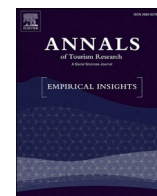




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## How do Chinese tourists negotiate the constraints of engaging in post-COVID-19 domestic travel?

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### ARTICLE INFO

Editor Name: Dr. Kirilova Ksenia

#### Keywords:

Travel constraint  
Negotiation strategy  
Post-COVID-19 domestic travel  
China

### ABSTRACT

Post-COVID-19 domestic travel, a valuable component of tourism recovery, has been initiated. However, verified and detailed knowledge regarding epidemic-induced travel behaviour changes from an emic perspective is lacking. Focusing on actual behaviour based on a field investigation of Chinese domestic travellers, this study provides detailed knowledge of the travel constraint-negotiation interaction process between travellers and the epidemic. The findings suggest that the effects of COVID-19 involve various constraints including intrapersonal, interpersonal and structural factors at both the context and system levels. Both cognitive and behavioural strategies are synergistically used in an interlinking manner and depend not only on individual preference and self-efficacy but also, more importantly, on the temporality and socioculture of COVID-19 created by anti-epidemic practices.

### 1. Introduction

The continuous mutation of the virus has led to a long-term recovery phase, i.e., the post-COVID-19 phase, which has been referred to as the “new normal” by the WHO (2020). It is important to stress that the term “post-COVID-19” in this study does not refer to the complete end of the epidemic on either a global or a local scale but to the period of relative and regional stability after the initial uncontrolled global outbreak and growth of the epidemic. Post-COVID-19 domestic travel means travel within the state administrative borders during this period.

This phase represents an unprecedented long-term crisis response period before the epidemic is eliminated and life eventually returns to the previous normal, which is characterized as the time when the full lockdown has ended, uneven global geographic conditions exist, new outbreaks occur at unknown times and in unknown places and groups, general vaccination production or inoculation is unavailable, and virus mutation is a possibility. Given the experiences of earlier concentrated outbreaks, restarting and restoring the economy and daily life on the basis of continuing epidemic prevention are the top priorities. Restarting tourism in a timely manner during this stage is a way not only for the industry to recover and reduce the impact of the epidemic but also to support the global 2030 Agenda for Sustainable Development (Pololikashvili, 2020; UNWTO, 2020).

Consistent with the Chinese reality, domestic travel was predicted to be the first step of reopening (Jin, Bao, & Tang, 2021; Lew, Cheer, Haywood, Brouder, & Salazar, 2020; Wu, Cao, Liu, & Chen, 2022). Some knowledge of tourist behaviour in terms of the COVID-19 influence has been accumulated from earlier scholarly comments, reflections and visions based on theoretical reasoning or investigations of the behavioural intentions of future tourists. However, as Bianchi (2022) noted, few could have predicted the scope and severity of the impact of COVID-19 on human societies. We believe that tourists' actual behaviour changes during this unique stage are still worth researching, whether to validate existing predictive research or to identify these complex impacts (Zopiatis, Pericleous, & Theofanous, 2021). Under this emerging risk scenario with intertwining disruptive events, global health crises, and rapid change and uncertainties, how does the epidemic impede the restarting of travel and how do pioneering tourists overcome the obstacles and ultimately succeed in travelling? The lack of knowledge of this epidemic-induced reconfiguration process of travellers' behaviour remains a gap in the literature. The practical importance of this research is self-explanatory as tourism marketers need this knowledge to develop effective marketing strategies amid unprecedented risk scenarios to assist in the return of mass travel (Shin, Nicolau, Kang, Sharma, & Lee, 2022).

The literature is predominantly silent regarding a systematic

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examination of travellers' behaviour changes during such risk scenarios. Responding to many academic calls to examine the post-COVID-19 stage, i.e., the extreme, long-term, and comprehensive crisis stage (e.g., [Gursoy and Chi \(2020\)](#) and [Zopiatis et al. \(2021\)](#)), we adopted the constraint-negotiation model as a fundamental framework to explore the psychological and behavioural process of pioneering tourists, their travel constraints induced by COVID-19 and how they negotiate these constraints to participate in travel. Theoretically, this paper contributes to the understanding of tourism and epidemics in three aspects. First, we report an empirical investigation of the post-COVID-19 contextualized travel behaviour of Chinese domestic tourists to verify the research results of earlier stages (e.g., [Haywood \(2020\)](#); [Jin et al. \(2021\)](#); [Shin et al. \(2022\)](#)). Second, our research contributes to the relative dearth of academic research that uses a system approach (vs. an event approach), which is closer to the current epidemic reality, to obtain more exact and deeper insights into the changes in tourist behaviour due to this unprecedented risk scenario ([Bausch, Gartner, & Ortanderl, 2020](#); [Miao, Im, Fu, Kim, & Zhang, 2021](#)). Third, this qualitative research on epidemic-induced tourist behaviour change is one of the tourist studies that responds to the recent call by [Ingrid, 2016](#) to be more responsive to the social cultural context in constraint research. We validate the explanatory power for understanding these impacts by considering the new socioculture emerging from these long-term epidemic resistance practices.

## 2. Literature review

### 2.1. COVID-19 epidemic and travel behaviour

After the emergence of COVID-19, changes in travel behaviour, the most evident travel-related phenomenon, have become among the most frequently discussed topics ([Zopiatis et al., 2021](#)). Despite the disruption of tourism at the start of the outbreak, optimistic and experienced tourism academics believe that tourism, which [Veblen \(1965\)](#) called "a worldly archetype of paradise and a good life", will eventually be able to attract tourists to travel again ([Galvani, Lew, & Perez, 2020](#); [Havitz, Pritchard, & Dimanche, 2020](#)). Acknowledging the inherent ties between travel mobility and public health crises, researchers have sought to predict the changing travel behaviour induced by the COVID-19 epidemic. Notably, however, scholarly predictions regarding "what will be different" are inconsistent and even contradictory ([Bausch et al., 2020](#)).

Leisure and tourism scholars' observations during the early outbreak suggested that the severe side effects of quarantine and social distancing would stimulate the desire to meet people and move around, which are basic components of the potential demand for post-COVID-19 travel ([Havitz et al., 2020](#); [Sivan, 2020](#); [Wen, Kozak, Yang, & Liu, 2020](#)). Based on historical experiences of public health events, such as SARS, some tourism scholars forecasted a popular post-COVID-19 travel type of "retaliatory growth" or "catch-up travel" ([Vogler, 2021](#)). However, [Hall, Scott, and Gössling \(2020\)](#) found that social isolation made tourists unable to travel immediately because of the higher perceived risk and longer-term behavioural implications. [Bao \(2020\)](#) argued that due to the unparalleled devastating and widespread impact of the epidemic, the above concepts were overly optimistic and ambiguous but were supported in the later recovery stage of Chinese tourism ([Enger, Saxon, Suo, & Yu, 2020b](#)). [Vogler \(2021\)](#) also warned about the possible influence of epidemic-induced tourism savings and extra risk mitigation.

In addition, the COVID-19-induced paradigmatic shifts in tourist behaviour predicted from a postevent perspective are diverse. Both the earlier experience of the crisis outbreak period leading to tourists' cognitive change ([Kock, Norfelt, Josiassen, Assaf, & Tsonas, 2020](#)) and environmental factors emerging during the epidemic period ([Sigala, 2020](#)) were used to speculate on the change. Using psychological theory for a simulation analysis of psychological distance and perceived risk, [Z. Li, Zhang, Liu, Kozak, and Wen \(2020\)](#) characterized the change in

tourist behaviour "from general to elaborate, from open-hearted to closed, and from radical to conservative". Nevertheless, the reality is that the tourism recovery phase appears completely different from previous epidemics, allowing scholars to focus on the epidemic's spatial and temporal variability with regard to the outbreak, prevention and recovery. Scholars began to consider COVID-19 an epidemic virus-induced comprehensive crisis involving a combination of several disaster and crisis typologies instead of a public health event, as previously thought ([Aebli, Volgger, & Taplin, 2021](#); [Horton, 2020](#)). [Aebli et al. \(2021\)](#) summarized the risk-related factors influencing post-COVID-19 travel, including individual physical and psychological aspects, such as perceived health risks ([Bae & Chang, 2020](#)) and negative effects on mental wellbeing ([Matiza, 2020](#); [Zheng, Luo, & Ritchie, 2020](#)), as well as external aspects related to the context of the epidemic and destinations, such as access to destination information ([Ahmad, Jamaludin, Zuraimi, & Valeri, 2020](#)). [Shin et al. \(2022\)](#) also highlighted the importance of understanding the role of government restrictions and vaccination. The empirical results of [Fedeli, Nguyen, Williams, Chiappa, and Wassler \(2022\)](#) show that travel craving rather than travel intention represents a more valuable predictor of COVID-19 vaccination confidence, which again reflects the limitations of earlier predictions of the relevant factors for the understanding of post-COVID-19 travel decisions.

In summary, the long-term persistence and continuous mutational development of the epidemic have changed the societal structure and individual lifestyles and largely exceeds the perceived scope of previous public health events. Thus, differences and even paradoxes appear as scholars make direct analogies based on their own perspective, experience, and discipline. Reflecting on the epistemological framework, some scholars provide valuable approaches through which to interpret these contradictory aspects. For instance, [Bausch et al. \(2020\)](#) adopted the concept of a system to analyse the effects of the epidemic on tourism to present three scenarios, each with two end states and constituting an impact grid, to follow the effects. Formalizing the COVID-19 outbreak as an ecological determinant that can activate individual behavioural immune systems, [Kock et al. \(2020\)](#) used an evolutionary tourism paradigm to examine tourists' fundamental motives rather than proximate motives. [Miao et al. \(2021\)](#) adopted an emic perspective on COVID-19 as an individual life event and proposed a proximal and distal post-COVID travel behaviour model. More recently, the author further adopted a theoretical perspective on posttraumatic growth to analyse post-COVID-19 behaviour as outcomes of both pandemic-induced and posttraumatic-induced changes ([Miao, Im, So, & Cao, 2022](#)).

These studies indicate that the unprecedented situation of the frequency of virus mutation as well as the dimensions of temporal recovery, spatial transmission and regional preparedness have led to the complex scenario of the post-COVID-19 phase. The rapidly changing dynamic system leads to a gap between reality and deduction based on static event frameworks and travel decision models in stable contexts. Individual travel behaviour decisions are context-specific ([Jeng & Fesenmaier, 2002](#)), but what is the reality of travel behaviour in the emerging context? Has it changed as predicted? Furthermore, what are the travel-related factors of COVID-19, and how do they influence the decision-making process? These research questions remain unanswered.

### 2.2. Travel constraint negotiation

Tourism scholars have integrated time and space constraints in geography ([Hägerstrand, 1970](#)) and individual constraints in leisure studies ([Wade & Hoover, 1985](#)) into a classic concept for understanding tourism behaviour and travel constraints while referring to the barriers that inhibit individuals from carrying out their intended travel behaviours ([Nyaupane & Andereck, 2007](#)). [Crawford, Jackson, and Godbey \(1991\)](#) constructed a constraint-negotiation model that went beyond traditional research that has examined motivations, constraints, and decisions in an isolated way to provide a more detailed and holistic

understanding of the travel decision-making process by integrating these constructs. The relatively complex hierarchical model provides a stronger analytical tool for scholars to analyse tourism behaviours, especially those impacted by internal or external variability (Hinch & Jackson, 2010; Xie & Ritchie, 2018).

The constraint-negotiation model includes intrapersonal, interpersonal, and structural three-dimensional constraint structures, which are linearly and hierarchically ordered (Crawford et al., 1991). Specifically, with regard to travel participation, proximal intrapersonal constraints are encountered first and refer to inhibitors associated with individual psychological and attribute factors. Only after addressing intrapersonal constraints will people with tourist preferences and desires face interpersonal constraints and interactions with other potential participants. After overcoming previous constraints, the most distal structural constraints take effect; these are the external factors that restrain individuals from carrying out their behavioural intentions. Although these constraints affect or intervene with travel participation, they do not necessarily result in tourism nonparticipation as people overcome these seemingly insurmountable constraints through negotiation (Hubbard & Mannell, 2001; Hung & Petrick, 2012).

Powerful explanations of the model have been illustrated in studies exploring tourist behaviours characterized by unique barriers or occurring in difficult situations, such as travel to unfamiliar, risky or cross-cultural destinations (He, Li, Harrill, & Cardon, 2013), tourist activities requiring professional skills (Hudson, 2000), and the travel participation of vulnerable groups (Wen, Huang, & Goh, 2020). As postepidemic travel is consistent with the above tourist behaviour in many aspects, we adopt the model as a theoretical framework. In addition, Shin et al. (2022) enhanced the model's predictive power for post-COVID-19 travel intention by integrating the constraint constructs. However, beyond the social distancing factor he adopts, many elements of epidemic constraints and complex tourist negotiation processes are still not well understood by scholars. As constraint negotiation affects the entire travel sequence (Gao & Kerstetter, 2016), the model is used as a processual analysis framework in this research rather than a variable to qualitatively explore how such behaviour actually changed (Davies & Prentice, 1995; Karl, Sie, & Ritchie, 2021; Kim & Park, 2016).

In addition, as Chick and Dong (2005) state, the disregard of culture in the study of constraints is itself highly constraining. Similarly, D. M. Samdahl (2005) critiques the traditional models that are isolated from other social factors. Especially in the Chinese context, which differs from the Western context where the theory originates, the role of socioculture in the evolution of constraints has been identified in leisure and tourism (Chick & Dong, 2005; Gao & Kerstetter, 2016; Lai, Li, & Harrill, 2013; Walker, Jackson, & Deng, 2017). Chick and Dong (2005) conducted interviews with people from oriental backgrounds and proposed a fourth type of constraint, cultural constraint, because culture prescribes and proscribes intrapersonal and interpersonal behaviour differently in different cultures. Gao and Kerstetter (2016) further found that culture, which intersects with individual social identities, also affects Chinese travel negotiation strategies. Wen, Kozak, et al. (2020) argue that collectivistic culture is a framework for Chinese tourists to change their behaviour and preferences due to the impact of the COVID-19 outbreak. Considering the strict collective epidemic prevention policies (Xu & Yang, 2020), socioculture cannot be ignored in travel constraint research focusing on post-COVID-19 China.

Chick and Dong's (2005) new variable is a conceptualization of the culturally influenced intrapersonal constraint component (Walker et al., 2017). However, many studies indicate that intrapersonal constraints as well as interpersonal and structural constraints are affected by socioculture in a corresponding manner (Gao & Kerstetter, 2016; Lai et al., 2013; Stodolska, Shinew, & Camarillo, 2019). Thus, the role of socioculture should not be viewed as an independent variable but as an influential force that directly or indirectly acts on the whole constraint system. In line with Walker et al. (2017), this research is based on Crawford et al.'s (1991) hierarchy model and further follows Stodolska

et al. (2019) in incorporating the context and system levels into structural constraints. This allows us to analyse the role of culture in each constraint category and provides a more complete and hierarchical framework to reveal the impact of socioculture.

### 3. Methods

To achieve the goal of this exploratory study and obtain in-depth knowledge, we adopted a qualitative methodology involving an interpretivist paradigm. This enabled us to provide an extensive and detailed description of this new phenomenon and to obtain emerging insights and explanations based on the respondents' perspectives, thoughts and behaviours (Creswell & Poth, 2018). We employed semistructured interviews guided by a set of open-ended questions based on themes generated in the literature (Nyaupane & Andereck, 2007; Randler, Tryjanowski, Jokimaki, Kaisanlahti-Jokimaki, & Staller, 2020; Wen, Huang, & Goh, 2020).

China was one of the first countries to identify, lock down and control the epidemic, and a strict vaccination policy is still being implemented. After controlling the first wave of the epidemic in March 2020, China underwent a cautious restart phase, including tourism, which provided an important opportunity to explore such changing behaviour (Lew et al., 2020). We conducted a field survey in Huangyao Ancient Town, China. According to Jin et al.'s (2021) investigation during the epidemic and Enger, Saxon, Suo, and Yu's (2020a) practical industry report, Huangyao is a popular tourist destination for three reasons: (1) security, since the destination lacks any reported cases of infection; (2) location, on the periphery of China's Pearl River Delta urban agglomeration near some megacities, including Guangzhou, Shenzhen and Hong Kong; and (3) content, including natural outdoor activities and a rural healthy lifestyle. Using a combined purposive and convenience sampling method, we recruited participants in the natural scenic setting of Huangyao. To achieve data saturation (Charmaz, 2014; Guba & Lincoln, 1994), we conducted 39 semistructured interviews (see Table 1 for a list of respondents). With the guidance of the interview questions (see Appendix Table 1 for the list of interview questions), the field interviews began with a dialogue regarding the respondents' perceptions of and experiences with postepidemic travel to guide the respondents to make comparisons with their historical experience. Then, the respondents provided detailed reporting of their travel habits and experiences with the COVID-19 epidemic to encourage them to gradually focus on the impact of the epidemic on travel. The respondents were asked to describe their current travelling process, from motivation and decision to mobility and experience. On the basis of the above knowledge, the investigator guided the interviewees to narrate more targeted information about epidemic-induced travel constraints and their negotiation strategies. The techniques of regular cross-checking of information and peer-to-peer confirmation were used throughout the interviews to help overcome memory bias and cognitive bias (Huberman & Miles, 1994). In addition, the investigator developed more in-depth probing questions based on key emergent messages about unexpected themes and interpretations (Creswell & Poth, 2018). The investigation team discussed the new findings every day after the interviews to add the new responses to the subsequent interviews and determine the point of data saturation (Charmaz, 2014). The interviews lasted from 15 to 40 min. After obtaining the interviewees' consent, the interviews were digitally recorded and transcribed verbatim into textual data.

Using the qualitative data analysis software NVivo 11, the data analysis was conducted in three phases. First, using the constant comparison technique, the preliminary travel-related themes were coded after incident-by-incident open coding. Then, we compared the themes with travel constraints in normal contexts, and focused coding was used to filter the preliminary codes to the key themes of epidemic-induced motivations and constraints. Inter coding and saturation point techniques were adopted for consistency and validity. Second, the researchers further analysed the constraint-negotiation relationship by

**Table 1**  
Profile of the respondents.

Code	Gender	Age	Companions (no.)	Origin	Route	Transport	Days	First trip?
#001	F	26	Friends (2)	Guangdong	Single destination	HSR	2	N
#002	F	50	Family (3)	Guangdong	Multiple destinations within a province	Driving	2	Y
#003	F	33	Family (4)	Guangdong	Multiple destinations within a province	Driving	3	Y
#004	M	45	Friends (11)	Guangdong	Multiple destinations across provinces	Driving	10	N
#005	F	52	Family (2)	Guangxi	Single destination	HSR	4	Y
#006	M	42	Family (4)	Guangdong	Multiple destinations within a province	Driving	5	Y
#007	F	25	Family (4)	Guangdong	Single destination	Driving	2	Y
#008	F	38	Family (4)	Guangdong	Multiple destinations within a province	Driving	3	Y
#009	F	39	Family (3)	Guangdong	Single destination	HSR	2	Y
#010	F	30	Friends (4)	Guangxi	Single destination	Driving	2	N
#011	F	43	Family (2)	Guangdong	Multiple destinations within a province	Driving	7	Y
#012	F	38	Family (4)	Guangdong	Multiple destinations within a province	Driving	7	Y
#013	F	43	Family (3)	Guangdong	Single destination	HSR	7	Y
#014	F	18	Family (3)	Guangdong	Multiple destinations within a province	HSR	7	Y
#015	F	48	Classmates (16)	Guangdong	Single destination	HSR	7	Y
#016	F	30	Classmates (10)	Guangdong	Single destination	HSR	5	Y
#017	F	50	Family (4)	Guangdong	Multiple destinations within a province	HSR	4	Y
#018	F	45	Family (7)	Guangdong	Multiple destinations within a province	Driving	7	Y
#019	M	45	Family (3)	Guangdong	Multiple destinations across provinces	Driving	7	Y
#020	F	39	Family (3)	Guangdong	Multiple destinations within a province	Driving	4	N
#021	M	27	Friends (2)	Shanghai	Multiple destinations within a province	Airplane	7	N
#022	M	38	Family (3)	Guangxi	Multiple destinations within a province	Driving	5	Y
#023	F	28	Friends (2)	Guangxi	Single destination	Train	2	N
#024	M	50	Family (3)	Guangxi	Multiple destinations within a province	Driving	7	Y
#025	M	32	Family (3)	Guangxi	Single destination	Driving	3	N
#026	F	60	Family (2)	Guangxi	Single destination	Driving	1	Y
#027	F	25	Colleague (23)	Guangdong	Multiple destinations within a province	Bus	2	N
#028	F	38	Friends (2)	Guangdong	Single destination	HSR	3	N
#029	F	33	Family (2)	Guangxi	Single destination	Driving	3	N
#030	F	28	Family (4)	Guangxi	Multiple destinations within a province	Driving	3	N
#031	M	35	Family (3)	Guangdong	Multiple destinations within a province	Driving	4	N
#032	M	32	None	Guangxi	Single destination	Train	3	Y
#033	M	28	Family (2)	Guangxi	Single destination	Driving	2	N
#034	F	31	Family (3)	Guangdong	Multiple destinations within a province	Driving	5	N
#035	M	43	Friends (7)	Guangdong	Multiple destinations within a province	Driving	4	Y
#036	M	36	Family (3)	Guangdong	Single destination	Driving	3	Y
#037	F	24	Friends (3)	Guangxi	Single destination	Driving	1	N
#038	M	33	Family (3)	Guangdong	Multiple destinations within a province	Driving	3	N
#039	F	40	Family (3)	Guangxi	Single destination	Train	3	Y

matching their discovered themes. Then, the researchers returned to the transcripts to conduct a content analysis from an epidemic situational lens (Clarke, 2005). Third, by continually comparing this study with existing studies, the researchers conceptualized the study using theoretical coding. Detailed memos were generated throughout the analysis process. In addition to triangulation, the peer debriefing technique, thick description and the direct presence of the participants' words were adopted to establish trustworthiness.

**4. Findings**

The findings revealed that home quarantine contributed to some driving factors, including both the massive demand for relaxation and travellers' maintenance of their previous travel lifestyle after its suspension. This finding is consistent with the predicted increase in motivation due to restrictions on outdoor leisure activities during the epidemic (Aebli et al., 2021; Anderson, 2020; Randler et al., 2020). However, the recovery of daily life and work was the first priority during the earlier post-COVID-19 stage. As individuals' social resilience differs, the meanings of travel also differ for individuals (E. J. Kim & Pomirleanu, 2021; Li et al., 2020). Notably, the interviewed pioneering travellers did not feel that their trips represented the predicted compensatory "binge" travel behaviour (Miao et al., 2021). They were inclined to view their trip as a rational result, especially given the multiple constraints imposed by the epidemic.

**4.1. Travel constraints**

**4.1.1. Intrapersonal constraints**

Intrapersonal travel constraints in a normal context include pressure, fear, lack of interest, knowledge of skills or ability, religiosity, and personal evaluation of the suitability of activities (Hung & Petrick, 2012; Nyaupane & Andereck, 2007; Wang, Deng, & Petrick, 2018). The field survey showed that perceived epidemic risks were the core interpersonal constraints. These epidemic risks constrained individual travel at different psychological, emotional and behavioural levels, including risk and fear, pessimism and sensitivity, and the perceived security of staying home.

COVID-19 has the clinical characteristics of population susceptibility and asymptomatic infection. During the postepidemic stage, without full vaccination and global pandemic control, most people still have health risk perceptions. In particular, later increases in cases in other countries, imported virus-carrying people and goods, and occasional domestic recurrences of the virus contribute to the maintenance of these perceptions. Therefore, the perceived health risks of the epidemic impose serious psychological constraints on travellers, especially those with the common sense inherited from the previous home quarantine stage that staying at home is the safest option. This concept was significantly reflected in the prominent ambivalence of the travelling tourists:

*I consider travelling in my mind before making the decision. After all, the epidemic is not completely over, and it is not absolutely safe now (Informant #023).*

*The mood in terms of travelling is different. In the past (non-epidemic period), I would be more relaxed, but now, I feel a little nervous (Informant #035).*

*We travelled far away from home, but we do not have any specific measures to resist risks. We are just optimistic. I know there are many travelling emergencies due to COVID-19 that we have not considered (Informant #004).*

#### 4.1.2. Interpersonal constraints

Interpersonal travel constraints mainly include the inability to find a companion and disagreement regarding travel decisions (Nyaupane & Andereck, 2007; Wang et al., 2018). During the post-epidemic period, in addition to the absence of travel companions, two unique and invisible forms of interpersonal constraints emerged: a lack of support from others and feeling responsible for others. Post-COVID-19 travel motivations and constraints are individualized and related to demographic characteristics, sociological characteristics, personality traits, travel experiences, and epidemic experiences. Alternatively, the social distancing habits developed during the epidemic have made people more vigilant about avoiding strangers, which hinders the recruitment of travel companions on social media. These indirect effects make it more difficult to find travel.

Travelling to reconnect with family and friends or for social experiences is viewed as one of the main tendencies (Aebli et al., 2021; Hall et al., 2020). However, the fact that divergent travel motivations and preferences among family members or friends ultimately hinder travel has been ignored. The attitudes of people such as elderly family members, friends, colleagues, and neighbours who may still be very sensitive to the epidemic also discourage those who intend to travel. Nearly two-thirds of the respondents noted this resistance factor. Notably, this lack of support was enhanced after the enactment of the “joint prevention and control” measures for epidemic prevention. During the epidemic, people’s daily behaviour was under mutual supervision, and many violators were exposed and condemned by the public. The collectivistic culture also provides travellers with a sense of responsibility for their companions, i.e., to ensure their safety while travelling. This responsibility troubles many parents and organized travellers who are preparing to travel:

*The trip is somewhat depressing as we dare not share it on WeChat Moments. I posted one at the beginning, and some comments expressed envy, some about consultation, but some questioned our trip. I do not feel well, although it is not malicious, and some relatives and friends care about our safety. Thus, we decided not to post any more during travelling (Informant #019).*

*I have no problem with myself; I love to travel and have encountered all kinds of things during travel. However, it feels slightly risky to bring my family with me (Informant #017).*

#### 4.1.3. Structural constraints

Structural constraints are external factors that exist after a person develops a travel preference but does not actually participate in travel activities. Under normal circumstances, structural travel constraints include financial status, available time, climate, resources, and facilities (Gao & Kerstetter, 2016; Nyaupane & Andereck, 2007). During the investigation, we found that the structural travel constraints resulting from the epidemic were numerous and interlinked, including both direct impediments created by the current epidemic as a risk context and indirect restrictions from a social system changed by the previous epidemic outbreak. Following Stodolska et al. (2019), who improved the ecological constraints model, we categorized the codes into structural constraints at the context level (i.e., mobility restriction and epidemic dynamic uncertainties) and constraints at the system level (i.e., social structural inertia during recovery) to reveal the multiple effects of the

epidemic on post-COVID-19 travel behaviour.

First, in addition to mobility restriction, the dynamic effect of the uncertainty of epidemic development on constraints was frequently mentioned by tourists. Uncertainties refer to objective epidemic developments and corresponding direct and indirect effects on the travel system, such as the possible recurrence of the epidemic in tourist destinations, corridors or origins; the constant mutation of the virus; and the consequent external effects on tourism of the ensuing systemic response to the epidemic. To the best of our knowledge, there is no framework for tourist destinations that clearly informs travellers of the direct consequences they face in the wake of uncertainties occurring during this unique stage. Thus, travel mobility could potentially be halted and a destination could be closed due to such uncertainties. In tourist sources, although mobility is allowed according to official regulations, a condition states that travel should be limited to essential reasons only. Individual leisure and tourism still cannot be claimed to be essential in the longstanding Chinese cultural tradition of a strong work ethic (Wang & Stringer, 2011) or in this special scenario where travel is a risky vector for transmitting the epidemic (Iaquinto, 2020).

With regard to tourist passage and destinations, different policies at the province scale have led administrative border effects to impede travel. The cost of time was one of the most significant results. Some travellers reported that they were required to quarantine for fourteen days at home after interprovincial mobility. The 14-day observation period is an important and popular method for safely proceeding through the COVID-19 incubation period. Undoubtedly, the cost of time is another strong cause of resistance to travel because the time required for quarantine is often longer than the vacation.

At the system level, social structural inertia during recovery refers to the lag in the availability of facilities, markets, and institutions, which adds new types of structural constraint. The supply of some tourism services, such as tour groups and theme parks, is still limited, resulting in a broken travel chain. Moreover, different COVID-19 restrictions concerning mobility between the origin and destination, especially across administrative boundaries, add many new travel constraints. Furthermore, reluctance to exert effort to equip oneself for protection during travel, such as taking a nucleic acid amplification test or renting a car, was reported by those who had not travelled since the epidemic:

*I cannot drive. For my friends who can, their families are not at ease about driving mountain roads and long distances. Thus, our travel plan has been shelved for a long time. (Informant #008).*

The post-COVID-19 stage is characterized by future-oriented uncertainty, current epidemic prevention restrictions and social system constraints due to the aftermath of the epidemic. These factors have created new structural travel constraints that differed completely from those in normal situations and outbreak periods. However, many constraints, especially daily constraints and system-associated constraints, have not been considered in the predictive literature:

*We, civil servants, are not allowed leave our province freely during holiday. For example, if I go to Guangdong, I have to report first, and when I go back to work, I need to have a nucleic acid amplification test and quarantine for 14 days (Informant #039).*

#### 4.2. Constraint negotiation strategies

Constraint negotiation strategies differ in terms of individual attributes, such as perception, motivation, risk aversion, efficiency, social identity and power (Karl et al., 2021; Stodolska et al., 2019). Our field research found that most travellers negotiated the above epidemic-induced constraints synergistically using the cognitive strategies of “trusting the national government” and “acknowledging the ‘new normal’” as well as the behavioural strategies of “risk aversion” and “seeking opportunities for a reopening window”. They used these strategies synergistically to negotiate the epidemic-induced constraints on

travel participation.

#### 4.2.1. Trusting the national government

As Interviewee #002 stated, “Although the epidemic has not completely disappeared, it is controllable. The state allows cross-province travel, indicating no problem, or the government would not allow us travel”. Trusting the national government, as a fundamental cognitive negotiation strategy, helps most travellers negotiate the intrapersonal and interpersonal constraints related to epidemic-related health risks. The Chinese government’s authoritarian control, political culture, and awareness of government performance all contribute to public trust and support during the epidemic (Wu et al., 2021). The national government hence acts as an intermediary for some travellers in terms of their psychological awareness of controlling the epidemic and the legitimacy of postepidemic travel. Trusting the state not only helps in overcoming the intrapersonal travel constraint of perceived risks and pessimistic and sensitive emotions but also serves as a powerful excuse to persuade people with interpersonal constraints to agree or travel together. In addition, supporting the reopening of tourism in response to the national call was frequently reported by the informants and helps to induce legitimacy and heroism to overcome interpersonal constraints. For instance, young Interviewee #014 changed his family’s attitude with the following words:

*The state agrees, and the country’s scenic spots are also open. Zhong Nanshan (one of the most authoritative medical experts) said it’s safe, and Xi Dada (President Xi) went to the Xixi Wetland Park... Why do not you let me travel? This is against the call of our country!*

#### 4.2.2. Acknowledging the “new normal”

During the earlier post-COVID-19 stage, when the epidemic was controlled but still not completely eliminated, epidemic prevention became routine. As daily life gradually recovered in a new epidemic prevention-based way, such as the resumption of work, production, business, and school, the concept of the “new normal” was gradually perceived and accepted by the public. Acknowledgement of this “new normal” is a typical type of cognitive restructuring (Tobin, Holroyd, Reynolds, & Wigal, J. K., 1989) that makes individuals aware that life cannot continue to be suspended but should be resumed on the premise of rational safety. Similar to Maslow’s hierarchy of needs (Maslow, 1943), when people’s basic needs are gradually met during the post-epidemic period, tourism will reappear and become a new demand for many people, especially those who used to travel routinely. By obtaining information through social media and taking the initiative to make psychological adjustments, many travellers have acknowledged this new normal and made it a strategy to negotiate travel constraints at the psychological and cognitive levels. This is a rational approach to the maintenance of a sustainable travel lifestyle rather than focal attention to death:

*Experts said in the news that we are going to live in peace with COVID-19 for a long time. I think this must be a process from inadaptation to adaptation. Rather than tensely waiting to eliminate the virus, let us take life in the new normal as it comes (Informant #018).*

*Some of my friends are infected abroad, and I have learned some experiences from them. In my opinion, domestic travel is now very normal. Risks are everywhere, but everyone on the planet is actually taking risks. Happiness is the most important (Informant #006).*

*During home quarantine, everyone was at home, and I never thought about travelling. However, as the policy allowed, the scenic spots opened up, especially when people on social media began to post their travel photos; I could not sit still. If you think about it, travelling is feasible now. As long as we take good precautions and do not go to the epidemic area, there is no problem (Informant #037).*

#### 4.2.3. Risk aversion

As intrapersonal and interpersonal constraints are overcome by cognitive negotiation strategies and decisions are made, various behavioural strategies are used to address structural travel constraints at the epidemic context and system levels. These strategies feature “risk aversion”, specifically including the space-time compression of the journey, choice priority reconstruction, and social bubbles during the trip. Regarding strategies for negotiating the contextual constraints caused by the epidemic, on the one hand, travellers continue some of their daily habits of epidemic prevention while travelling, including wearing a mask and using alcohol wipes. On the other hand, travellers use other means of mobility, such as self-driving, high-quality hotels, low-risk and low tourist-density destinations, and natural outdoor attractions, to form a social bubble when travelling (Block et al., 2020; Zhou & Guo, 2021), limiting interactions with their companions and social distancing from strangers on the journey. As Informant #030 described, *Huangyao is the farthest distance we can drive by ourselves. If not for the epidemic, we would consider other means of transportation, such as airplanes and high-speed rail, for farther destinations. However, now, we only dare to drive ourselves. We avoid contact with other people as much as possible during the journey.*

However, we found that these strategies that negotiate system constraints provide different insights than those in the literature. The strategy of the space-time compression of the journey negotiates the geographic administrative boundary effects induced by epidemic prevention. Similarly, choice priority reconstruction is not the first option for avoiding viruses but highlights compliance with epidemic prevention rules. As the policies in Guangdong allow travel across provinces while those in Guangxi do not, compared with the corresponding period last year, the travellers in Huangyao include more government employees on leave from Guangxi and more travellers from Guangdong. In addition, two unique comprehensive behavioural negotiation strategies, namely, “silent intimate travel” and “sailing with the wind”, were identified. For instance, some travellers noted that travelling quietly with family or close friends without sharing the experience on social media prevented unnecessary troubles due to interpersonal constraints. “Sailing with the wind” refers to travellers actively using information and communication technology to obtain the latest news regarding the epidemic situation and any changes to rules at their destinations to dynamically adjust their travel routes.

#### 4.2.4. Seeking the opportunity for a reopening window

In contrast to risk aversion, some experienced tourists adopt the travel behaviour of “opportunity seeking”. Similar to adding new chips to a gamble, the cost-effective product originating from industrial recovery and the superb experience of no crowding strengthens the determination of pioneering tourists to engage in risky scenarios. In the field investigations, almost all respondents mentioned the unique experience of the presence of fewer tourists at the destination:

*Hearing that there are few people here (in Huangyao), we rushed here during the weekend. You know, if it were not for the epidemic, there would be huge crowds of tourists here (Informant #037).*

Moreover, when asked about the constraints of social norms, some tourists responded with government propaganda regarding tourism reopening. These tourists regard tourism consumption as contributing to national economic recovery and as a type of patriotism; it is a collective cultural way of repaying the great country for its outstanding performance during the epidemic. The behavioural strategy of “opportunity seeking” is used to negotiate the interpersonal and social structural constraints due to temporal lag. As legitimacy is constructed through personal consumer wisdom or patriotic responsibility, pioneering travellers change post-COVID-19 travel from a risk to an opportunity for these brave and astute forerunners.

## 5. Discussion

Based on the theoretical perspective of constraint-negotiation, we examined travellers' entire travel process in the post-COVID-19 era. This detailed knowledge of the interaction between the epidemic and travellers indirectly tests and interprets earlier predictions of changes in tourist behaviour due to the epidemic. We validated some factors that scholars predicted, such as perceived epidemic risks (e.g., Z. Li et al. (2020), Sigala (2020)), mobility constraints (e.g., Lew et al. (2020), Bao (2020)) and various risk-averse strategies adopted by tourists (e.g. Jin et al. (2021), Miao et al. (2021), Renaud (2020)) that cause them to maintain their travel within a social bubble (Block et al., 2020; Zhou & Guo, 2021). At the same time, from reports of those who were already travelling, we identified some subtle and unpredicted constraints, especially interpersonal constraints and travellers' use of state authoritative institutions and discourses to negotiate such constraints. Some pioneering travellers who are less influenced by collectivist culture even form travel motivations to access market opportunities arising from tourism recovery. These findings show that travellers' negotiation of postepidemic travel constraints depends not only on individual preferences and self-efficacy but also on the development of societal changes in response to epidemic dynamics and new cultural perceptions. Consequently, we argue that the constraints caused by the epidemic and the negotiation strategies used by tourists cannot be understood only through the lens of public health risks. The transformation of deeper social structural contexts (Bianchi, 2022) and cultural ideologies (Wen, Kozak, et al., 2020) following the epidemic should also be considered to gain a deeper understanding of the changing behaviour of post-COVID-19 travellers. This echoes the emphasis of Diane M. Samdahl and Jekubovich (1997) on the embeddedness of constraints in the social and political environment in which people operate.

Statistically, 50% of the information from the interviews points to constraints and 60% involves negotiations and changes to the social and political environment, suggesting that the social construction of the epidemic has a stronger impact on travel than sanitary and epidemiological factors, in line with Miao et al. (2021) and Zhou and Guo (2021). In China, people's perceptions of this unprecedented epidemic are mainly derived from official information from the government and authoritative experts, and effective epidemic prevention is oriented according to the "Joint Prevention and Control Mechanism" policy (T. Xu & Yang, 2020). The transmission mechanism of the "country-community/family-market" has influenced epidemic-induced constraints and negotiations at the societal level. More specifically, as individuals obtain information regarding postepidemic travel, three synergistic subjects influence travel through both respective means and the cumulative cascade effect. Through these three intermediary agents, the epidemic restricted travel at the societal level, and travellers established negotiation strategies by interacting with these agents. In addition, constraints and negotiations at each level are ongoing, interrelated, and synergistic, as claimed by Ingrid (2016) and Karl et al. (2021). Authoritarian control and remarkable prevention performance have allowed the Chinese state to play the role of a social intermediary (Wu et al., 2021). In particular, the strict national one-month home quarantine policy during the epidemic changed individual ideology and daily behaviour, leading to a temporary epidemic society involving anticontagion, social distancing, collectivism and societal responsibility. The role of tourism was confirmed by the constraint of social structural inertia during recovery in our research and mindful tourism behaviours as a part of the lifestyle change predicted by scholars (e.g., Lew et al. (2020); Miao et al. (2021)).

The corresponding initiatives of both community/family and the market have contributed to difference between emerging travel constraints or negotiations and previous predictions. The community and the family have an impact due to the interaction between the collective culture and heterogeneous individual cognitions. Consistent with Gao and Kerstetter (2016), Mei and Lantai (2018), and Wang et al. (2018), the strong collective culture in China contributed to awareness of the

epidemic and social norms of individual behaviour, forming interpersonal travel constraints. At the market level, joint prevention and control required the halting of tourism for epidemic prevention and indirectly influenced market demand and industrial chain linkages. This suspended travel supply resulted in structural travel constraints for facilities and market supply shortages.

The respondents repeatedly mentioned that the perceived dynamics of the transition highlighted the temporal dynamics of the post-COVID-19 tourism system, verifying the findings of Bausch et al. (2020). The postepidemic period involved a turning point at which various fluctuations occurred (Li & Zhang, 2021; Li et al., 2020) that are reflected not only in the transition from absolute quiescence (pause) to the beginning of flow (operation) but also in the small-scale emerging outbreaks during the overall recovery, including uncontrolled outbreaks abroad and virus mutation. Upon experiencing this dynamic external environment, individuals gradually made psychological adjustments and carried out self-reinforcement or lazy optimism, both further influencing the travel process. The transition dynamic has led travellers to acknowledge the new normal, including travel strategies that reconsider the previous view that travel was a form of misconduct. According to emotion-motivation models (Bradley & Lang, 2007), situations that are associated with positive emotions motivate approach behaviour. Transition dynamics stimulate travellers' attitudes and sense of power towards postepidemic travel as individual social cognition and interpretation differed between the two stages.

As Krings, Steeden, Abrams, and Hogg (2021) noted, group processes and intergroup relations are central to the ways that individuals have managed the challenges of the epidemic. The same is true for post-COVID-19 travel. Sociality and temporality shaped the epidemic society of adaptation and progress (Bausch et al., 2020), including improving crisis management capabilities with virus testing and vaccine development (Collins, 2021) and reconstructing collective social psychology (Krings et al., 2021). With regard to the abovementioned interpersonal constraints, group agency due to individual time deviation causes contradictory understandings of national policies. Transition dynamics drive the epidemic at the societal level to change from collective insecurity to the psychological reality of collective sharing, further weakening and eliminating the interpersonal constraints on travel induced by the epidemic. In addition, the market gradually reopened through the mutual strengthening of the supply and demand sides, reducing structural travel constraints and promoting travellers' psychological adjustment to travel during the postepidemic period with increasingly effective information regarding market recovery. This balanced ordering of post-COVID-19 society acts as a collective choice process for an "anti-epidemic and daily life" balance towards recovery on a macroscopic scale (Mei, 2020).

In summary, there is a coordinated relationship between the epidemic, society, and the individual in a timeline embedded in the mechanism of travel constraints and negotiations, echoing the statements by Bao (2020) and Bausch et al. (2020) that incorrect predictions of so-called retaliatory growth were made due to ignorance of the time characteristics of the postepidemic stage. Samdahl (2005) proposed the concept of navigation, which refers to the responsibility to avoid constraints and to accommodate and adapt to the existing conditions. Travelling is not a linear equation of perceived risks but a complex function with an interaction between individual attributes and various epidemic-related social and temporal parameters.

### 5.1. Theoretical contributions

Although this study partially addresses the gaps pertaining to the constraints and negotiations of post-COVID-19 travel, listing specific elements is not the core intention because of the moderating effects of sociality and temporality and the uniqueness of epidemic progress in China (Xu & Yang, 2020). Our aim is to provide a valid theoretical perspective to understand the relationship between the epidemic and



travel that contributes to knowledge of tourist behaviour in relation to tourism risk/crisis factors. First, based on the investigation of the travel process in the new normal (Aebli et al., 2021; Berbekova, Uysal, & Assaf, 2021), this qualitative research provides detailed knowledge of actual post-COVID-19 travel behaviour and verifies and interprets some earlier predictions. Second, in addition to the emerging public health event context, this research contributes to the relative dearth of tourist risk/crisis studies that extend the theoretical framework of travel constraint negotiation to analyse the external processual impact on travel behaviour (Karl et al., 2021) and verify its effectiveness. Finally, in the context of tourism risks, this study responds to and examines the reconceptualized constraint framework by Ingrid, 2016 that is less committed to activity participation and more responsive to the social context.

## 5.2. Management implications

These empirical research findings provide knowledge and guidance for the reopening of the tourism industry during the post-COVID-19 period. First, the specific findings of induced travel restrictions and negotiation can be directly applied to guide the creation of policy for tourism reopening. For instance, the unexpected restrictions created by intersections of various epidemic prevention department actions and increased constraints due to societal concerns are a far greater hindrance than travellers' fear of the virus. Therefore, in addition to encouraging tourism recovery, high-level governments need to extend initiatives to encourage tourism recovery by officially clarifying the relationship between epidemic prevention and tourism reopening and coordinating different geographical areas and administrative sectors.

Second, the findings indicate that psychological factors related to tourists, including insecurity about the epidemic and travel perceptions, are critical for travel restrictions and negotiations. The link of "country-community/family-market" suggests that DMOs should identify more intersections among these levels and cooperate with authoritative experts to obtain a clear understanding of post-COVID-19 travel. Integrating restorative travel into the socially balanced ordering of the new normal will enhance potential travellers' ability to overcome personal and interpersonal constraints through perceived travel safety and legitimacy.

Third, clear and transparent information, especially information regarding the officially confirmed consequences of emergencies, is of great significance for travellers to build trust in the destination (Shin et al., 2022). DMOs should analyse the various epidemic-induced uncertainties that tourists face and assist in eliminating them by recommending behavioural measures related to public health, society and travel for post-COVID-19 travellers.

Finally, as one of the earliest countries to effectively control the epidemic while continuing to impose strict anti-epidemic policies, China's market experience may have some reference value for travel recovery. However, the social construction of the epidemic has caused the situation in China to be very different from the situation in many neoliberalist countries pursuing "herd immunity" (Fong, Law, & Ye, 2020; Xu, Ding, & Packer, 2008). Therefore, it is necessary to critically adopt the findings and conclusions in this research by rethinking previous local anti-epidemic experiences, social culture, public trust in the government, and the role of decentralization.

## 6. Limitations and future research

Despite its contributions, this explorative study has several limitations. Regarding the study sample, limited data were collected from travellers on journeys to their destinations. Although this approach was appropriate for this qualitative research on the internal aspects and explanations of the emerging phenomenon, the results cannot be directly generalized to the larger population of Chinese tourists or foreign tourists. In the future, given the heterogeneity based on social groups (Krings et al., 2021), more effort should be invested in

diversifying the group sample to further substantiate and explore the mediation of the sociocultural context on crisis-induced travel behaviour change. Regarding the research model, there are certain inspirations from the situational model explaining the impact of the epidemic on travel constraint negotiation. In the future, leisure/travel constraint scholars can deepen and extend this theory by integrating internal and external mechanisms in the context of external environmental changes (Ingrid, 2016).

## Funding

This work was supported by National Science Foundation of China (41920104002).

## Declaration of Competing Interest

The author reports no financial or commercial conflicts of interest.

## Acknowledgement

The authors thank Associate Prof. Zhuowei (Joy) Huang and Assistant Prof. Zeya He for their helpful comments on the revision. The authors are grateful for the comments of anonymous reviewers and the editor who appreciably improved the article.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.annale.2022.100065>.

## References

- Aebli, A., Volgger, M., & Taplin, R. (2021). A two-dimensional approach to travel motivation in the context of the COVID-19 pandemic. *Current Issues in Tourism*, 1–16. <https://doi.org/10.1080/13683500.2021.1906631>
- Ahmad, A., Jamaludin, A., Zuraimi, N. S. M., & Valeri, M. (2020). Visit intention and destination image in post-covid-19 crisis recovery. *Current Issues in Tourism*. <https://doi.org/10.1080/13683500.2020.1842342>
- Anderson, S. (2020). COVID-19 and leisure in the United States. *World Leisure Journal*, 62(4), 352–356. <https://doi.org/10.1080/16078055.2020.1825259>
- Bae, S. Y., & Chang, P. J. (2020). The effect of coronavirus disease-19 (COVID-19) risk perception on behavioural intention towards 'untact' tourism in South Korea during the first wave of the pandemic (March 2020). *Current Issues in Tourism*. <https://doi.org/10.1080/13683500.2020.1798895>
- Bao, J. (2020). The impact of COVID-19—How will tourism situation in China at the post-pandemic stage? *Journal of Global Change Data & Discovery*, 4(1), 11–15. <https://doi.org/10.3974/geodp.2020.01.02>
- Bausch, T., Gartner, W. C., & Ortanderl, F. (2020). How to avoid a COVID-19 research paper tsunami? A tourism system approach. *Journal of Travel Research*, 60(3), 467–485. <https://doi.org/10.1177/0047287520972805>
- Berbekova, A., Uysal, M., & Assaf, A. G. (2021). A thematic analysis of crisis management in tourism: A theoretical perspective. *Tourism Management*, 86. <https://doi.org/10.1016/j.tourman.2021.104342>
- Bianchi, R. V. (2022). Tourism, COVID-19 and crisis: The case for a radical turn. In F. Higgins-Desbiolles, A. Doering, & B. Chew Bigby (Eds.), *Socialising tourism: Rethinking tourism for social and ecological justice* (pp. 93–108). Routledge.
- Block, P., Hoffman, M., Raabe, I. J., Dowd, J. B., Rahal, C., Kashyap, R., & Mills, M. C. (2020). Social network-based distancing strategies to flatten the COVID-19 curve in a post-lockdown world. *Nature Human Behaviour*, 4(6), 588–596. <https://doi.org/10.1038/s41562-020-0898-6>
- Bradley, M. M., & Lang, P. J. (2007). Emotion and motivation. In J. T. Cacioppo, L. G. Tassinari, & G. Berntson (Eds.), *Handbook of psychophysiology* (pp. 581–607). Cambridge: Cambridge University Press.
- Charmaz, K. (2014). *Constructing grounded theory*. Sage.
- Chick, G., & Dong, E. (2005). Cultural constraints on leisure. In E. L. Jackson (Ed.), *Constraints to leisure* (pp. 169–183). State College, PA: Venture.
- Clarke, A. E. (2005). *Situational analysis: Grounded theory after the postmodern turn*. Thousand Oaks, CA: Sage.
- Collins, F. S. (2021). COVID-19 lessons for research. *Science*, 371(6534), 1081. <https://doi.org/10.1126/science.abh3996>
- Crawford, D. W., Jackson, E. L., & Godbey, G. (1991). A hierarchical model of leisure constraints. *Leisure, Sciences*(13), 309–320.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage.
- Davies, A., & Prentice, R. (1995). Conceptualizing the latent visitor to heritage attractions. *Tourism Management*, 16(7), 491–500.

- Enger, W., Saxon, S., Suo, P., & Yu, J. (2020a). *China's travel recovery gains steam: How families are planning their summer vacations*. Retrieved from.
- Enger, W., Saxon, S., Suo, P., & Yu, J. (2020b). *The way back: What the world can learn from China's travel restart after COVID-19*. Retrieved from.
- Fedeli, G., Nguyen, T. H. H., Williams, N., Chiappa, G. D., & Wassler, P. (2022). Travel desire over intention in pandemic times. *Annals of Tourism Research Empirical Insights*, 3(2). <https://doi.org/10.1016/j.annale.2022.100051>
- Fong, L. H. N., Law, R., & Ye, B. H. (2020). Outlook of tourism recovery amid an epidemic: Importance of outbreak control by the government. *Annals of Tourism Research*, 102951. <https://doi.org/10.1016/j.annals.2020.102951>
- Galvani, A., Lew, A. A., & Perez, M. S. (2020). COVID-19 is expanding global consciousness and the sustainability of travel and tourism. *Tourism Geographies*, 22(3), 567–576. <https://doi.org/10.1080/14616688.2020.1760924>
- Gao, J., & Kerstetter, D. L. (2016). Using an intersectionality perspective to uncover older Chinese female's perceived travel constraints and negotiation strategies. *Tourism Management*, 57, 128–138. <https://doi.org/10.1016/j.tourman.2016.06.001>
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105–117). Thousand Oaks, CA: Sage.
- Gursory, D., & Chi, C. G. (2020). Effects of COVID-19 pandemic on hospitality industry: Review of the current situations and a research agenda. *Journal of Hospitality Marketing & Management*, 29(5), 527–529. <https://doi.org/10.1080/19368623.2020.1788231>
- Hägerstrand, T. (1970). What about people in regional science? *Regional Science*, 24(1). <https://doi.org/10.1111/j.1435-5597.1970.tb01464.x>
- Hall, C. M., Scott, D., & Gössling, S. (2020). Pandemics, transformations and tourism: Be careful what you wish for. *Tourism Geographies*, 22(3), 577–598. <https://doi.org/10.1080/14616688.2020.1759131>
- Havitz, M., Pritchard, M. P., & Dimanche, F. (2020). Leisure matters: Cross continent conversations in a time of crisis. *Leisure Sciences*, 1–7. <https://doi.org/10.1080/01490400.2020.1774451>
- Haywood, K. M. (2020). A post COVID-19 future - tourism re-imagined and re-enabled. *Tourism Geographies*, 22(3), 599–609. <https://doi.org/10.1080/14616688.2020.1762120>
- He, L., Li, X., Harrill, R., & Cardon, P. W. (2013). Examining Japanese tourists' US-bound travel constraints. *Current Issues in Tourism*, 17(8), 705–722. <https://doi.org/10.1080/13683500.2012.749842>
- Hinch, T. D., & Jackson, E. L. (2010). Leisure constraints research: Its value as a framework for understanding tourism seasonality. *Current Issues in Tourism*, 3(2), 87–106. <https://doi.org/10.1080/1368350008667868>
- Horton, R. (2020). Offline: COVID-19 is not a pandemic. *The Lancet*, 396(10255). [https://doi.org/10.1016/S0140-6736\(20\)32000-6](https://doi.org/10.1016/S0140-6736(20)32000-6)
- Hubbard, J., & Mannell, R. C. (2001). Testing competing models of the leisure constraint negotiation process in a corporate employee recreation setting. *Leisure Sciences*, 23(3), 145–163.
- Huberman, A. M., & Miles, M. B. (1994). Data management and analysis methods. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 428–444). Thousand Oaks, CA: Sage Publications.
- Hudson, S. (2000). The segmentation of potential tourists: Constraint differences between men and women. *Journal of Travel Research*, 38(4), 363–368.
- Hung, K., & Petrick, J. F. (2012). Testing the effects of congruity, travel constraints, and self-efficacy on travel intentions: An alternative decision-making model. *Tourism Management*, 33(4), 855–867. <https://doi.org/10.1016/j.tourman.2011.09.007>
- Iaquinto, B. L. (2020). Tourist as vector: Viral mobilities of COVID-19. *Dialogues in Human Geography*, 10(2), 174–177. <https://doi.org/10.1177/2043820620934250>
- Ingrid, E. Schneider (2016). Leisure constraints and negotiation: Highlights from the journey past, present and future. In I. G. J., D. S. Walker, & M. Stodolska (Eds.) (Ed.), *Leisure matters: The state and future of leisure studies* (pp. 151–161). Urbana, IL: Sagamore-Venture.
- Jeng, James, & Fesenmaier, Daniel R. (2002). Conceptualizing the Travel Decision-Making Hierarchy: A Review of Recent Developments. *Tourism Analysis*.
- Jin, X., Bao, J., & Tang, C. (2021). Profiling and evaluating Chinese consumers regarding post-COVID-19 travel. *Current Issues in Tourism*, 1–19. <https://doi.org/10.1080/13683500.2021.1874313>
- Karl, M., Sie, L., & Ritchie, B. W. (2021). Expanding travel constraint negotiation theory: An exploration of cognitive and behavioral constraint negotiation relationships. *Journal of Travel Research*. <https://doi.org/10.1177/00472875211011547>
- Kim, E. J., & Pomirleanu, N. (2021). Effective redesign strategies for tourism management in a crisis context: A theory-in-use approach. *Tourism Management*, 87. <https://doi.org/10.1016/j.tourman.2021.104359>
- Kim, J. S., & Park, S.-H. (2016). A study of the negotiation factors for Korean tourists visiting Japan since the Fukushima nuclear accident using Q-methodology. *Journal of Travel & Tourism Marketing*, 33(5), 770–782. <https://doi.org/10.1080/10548408.2016.1167395>
- Kock, F., Norfelt, 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. <https://doi.org/10.1016/j.annals.2020.103053>
- Krings, V. C., Steeden, B., Abrams, D., & Hogg, M. A. (2021). Social attitudes and behavior in the COVID-19 pandemic: Evidence and prospects from research on group processes and intergroup relations. *Group Processes & Intergroup Relations*, 24(2), 195–200. <https://doi.org/10.1177/1368430220986673>
- Lai, C., Li, X., & Harrill, R. (2013). Chinese outbound tourists' perceived constraints to visiting the United States. *Tourism Management*, 37, 136–146. <https://doi.org/10.1016/j.tourman.2013.01.014>
- 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. <https://doi.org/10.1080/14616688.2020.1770326>
- Li, B., & Zhang, W. (2021). Constructing a tourism "operation during the epidemic" model that is compatible with normalized epidemic prevention and control. *Tourism Tribune*, 36(2), 8–10.
- Li, Z., Zhang, S., Liu, X., Kozak, M., & Wen, J. (2020). Seeing the invisible hand: Underlying effects of COVID-19 on tourists' behavioral patterns. *Journal of Destination Marketing & Management*, 18. <https://doi.org/10.1016/j.jdmm.2020.100502>
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396.
- Matiza, T. (2020). Post-COVID-19 crisis travel behaviour: Towards mitigating the effects of perceived risk. *Journal of Tourism Futures*. <https://doi.org/10.1108/JTF-04-2020-0063>
- Mei, C. (2020). Policy style, consistency and the effectiveness of the policy mix in China's fight against COVID-19. *Policy and Society*, 39(3), 309–325. <https://doi.org/10.1080/14494035.2020.1787627>
- Mei, X. Y., & Lantai, T. (2018). Understanding travel constraints: An exploratory study of Mainland Chinese International Students (MCIS) in Norway. *Tourism Management Perspectives*, 28, 1–9. <https://doi.org/10.1016/j.tmp.2018.07.003>
- Miao, L., Im, J., Fu, X., Kim, H., & Zhang, Y. E. (2021). Proximal and distal post-COVID travel behavior. *Annals of Tourism Research*, 88. <https://doi.org/10.1016/j.annals.2021.103159>
- Miao, L., Im, J., So, K. K. F., & Cao, Y. (2022). Post-pandemic and post-traumatic tourism behavior. *Annals of Tourism Research*, 95. <https://doi.org/10.1016/j.annals.2022.103410>
- Nyaupane, G. P., & Andereck, K. L. (2007). Understanding travel constraints: Application and extension of a leisure constraints model. *Journal of Travel Research*, 46(4), 433–439. <https://doi.org/10.1177/0047287507308325>
- Pololikashvili, Z. (2020). Restarting tourism. Retrieved from <https://www.unwto.org/news/restarting-tourism>.
- Randler, C., Tryjanowski, P., Jokimaki, J., Kaisanlahti-Jokimaki, M. L., & Staller, N. (2020). SARS-CoV2 (COVID-19) pandemic lockdown influences nature-based recreational activity: The case of birders. *International Journal of Environmental Research and Public Health*, 17(19). <https://doi.org/10.3390/ijerph17197310>
- Renaud, L. (2020). Reconsidering global mobility – Distancing from mass cruise tourism in the aftermath of COVID-19. *Tourism Geographies*, 22(3), 679–689. <https://doi.org/10.1080/14616688.2020.1762116>
- Samdahl, D. M. (2005). Making room for "silly" debate: Critical reflections on leisure constraints research. In E. L. Jackson (Ed.), *Constraints to leisure* (pp. 337–349). State College, PA: Venture Publishing.
- Samdahl, D. M., & Jekubovich, N. J. (1997). A critique of leisure constraints: Comparative analyses and understandings. *Journal of Leisure Research*, 29(4), 430–452. <https://doi.org/10.1080/00222216.1997.11949807>
- Shin, H., Nicolau, J. L., Kang, J., Sharma, A., & Lee, H. (2022). Travel decision determinants during and after COVID-19: The role of tourist trust, travel constraints, and attitudinal factors. *Tourism Management*, 88, 104428. <https://doi.org/10.1016/j.tourman.2021.104428>
- Sigala, M. (2020). Tourism and COVID-19: Impacts and implications for advancing and resetting industry and research. *Journal of Business Research*, 117, 312–321. <https://doi.org/10.1016/j.jbusres.2020.06.015>
- Sivan, A. (2020). Reflection on leisure during COVID-19. *World Leisure Journal*, 62(4), 296–299. <https://doi.org/10.1080/16078055.2020.1825260>
- Stodolska, M., Shiney, K. J., & Camarillo, L. N. (2019). Constraints on recreation among people of color: Toward a new constraints model. *Leisure Sciences*, 42(5–6), 533–551. <https://doi.org/10.1080/01490400.2018.1519473>
- Tobin, D. L., Holroyd, K. A., Reynolds, R. V., & Wigal, J. K. (1989). The hierarchical factor structure of the coping strategies inventory. *Cognitive Therapy and Research*, 13(4), 43–61.
- UNWTO. (2020). *How are countries supporting tourism recovery?* (9789284421893). Retrieved from <https://www.unwto.org/publications/how-are-countries-supporting-tourism-recovery>
- Veblen, T. (1965). *The theory of the leisure class* (revised). A. M. Kelley.
- Vogler, R. (2021). Revenge and catch-up travel or degrowth? Debating tourism post COVID-19. *Annals of Tourism Research*. <https://doi.org/10.1016/j.annals.2021.103272>
- Wade, M. G., & Hoover, J. H. (1985). Mental retardation as a constraint on leisure. In M. G. Wade (Ed.), *Constraints on leisure* (pp. 83–110). Charles C. Thomas.
- Walker, G. J., Jackson, E. L., & Deng, J. (2017). Culture and leisure constraints: A comparison of Canadian and mainland Chinese university students. *Journal of Leisure Research*, 39(4), 567–590. <https://doi.org/10.1080/00222216.2007.11950123>
- Wang, F., Deng, Z., & Petrick, J. F. (2018). Exploring the formation mechanisms of urban residents' travel behaviour in China: Perceptions of travel benefits and travel constraints. *Journal of Travel & Tourism Marketing*, 35(7), 909–921. <https://doi.org/10.1080/10548408.2018.1445575>
- Wang, J., & Stringer, L. A. (2011). The impact of taoism on Chinese leisure. *World Leisure Journal*, 42(3), 33–41. <https://doi.org/10.1080/04419057.2000.9674194>
- Wen, J., Huang, S., & Goh, E. (2020). Effects of perceived constraints and negotiation on learned helplessness: A study of Chinese senior outbound tourists. *Tourism Management*, 78. <https://doi.org/10.1016/j.tourman.2019.104059>
- Wen, J., Kozak, M., Yang, S., & Liu, F. (2020). COVID-19: Potential effects on Chinese citizens' lifestyle and travel. *Tourism Review*. <https://doi.org/10.1108/TR-03-2020-0110>
- WHO. (2020). WHO Director-General's opening remarks at the media briefing on COVID-19 - 29 June 2020. Retrieved from <https://www.who.int/director-general/s>

- [peeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19—29-june-2020](https://www.who.int/press-detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19-29-june-2020).
- Wu, C., Cao, C., Liu, W., & Chen, J. L. (2022). Impact of domestic tourism on economy under COVID-19: The perspective of tourism satellite accounts. *Annals of Tourism Research Empirical Insights*, 3(2). <https://doi.org/10.1016/j.annale.2022.100055>
- Wu, C., Shi, Z., Wilkes, R., Wu, J., Gong, Z., He, N., ... Giordano, G. N. (2021). Chinese citizen satisfaction with government performance during COVID 19. *Journal of Contemporary China*. <https://doi.org/10.1080/10670564.2021.1893558>
- Xie, L., & Ritchie, B. W. (2018). The motivation, constraint, behavior relationship: A holistic approach for understanding international student leisure travelers. *Journal of Vacation Marketing*, 25(1), 111–129. <https://doi.org/10.1177/1356766717750421>
- Xu, H., Ding, P., & Packer, J. (2008). Tourism research in China: Understanding the unique cultural contexts and complexities. *Current Issues in Tourism*, 11(6), 473–491. <https://doi.org/10.1080/13683500802475737>
- Xu, T., & Yang, R. (2020). COVID-19 epidemic and public health measures in China. *Journal of Epidemiology and Global Health*, 10(2), 118–123. <https://doi.org/10.2991/jegh.k.200421.001>
- Zheng, D., Luo, Q., & Ritchie, B. W. (2020). Afraid to travel after COVID-19? Self-protection, coping and resilience against pandemic “travel fear”. *Tourism Management*. <https://doi.org/10.1016/j.tourman.2020.104261>
- Zhou, M., & Guo, W. (2021). Social factors and worry associated with COVID-19: Evidence from a large survey in China. *Social Science & Medicine*, 277. <https://doi.org/10.1016/j.socscimed.2021.113934>
- Zopiatis, A., Pericleous, K., & Theofanous, Y. (2021). COVID-19 and hospitality and tourism research: An integrative review. *Journal of Hospitality and Tourism Management*, 48, 275–279. <https://doi.org/10.1016/j.jhtm.2021.07.002>