



# Tourist Behavior during COVID 19 Pandemic: A Systematic Review and Future Research Agenda

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## Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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## ABSTRACT

During the COVID-19 outbreak, tourism has been significantly limited due imposed government restrictions, with travel being considered a high-risk activity.. Moreover, tourist behavior and preferences changed during the covid-19 pandemic. The current systematic literature review gathers and synthesizes research records of the last 2 years (2019–21) on tourists' behavior concerning during covid 19 pandemic. We used PRISMA as a protocol to conduct this systematic literature review. The synthesis provides a detailed account of the tourists behavior during covid 19 pandemic, their antecedents and consequences, behavior changes, and future research potential in the said domain.

*Keywords: Tourist behaviour; COVID 19; systematic review.*

## 1. INTRODUCTION

Tourism industry and the global economy have depraved by COVID-19 pandemic since March 11, 2020 which proclaimed as a pandemic by the World Health Organization (WHO). The infected people growth continually.

Lockdown strategies implemented to fight back the pandemic such as lockdown policies included

the suspension of international flights, shutting of restaurantssporting events museums, religious services and tourist attractions.

The pandemic has affected tourism industry that has relatively low levels of resilience to long-running crisis events [1].

The surge in demand for travel in tourism industry which concerned with the people

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movement both domestically and internationally has accelerated the scale of tourism flows. Tourism industry has been highly sensitive to external crisis events such as pandemics, natural disasters financial crises, terrorist activities, wars and other factors affected international tourism flows.

Public health concerns can generate considerable fluctuations in demand for international travel. In situations that have occurred during the COVID-19 pandemic, the characteristics of population movement, urbanisation trends, virus transmission routes and speed of infection, the sophistication and complexity of transportation network, the quality of national medical and health services, and pandemic control measures can affect how both the supply and demand sides of tourism are affected s, [2].

In this fertile context, international tourist arrivals exploded, from just 25 million in 1950, to 1.5 billion in 2019 (+4% compared to the previous year) (<https://www.unwto.org/international-tourism-growth-continues-to-outpace-the-economy>, 8 October, 2021). In the same year (2019), according to the same international body (UNWTO), tourism was the third largest export category, growing faster than the world economy. Then, in early 2020, SARS-CoV-2 devastated tourism industry (USD 2 trillion losses in global GDP, USD 1.3 trillion losses in tourism receipts) (<https://www.unwto.org/covid-19-and-tourism-2020>, 8 October 2021) that fall of 73.9% in 2020, close to its 1990s level (SARS (2003) generated a fall in international tourism of 0.4%, while the global economic crisis (2009) caused a fall of 4%) (<https://www.unwto.org/covid-19-and-tourism-2020>, 8 October 2021). The data showing that international arrivals decline of 87% in January 2021, compared to January 2020 (<https://www.unwto.org/taxonomy/term/347>, 8 October 2021) [3].

Morar, et al. [3] found less traveled participants especially group and foreign travel in the pandemic year than in the year before—yet more participants reported individual traveling in their home county during the pandemic period. travel Traveller behavior and preferences, as well as cognitive and affective factors, were related to the distinct types of exposure to COVID-19 risk. However, the major predictor of travel intention was only fun-seeking personality, while fear of travel was only the predictor of travel avoidance. Instead, people traveled more cautiously when

they perceived more risk of infection at the destination, and had higher levels of fear of travel, but also a high sense of efficacy in controlling the infection and problem-solving capacity [3].

Public authorities have controlled the virus spreading by implementing policy level actions and strategies such as closing schools, online teaching, home working, closing stores and restaurants, etc Restraining mobility, included closing airports, limiting community contacts, closing international borders and restricting international travel, was also a key mitigation policy due to the people's mobility was spreading the virus. In addition, restricted on public meetings, social, sporting, and cultural events, and public transportation or taxi operations, were imposed to limit travel and social restriction that were implemented in accordance with different local cultures, socioeconomic conditions and administrative organizations. These restrictions on mobility were applied at different administrative levels: local (e.g., restraining walking or motorized transportation, closing public places), regional (e.g., city lockdowns), national (e.g., closing regions and cities), and international (e.g., closing countries),. The restrictions influenced the diverse travel needs seriously (tourism, working, shopping, etc.), which further resulted changes in daily travel activities and travel behaviors (e.g., recreational activities, heritage explorations, and shopping routines,) as the impact of fearness [4].

To build a comprehensive understanding of tourist behavior during covid 19 pandemic which has been being an interesting issue, this study will present systematic review of the subject that will systematically collected, analyzed, and synthesized at the last 2 □year (2019-21) by making tourist behavior during covid 19 pandemic as a focal point.

We endeavored to find answers to the following research questions to provide useful insights:

1. What are the research designs and theories applied by researchers.
2. What are the dimensions, antecedents, consequences concerning the constructs related to tourist behavior during covid 19 pandemic.
3. What are various future research directions.

Overall, this study contributes to literature at two levels. First, our systematic review identifies a comprehensive set of tourist behavior during covid 19 pandemic and their antecedents and consequences of the constructs related to the subject. Second, it identifies various future research avenues for upcoming academic researchers. The rest of the study is an effort to find answers to the above- stated questions.

## 2. METHODS

Sweet and Moynihan (2007) have defined systematic review as “to provide a systematic, transparent means for gathering, synthesizing and appraising the findings of studies on a particular topic or question. The aim is to minimize the bias associated with single studies and nonsystematic reviews.” Therefore, the systematic review starts with an objective and explicit question which needs to be addressed via systematic and transparent data collection and synthesis [5].

The current study adopted the Preferred Reporting Items for Systematic Reviews and Meta- analyses (PRISMA) proposed by Moher, Liberati, Tetzlaff, and Altman (2009). PRISMA provides a roadmap to report a systematic review in a transparent, objective, and explicit way. Furthermore, the PRISMA statement suggests the information flow in four phases: identification, screening, eligibility, and inclusion.

The identification of records is the first stage of the PRISMA protocol. The critical issues in identification are what, how, and where to find. The research question provides the basis for identification. The electronic search was conducted in December 2021 by using databases of Web of Science, ScienceDirect, Emerald, and Google Scholar. These electronic databases provide coverage for research publications in the related disciplines. All records identified from various online sources were screened to exclude duplicates or unrelated items. We identified as many records as possible to avoid missing any vital study. This concept is called sensitivity at the initial stage of screening [6].

After the initial screening, we assessed the remaining full-text articles for eligibility to include in the qualitative synthesis. The assessment was based on eligibility criteria. The inclusion or exclusion criteria were based on the objectives of our study. Finally, for data extraction and

qualitative analysis, we used Endnote and Microsoft Excel applications. A data extraction form was also designed to extract and arrange information for qualitative synthesis.

## 3. RESULTS

### 3.1 Characteristics of Studies

The search strategy yielded a total of 20 full-text records. Of total records, 5 studies were removed because of duplication, 1 study mark as ineligible by automation tools, 14 studies were screened after reading titles and abstracts. After screening, we found 14 full-text articles for assessment. After applying exclusion criteria on full-text records, 2 studies were further excluded. Finally, 12 studies were included in qualitative assessment and synthesis.

Record identification from Keyword: (tourist behavior covid 19). Database (Scopus, n=20). Record removed before screening Duplicate records removed (n=0). Records mark as ineligible by automation tools [Year 2019-2021] (n=1). Record removed for other reasons [Tier Q1,Q2,Q3,Q4] (n=5). Record screened (n=14). Records excluded (n=0). Reports sought for retrieval (n=14). Reports not retrieved (n=2). Reports assessed for eligibility (n=12).

From the result of quality synthesis there are several findings and themes which divided into five categories, the main findings (year, publication and country, theory held, and research design elements). 'Tourist behavior during the covid 19 pandemic' identified, along with antecedents and consequences, observations and directions.

The qualitative research design was found most popular among researchers as 58 % (7 eligibled articles) of research articles opted for the qualitative method, so that they cannot be included in the systematic literature review due to the only quantitative approach studies used structural equations which can be included.

In the final set, there were 5 studies could be reviewed in the systematic literature review. We included studies for years ranging from 2019 to 2021.

The yearly progression of publications can be viewed in Fig 1. Of the total studies most were published in the last one year. Moreover, an increasing trend was found throughout the

period. The maximum number of studies ( 4 ) was published in the year 2021 and minimum ( 1 ) published in 2020. No study could be found in the year 2019.

An interesting finding was about the country of publication. Korea produced the most studies ( 2 studies or 40%). Different studies were published in different countries. There were 5 countries that published research in that subject, namely China, South Korea/ Korea, Serbia, and USA (see Table 1).

The most researched areas of research are in the context of risk : risk perception ( 2 articles) and risk reduction behavior ( 1 article) followed by

cruise tourists and tourist outbound travel behavior. Natural tourism and marine tourism are still in demand by tourists during the pandemic C19.(see Table 1).

The survey method was adopted by 100% of articles. Data analysis is a crucial activity to arrive at results and conclusions. Structural equation modeling (SEM) was applied by the all of the studies (see Table 2).

The topic of environmentally friendly behavior dominated the focus area of the studies during the pandemic (60%), another interesting topic is a vacation planning

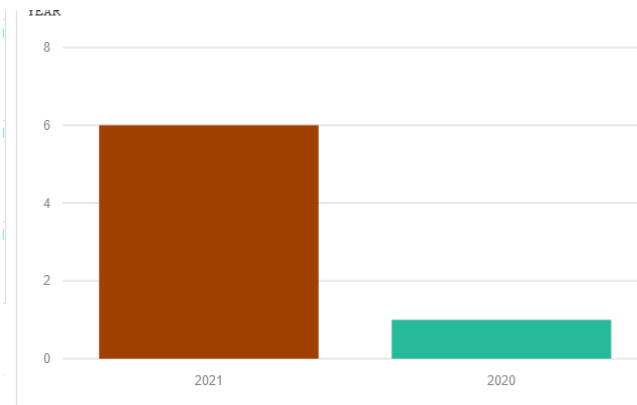


Fig. 1. The yearly progression of publications

Table 1. Context Of research area vs Author vs country of publication

Context Area	China	South Korea	Korea	Serbia	USA	Number of article
Cruise tourists			Xu [9].			1
Risk perception	Chen 2021.					1
Tourist outbound travel behavior					Chua [18].	1
Risk perception				Brati, 2021.		1
Risk Reduction Behavior		Seong 2021.				1
Total	1	1	1	1	1	5

Source : Author (2021)

Table 2. Focus research area vs research method vs quantity of research

Focus Research Area	Survey	quantity
Corporate social responsibilit	Chua 2020.	1
Expatriates practical strategies for managing nature-friendly tourist spaces such as national park	Seong 2021.	1
Predicting latent cruise travelers decision-making process in the COVID-19 pandemic	Xu [9].	1
Responsible tourism behavior	Chen 2021.	1
Tourist vacation behavior.	Brati, 2021.	1
Total		5

Source : Author (2021)

**Table 3. Underpinning theory vs focus research area vs author**

Underpinning Theory	Corporate Social Responsibility	Expatriates Strategies For Managing Nature-Friendlytourist Spaces Such As National Park	Practical tourist Makingprocess In The Covid-19 Pandemic	Predicting Latent Cruise Decision- Tourism Behavior	Responsible Tourism Behavior	Tourist Vacation Behavior.	Quantity
Model of Goal-Directed Behavior				Xu [9]			1
No specific theory	Chua 2020 [10]					Brati, [11].	2
Theory of Planned Behavior		Seong [12]			Chen [13]		2
Total							5

Source : Author (2021)

**Table 4. Antecedents, main construct (behavior), consequences, and Author**

Path	Anteseden	Behavior	Consequence	Author
1	Desire	BI after C19		Xu,[9]
1	Perceptipn of C19	BI during C10		Xu,[9]
2	Operation non Phamaceutical Intentions	BI during C10		Xu,[9]
3	Desire	BI during C10		Xu,[9]
1	C19 risk perception	Visit Intention		Seong,[12]
2	Perceived behavior control	Visit Intention		Seong,[12]
3	Attitude	Visit Intention		Seong,[12]
1	C19 risk perception	Reduction risk behavior		Seong,[12]
1	Knowledge in travel risk	Responsible behavioral intentions		Chen et al., [13]
2	C19 perception	Responsible behavioral intentions		Chen et al., [13]
3	Behavioral attitude	Responsible behavioral intentions		Chen et al., [13]
4	Perceived behavioal control	Responsible behavioral intentions		Chen et al., [13]
5	C19 perception	Responsible behavioral intentions		Chen et al., [13]
1	Perceived self efficacy	Health preventive behavior		Chua, [15]
2	Perceived susceptibility	Health preventive behavior		Chua, [15]
3	Cues to action	Health preventive behavior		Chua, [15]
1	Perceived response effort	Approach behavior intention		Chua, [15]
2	CSR	Approach behavior intention		Chua, [15]

Source : Author (2021)

### 3.2 Theories

This review provides beneficial insights into the underpinning theories applied in the area of tourist behavior during Covid 19 pandemic. A higher number of researchers considered the theory of planned behavior, followed by the Model of Goal-Directed Behavior, and the remaining considered no specific theory.

TPB proposed by Ajzen (1991), attitude is coined as an individual judgment based on an individual's favorability to perform a particular action. Subjective norm is a behavior that relies on the approval or disapproval of other people. Perceived behavioral control refers to how individuals discern the ease or difficulty of completing such action. While attitude and subjective norm can be categorized as volitional elements, perceived behavioral control is regarded as a non-volitional component. The empirical literature shows that attitude, subjective norm, and perceived behavioral control jointly improve the predictive power of behavioral intention in pro-environmental and pro-social behavior [7].

The Model of Goal-Directed Behavior (MGB) posits that desires provide the direct impetus for intentions and transform the motivational content to act embedded in attitudes towards the act (Aact), anticipated emotions (AE), subjective norms (SN) and PBC. Frequency of past behaviour is further assumed to be a predictor of desires, intentions and behaviour, whereas recency of past behaviour predicts behaviour only. As argued below, the introduction of anticipated emotions broadens the TPB by including new decision criteria with respect to a person's goals. The incorporation of desires deepens the TPB by reinterpreting how existing antecedents in the theory function [8].

### 3.3 Synthesizing 'Behavior'

Behavior factors, whose meaning is expanded on behavior intention, in this study has found, (behavior intention after C19, behavior intention during C19, visit Intention, reduction behavior, responsible behavioral intentions, health preventive behavior, and approach behavior intention), provided the basis for our analysis.

### 3.4 Antecedents and Consequences

The antecedents can be divided into four groups.: (1) antecedents related to risk:

Perceptipn of C19/ C19 perception [14-15] perceived susceptibility [16] knowledge in travel risk [13], cues to action [16], (2) antecedents related to responsibility : perceived behavior control [12, 15] ; perceived response effort [16], corporate social responsibility (CSR) [16] (3) antecedents related to afection : desire [9], perceived self efficacy [16], (4) antecedents related to attitude: attitude [12], behavioral attitude [15]), operation non phamaceutical intentions [9]. Nevertheles, behavior have no any consequences in this study.

Antecedents, consequences, and behavior factors revealed in Table 4.

## 4. CONCLUSSION

The greatest research contribution both theoretically and practically would be revealed if we found the areas of research that have never been researched or are still very rarely researched which called research gaps.

Besides, the extant literature has studied and confirmed links among antecedents, consequences, and behavior factors. The literature, however, discovered the lacks in studying tourist behavior during pandemic C19 on 3 counts.:

*First*, studies of tourist behavior during C19 were still rarely in the last 2 years, *Second*, quantitative research design was employed in few case. There were only 12 eligibled researches of the subject in quantitative approach using structural equation model which were published in Q3, Q2 and Q1 Scopus indexed journal at last 2 years. *Third*, the review discovered the behavioral antecedents which were still rarely studied such as : (1) the antecedents related to environmental responsibility, namely perceived response effort, (2) the antecedents related to affection, namely desire [9], perceived self efficacy [16], (3) antecedents related to attitude, namely: operation non phamaceutical intentions [9].

While, all of behavioral factors in this study were still rarely studied in the past 2 years, . due to all of them just only once studied by the same researcher.

## FUTURE RESEARH DIRECTIONS FROM PRIOR STUDIES

The future research directions on the subject of tourist behavior during C19 in this review also

revealed by Chua, et al. [10], suggested that it is possible to expect significant differences with the approach behavior to the respective global destinations. Verifying the conceptual model by destinations or countries will give confidence that the subject under investigation echoes across the diverse international destination settings, and the future research should address a variety of the tourists' nationalities in order to explore how this demographic variable affects their outbound travel behavior after the COVID-19 pandemic [10].

Tourists' responsible behavioral intention was investigated instead of the actual behavior. Previous studies have suggested that the environmental behavior intention can be used to predict environmental behavior. However, discrepancy between actual responsible behavior and responsible behavioral intention is likely to exist. Therefore, this should be addressed in further research to gain more insights into the intention-behavior gap regarding responsible tourism [13].

Future studies should guide the development of effective approaches to reduce travel related risk perception and anxiety, due to COVID-19 and other similar health risk situation [11].

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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