (2011). Effects of sudden and dramatic events on travel desire and risk judgments. *Scandinavian Journal of Hospitality and Tourism*, 11(3), 268-285.
38. Lehto, X., Douglas, A. C., & Park, J. (2008). Mediating the effects of natural disasters on travel intention. *Journal of Travel & Tourism Marketing*, 23(2-4), 29-43.
39. Lew, A. A., Cheer, J. M., Haywood, M., Brouder, P., & Salazar, N. B. (2020). Visions of travel and tourism after the global COVID-19 transformation of 2020. *Tourism Geographies*, 22(3), 455-466.
40. Li, M., Zou, M., & Li, H. (2019). Urban travel behavior study based on data fusion model. In *Data-Driven Solutions to Transportation Problems* (pp. 111-135). Elsevier.
41. Li, M., Zou, M., & Li, H. (2019). Urban travel behavior study based on data fusion model. In *Data-Driven Solutions to Transportation Problems* (pp. 111-135). Elsevier.

42. Li, X., Gong, J., Gao, B., & Yuan, P. (2021). Impacts of COVID-19 on tourists' destination preferences: Evidence from China. *Annals of Tourism Research*, 90, 103258.
43. Maddux, J. E., & Rogers, R. W. (1983). Protection motivation and self-efficacy: A revised theory of fear appeals and attitude change. *Journal of experimental social psychology*, 19(5), 469-479.
44. Maltseva, Y. A., & Li, H. (2020, November). Transformation of Chinese tourist consumer behavior as a consequence of the COVID-19 pandemic. In *Research Technologies of Pandemic Coronavirus Impact (RTCov 2020)* (pp. 284-288). Atlantis Press.
45. McKercher, B., & Chon, K. (2004). The over-reaction to SARS and the collapse of Asian tourism. *Annals of tourism research*, 31(3), 716.
46. McKercher, B., & Hui, E. L. (2004). Terrorism, economic uncertainty and outbound travel from Hong Kong. *Journal of Travel & Tourism Marketing*, 15(2-3), 99-115.
47. Nazneen, S., Hong, X., & Ud Din, N. (2020). COVID-19 crises and tourist travel risk perceptions. Available at SSRN 3592321.
48. Noble, S. M., & Schewe, C. D. (2003). Cohort segmentation: An exploration of its validity. *Journal of Business Research*, 56(12), 979-987.
49. Pai, C., Bhaskar, A., & Rawoot, V. (2020). Investigating the dynamics of COVID-19 pandemic in India under lockdown. *Chaos, Solitons & Fractals*, 138, 109988.
50. Pegg, S., Patterson, I., & Gariddo, P. V. (2012). The impact of seasonality on tourism and hospitality operations in the alpine region of New South Wales, Australia. *International Journal of Hospitality Management*, 31(3), 659-666.
51. Pizam, A., & Mansfeld, Y. (2006). Toward a theory of tourism security. In *Tourism, security and safety* (pp. 15-41). Routledge.
52. Pizam, A., Jeong, G. H., Reichel, A., van Boemmel, H., Lusson, J. M., Steynberg, L., ... & Montmany, N. (2004). The relationship between risk-taking, sensation-seeking, and the tourist behavior of young adults: A cross-cultural study. *Journal of Travel Research*, 42(3), 251-260.
53. Rahman, M. K., Gazi, M. A. I., Bhuiyan, M. A., & Rahaman, M. A. (2021). Effect of Covid-19 pandemic on tourist travel risk and management perceptions. *Plos one*, 16(9), e0256486.
54. 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.
55. 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.
56. Reisinger, Y., & Mavondo, F. (2006). Cultural differences in travel risk perception. *Journal of Travel & Tourism Marketing*, 20(1), 13-31.
57. Ritchie, B. W. (2004). Chaos, crises and disasters: a strategic approach to crisis management in the tourism industry. *Tourism management*, 25(6), 669-683.
58. Rittichainuwat, B. N., & Chakraborty, G. (2009). Perceived travel risks regarding terrorism and disease: The case of Thailand. *Tourism management*, 30(3), 410-418.
59. Roehl, W. S., & Fesenmaier, D. R. (1992). Risk perceptions and pleasure travel: An exploratory analysis. *Journal of Travel research*, 30(4), 17-26.
60. Roehl, W. S., & Fesenmaier, D. R. (1992). Risk perceptions and pleasure travel: An exploratory analysis. *Journal of Travel research*, 30(4), 17-26.
61. Romagosa, F. (2020). The COVID-19 crisis: Opportunities for sustainable and proximity tourism. *Tourism Geographies*, 22(3), 690-694.

62. Schuman, H., & Scott, J. (1989). Generations and collective memories. *American sociological review*, 359-381.
63. Seabra, C., Dolnicar, S., Abrantes, J. L., & Kastenholtz, E. (2013). Heterogeneity in risk and safety perceptions of international tourists. *Tourism Management*, 36, 502-510.
64. Sönmez, S. F., & Graefe, A. R. (1998). Determining future travel behavior from past travel experience and perceptions of risk and safety. *Journal of travel research*, 37(2), 171-177.
65. Thanh, T. V. (2006). Le temps des risques. *La Revue des Sciences de Gestion*, (6), 35-45.
66. UNWTO (2021d). World Tourism Barometer, January 2021. Available at <https://www.e-unwto.org/toc/wtobarometereng/19/1>
67. Wachyuni, S. S., & Kusumaningrum, D. A. (2020). The effect of COVID-19 pandemic: How are the future tourist behavior. *Journal of Education, Society and Behavioural Science*, 33(4), 67-76.
68. Wen, J., Kozak, M., Yang, S., & Liu, F. (2020). COVID-19: potential effects on Chinese citizens' lifestyle and travel. *Tourism Review*, 76(1), 74-87.
69. Williams, A. M., & Baláž, V. (2013). Tourism, risk tolerance and competences: Travel organization and tourism hazards. *Tourism Management*, 35, 209-221.
70. Wood, S. A., Guerry, A. D., Silver, J. M., & Lacayo, M. (2013). Using social media to quantify nature-based tourism and recreation. *Scientific reports*, 3(1), 1-7.
71. Ye, Z. (2020). W., Yuan, S., Yuen, K. S., Fung, S.-Y., Chan, C.-P., & Jin, D.-Y, 1686-1697.
72. Yıldırım, M., Geçer, E., & Akgül, Ö. (2021). The impacts of vulnerability, perceived risk, and fear on preventive behaviours against COVID-19. *Psychology, health & medicine*, 26(1), 35-43.