

The Impact of COVID-19 Pandemic on the Psychological Needs of Tourists: Implications for the Travel and Tourism Industry

Abstract

This study aims to explore the psychological needs and satisfaction of Chinese, Japanese and Korean tourists across three phases (i.e., before, during and perceived aftermath) of the COVID-19 pandemic. It fulfilled the theoretical extension of the *Existence, Relatedness and Growth* (ERG) theory to identify the basic psychological needs of the tourists in a pandemic situation. In-depth interviews findings confirmed ERG processes of *Satisfaction-progression*, *Frustration-regression* and *Simple-Frustration*. Nevertheless, the predominant psychological needs of tourists was different in each phase. The study contributes to a better understanding of post pandemic needs of the tourists and is useful in redesigning travel experiences.

Keywords: Psychological needs, ERG theory, COVID-19 pandemic, Tourism marketing strategies, Satisfaction progression, Frustration regression, Simple frustration, Tourism recovery, Tourists in Asia

Introduction

The COVID-19 pandemic has had a global dramatic spread, threatening the lives and livelihoods of communities and businesses worldwide. The pandemic has become one of the most challenging tests faced by humanity in modern history (WEF, 2020). The impact of the pandemic to global economy, health, social and livelihood are devastating. The International Monetary Fund views the global economy in its severest downturn since the Great Depression; Oxfam International has alerted that half a billion people could live in extreme poverty as a result (WEF, 2020). From the impact on the global economy to daily lives, COVID-19 is affecting human behavior enormously, such as how people travel, consume, learn, work, socialize and communicate (Huen, 2020). The COVID-19 pandemic has alarming implications for the well-being of individuals, as well as the social and economic functions of the society. Asia and the Pacific is the second most visited region in the world after Europe and has seen the fastest growth in recent years. Almost half of Asia's international tourist arrivals in 2018 were recorded in North-East Asia (49%), while 37% were recorded in South-East Asia, 9% in South Asia and 5% in Oceania (UNWTO, 2019). There is an urgent need for governments, private sectors, and researchers in the Asia and Pacific region to find solutions to help society recover from the pandemic.

According to the UNWTO's Report on COVID-19 Related Travel Restrictions, as of 11 May 2020, all worldwide destinations (100%) are implementing different types of travel restrictions such as imposing quarantines, entry bans and travel restrictions in response to the pandemic. Tourism and hospitality is among the most disrupted business sectors with airplanes on the ground, hotels closed and travel restrictions put in place in almost all countries around the world. Key questions arise from the tourism and hospitality sector are: How long will it take for consumers to reassume travel? How will travel behavior change? The key considerations for businesses are how to reconnect with consumers and to regain their confidence (UNWTO, 2020).

The society and cultural environment in which consumers belong to may shape the way they think, feel and behave in a crisis such as COVID-19. In the tourism and hospitality context, cross-cultural differences have been scrutinized to understand tourist motivation and satisfaction (e.g. Soldatenko and Backer, 2019), travel constraints (e.g. Hudson, Walker, Simpson and Hinch, 2013), travel behavior and travel intention (e.g. Lee and Lee, 2009). No studies have explored the basic psychological needs of tourists in a pandemic situation, in particular for tourists from Asia.

Using *Existence, Relatedness and Growth* (ERG) theory, this study aims at answering research questions such as: To what extent will the basic psychological needs of travelers from the three major Asian countries be different or similar across three phases (i.e., before, during and perceived aftermath) of COVID-19? What are considered the important and satisfying psychological needs of the travelers? What will be the perception of travelers on the changes of travel behavior before and after the pandemic?

ERG theory is widely used in the study of organizational behavior. Few studies in the tourism and hospitality literature have utilized this theory and in particular, within the context of a crisis situation. To the authors' knowledge, this is the first study to address this research gap in the literature between ERG theory and the crisis of travel and tourism. In this study, the authors aim to use ERG theory as a framework to provide a feasible explanation of the dynamics of tourists' psychological needs. The application to cross-cultural tourists within Asia on the effectiveness of basic psychological needs' fulfillment provides a new context, a novel and proper framework for interpreting tourists' needs, desires and satisfaction. This information will be useful for the tourism and hospitality industry to design service standards that can meet their guests' needs. Furthermore, no study in the past has investigated in a single study whether tourists' psychological needs are being met and the kind of desires they have in a special home isolation and city lockdown situation. The understanding of the psychological desire of tourists in home isolation when travel restrictions are imposed is important since predictions can be made on the demand of the tourists when the tourism and hospitality industry rebound after the pandemic.

Theoretical Background

Alderfer (1969) developed the ERG theory by using the method of categorizing Maslow's classic Hierarchy of Needs into three major categories and renamed them as *Existence, Relatedness* and *Growth* of human basic psychological needs. *Existence* needs category was translated from Maslow's lower order needs (Physiological and Safety). *Existence* refers to the desires for various forms of safety, physiological and material needs. Safety needs are for prevention of fear, anxiety, threat, danger, worry, pressure and so on. Physiological needs are essential for an individual's

survival for instance relaxation, exercise, rest and sleep. Material needs are for food and clothing (Ko, Rhee, Walker and Lee, 2014).

Relatedness needs category was translated from Maslow's higher order needs (Interpersonal Love and Esteem). *Relatedness* needs are desires to establish and maintain positive interpersonal relationships. It includes sense of security, belonging and respect. They can be realized by maintaining mutual trust in a group, being acknowledged and belonging to a group, prevention from isolation, loneliness and distance, giving sense of value to others. For instance, it includes love, popularity, social status, dominance, importance and compliment (Ko, Rhee, Walker and Lee, 2014).

Growth needs category was translated from Maslow's highest order needs (Self-Esteem and Self Actualization). *Growth* needs are desires to be creative and have opportunities for personal development. Self-esteem encompasses self-evaluation of worthiness and self-emotional states such as knowledge seeking, building confidence, becoming independent and feeling proud and in control. Self-actualization refers to self-achievements of goals, developing individual character and spirit, recognizing one's potential and ability to support growth (Ko *et.al*, 2014). In contrast to Maslow's Hierarchy of Needs, ERG theory affirms that different kinds of needs may function simultaneously and eliminates a specified order determining the activation of the needs (Alderfer, 1980).

This study considers the following major propositions (P1 to P7) and a new proposition (*P8) in ERG theory as described and shown in the following figure 1:

- (P1): The less existence needs are satisfied, the more they will be desired.
- (P2): The less relatedness needs are satisfied, the more existence needs will be desired.
- (P3): The more existence needs are satisfied, the more relatedness needs will be desired.
- (P4): The less relatedness are satisfied, the more they will be desired.
- (P5): The less growth needs are satisfied, the more relatedness needs will be desired.
- (P6): The more relatedness needs are satisfied, the more growth needs will be desired.
- (P7): The more growth needs are satisfied, the more they will be desired.
- * (P8): The less growth needs are satisfied, the more growth needs will be desired.

[Please insert Figure 1 here]

As per P3, P6, and P7 in Figure 1, when each *Existence*, *Relatedness* and *Growth* needs are satisfied individually, there is a desire for more on the respective ERG needs. Satisfaction-progression are shown in P3, P6 and P7. For P3, when an individual is satisfied with the *Existence* needs, he/she will ‘progress’ or look for *Relatedness* needs. P6 shows similar Satisfaction-progression route, when there is *Relatedness* Satisfaction, he/she will progress for *Growth* needs. The final Satisfaction-progression is P7, which shows that the *Growth* Satisfaction progress to higher level *Growth* needs. P2 and P5 are unique aspects of ERG theory, they are the Frustration-regression phases which can be explained in situations when there is an obstacle that prevents an individual from obtaining higher level need, he/she may ‘regress’ to a lower level need to achieve satisfaction (Alderfer, 1980). P2 shows when a person’s *Relatedness* needs cannot be met then this person may have the desire for *Existence* needs. P5 shows *Growth* Frustration ‘regressing’ to a lower level need of *Relatedness*. From the ERG model, P1 and P4 are simple Frustration needs, when *Existence* and *Relatedness* are not met, an individual will have stronger desire for that particular needs.

The direction of P8, when there is frustration of *Growth* needs, more will be desired, which is not proposed in this original model. Compared to Maslow’s hierarchy of needs, Alderfer’s theory has received greater empirical support since majority of the human needs are mostly found to be clustering around ERG. In addition, the two processes of Satisfaction-progression and Frustration-regression could explain the complexity of human emotions and motivation. For example, a person may want *Existence*-related objects when their *Relatedness* needs are not satisfied (an example of Frustration-regression, P2). Similarly, a person may want relationships with significant others when *Existence* needs are met (an example of Satisfaction-progression, P3).

In the leisure and tourism literature, ERG theory has been used as a companion for Maslow’s Hierarchy of Needs in a study of young domestic tourists in Malaysia, where *Existence*, *Relatedness* and *Growth* were redefined as *Relaxation*, *Social Relationship*, *Widening Knowledge and Self Actualisation*, respectively (Ying & Krishnapillai, 2018). In Hiscocks’ (2016) study on the impact of event and experience design on the success of Walt Disney World, ERG theory was applied whereby *Existence* needs were met by food and drinks; *Relatedness* were met through

interactions with other tourists; and *Growth* needs were met through self fulfilment. ERG was also used in combination with the socio-psychological theory of tourists to investigate the motivations that generated the decisions of Thai working holiday makers (Wattanacharoensil & Talawanchi, 2018). Additionally, ERG theory was adopted in a study of the satisfaction of voluntourists by Boluk, Kline and Stroobach (2017). Nevertheless, previous literature using ERG theory in leisure and tourism context is very limited in scope. The ERG propositions in the present study provide an appropriate framework to focus on the changes of essential psychological needs of tourists. The present study represents an important contribution to psychological theory by extending ERG theory; in particular, to highlight the propositions established in the original theory across the three phases of before, during and aftermath of the pandemic crisis.

Methods

The purpose of this study is to explore the psychological needs of tourists from mainland China, Japan and South Korea, including their inner feelings and emotions as well as insights and thoughts across three phases (i.e., before, during and perceived aftermath) of the COVID-19 pandemic. Qualitative research was employed to elicit substantive information in a relatively short period of time (Berg, 2008). The researchers based in South Korea, Japan, Hong Kong and Macau virtually met initially to discuss the semi-structured interview questions used for this study. The researchers were responsible for translating the questions into their native languages – Japanese, Korean and Chinese. Three versions of the questions were pilot tested for the appropriateness of the wordings used in the respective language. The researchers effectively considered themselves as “research catalysts” as their cultural understandings to the respondents’ responses enabled them to learn what probing questions to ask and how to ask them in their own respective native languages. The in-depth, semi-structured interviews allowed the researchers to gain greater insights and stimulate respondents to articulate their own experiences truthfully.

Tourists from mainland China, Japan and South Korea, at middle age and traveled frequently, were selected to fit into the study phenomenon by means of purposive sampling technique. Hence, the interviewers set out to identify interviewees who can provide the information by virtue of their travel knowledge and experiences, interviewees were also well informed with the research topic. The interviewees were available and willing to participate, and have the ability to communicate their experiences and views in a reflective manner (Etikan, Musa and Alkassim, 2016). They were also selected based on their demographic and geographical homogeneity. The intention of using purposive sampling is to concentrate on interviewees with similar characteristics who can potentially benefit the study by providing their insights to the topic.

The researchers knew the interviewees personally and no incentives were used in data collection. Altogether 21 in-depth interviews were conducted in a three weeks' period from late May to early June 2020. The selected interviewees were identified as tourists (i.e., 11 females and 10 males) who have made more than 4 to 12 trips per year and at least one trip in the past 12 months. Their ages range from 30-55, majority of them are in the range of 35-40. Interviewees are all in their midlife career except one doctoral student and one housewife. Each interview lasted for approximately 35 to 60 minutes and they were conducted by phone, in person, by Wechat or Line. The following Table 1 presents the socio-demographics of the respondents and duration of each interview:

[Please insert Table 1 here]

An interpretive research data analysis method was adopted, emphasizing travelers' own interpretation of their psychological needs, desires, emotions and behavior in relation to travel. The data collected from the three regions were analyzed in several steps. First, the meaning of the data was analyzed and classified independently by the authors. Next, there were several rounds of discussions involving the authors to decide on the coding according to the three categories of Existence, Relatedness and Growth. Finally, the importance and satisfaction of travel and home isolation, the seven propositions of ERG were examined carefully to determine the major themes, emerging new themes and new propositions. The researchers followed the recommendation of Morse (2015) to use the strategy of peer review and debriefing to achieve data saturation and rigor.

The sample size of 21 was determined by achieving data saturation and there was a consensus among the researchers to stop recruiting more participants.

Findings and Discussions

The results of the in-depth interviews provide support that ERG theory can explain the basic psychological need based experiences of Asian tourists from three major countries. The Japanese, South Korean and mainland Chinese tourists' respondents have similar basic psychological needs before, during and perceived aftermath of the COVID-19 pandemic.

Before the pandemic, all respondents express positive feelings and have memorable experiences of being tourists. The themes of *Existence* are physiologically related needs and the positive emotions highlighted include 'escape from daily routine', 'free', 'relax', 'recharge', 'leisure', 'sleep', 'happiness', and 'enjoy'. Safety and security needs is another theme, suggesting the importance of hotels with nice accommodation, convenient location and good customer service. Respondents were satisfied with their *Existence* needs but the desires for *Relatedness* were high, in particular, socializing and interpersonal needs, and family needs. Socializing and interpersonal needs were fulfilled by interacting with local people, strengthening bonds with family and friends, and building and maintaining the sense of belonging. Family needs are significant both for satisfying the family needs for vacation and for fulfilling the family roles of oneself to meet the expectations of different family members. For instance, K2 pointed out he is 'obligated as a father, a husband and a son'. Similarly, C5 expressed 'when I saw my wife and children are happy on vacation in a new place, I felt happy too'. J1 also mentioned 'My family lives in Yamanashi prefecture so I typically go there 2 or 3 times during the year'. Two themes of *Growth* needs are identified which is about knowledge seeking and the need for self-esteem. The desires to 'broaden my horizon', 'learn new things', 'explore different foods' and 'experience local culture'. The need of self-actualization and self-esteem included 'discover oneself', 'get inspired', 'challenge oneself' and the satisfaction of planning for a trip. Tourists were satisfied with their *Existence*, *Relatedness* and *Growth* needs in the Pre-pandemic, and the three propositions P3, P6 and P7 occurred with the Satisfaction-Progression pattern of desires. The more *Existence* needs were satisfied, the more *Relatedness* were desired. The more *Relatedness* needs were satisfied, the more *Growth* needs were desired. The more *Growth* needs were satisfied, the more they were desired. The themes and propositions before COVID-19 pandemic are shown in Table 2.

[Please insert Table 2 here]

During the COVID-19 pandemic, travel restrictions were imposed across Asia and other regions, city lockdown measures were implemented to contain the virus. *Existence* and *Relatedness* needs of the respondents were found to be predominant because of isolation, social distancing, travel restriction and the requirement of quarantine. The respondents had mixed emotions with much stronger negative emotions than positive emotions, such as ‘unhappy’, ‘worry’, ‘upset’, ‘frustration’, ‘depress’, ‘anxious’, ‘hopeless’, ‘helpless’, ‘fearful’, ‘panic’, ‘anger’, and ‘nervous’. Some of the positive emotions that were reported were an outcome of *Relatedness*, the desire of togetherness, and to overcome the crisis with a strong sense of belongingness to the community in following government rules and regulations. For instance, some respondents said, ‘follow government safety restriction measures’, and ‘wait for government directions and recommendations’. Safety and security concerns affected the sleeping and eating patterns as well as overall on physical and mental health of respondent C1. Insecure emotional states were noticeable when respondents described ‘uncertain’, ‘unsafe’, ‘no power’ and ‘no desire to travel’. They also showed less *Existence* satisfaction and they tried to ‘adapt to the changes of lifestyle’ such as to ‘use service based App to order food’ and to work from home. In terms of material needs, some respondents were satisfied that they still kept their job during home isolation and were not largely affected but C5 respondent was sad as his ‘business was affected and there is a profit loss’. Within the *Existence* dimension, the themes of physiological, safety, security and material needs were drawn from the data. The results match P1: when respondents had less satisfaction with their *Existence* needs, they had higher desire for more.

During COVID 19 pandemic, respondents also had *Relatedness* needs such as family, sense of belonging, and socializing and interpersonal needs. Family needs were mentioned by C2 respondent who could not return to hometown to see parents, and J7 who could not travel back to hometown nor visit husband who is working in South Korea. C5 respondent expressed children’s activities were affected when schools and even public playgrounds were closed. The desires of belonging needs are important such as ‘empathy and psychological support from employers’, ‘support from family at home and support from friend virtually’, ‘loss of freedom during quarantine, and loneliness’. C6 shared his view of dissatisfaction with the immediate government

intervention and believed they can do much better with community support measures. Strongly related to socializing and interpersonal needs, respondents longed for gatherings with friends or joining outdoor activities. They worried about the safety of people whom they know, and tried to connect with friends and family by phone or other online channels. The results match P4: when respondents have less satisfaction with Relatedness needs, they have higher desire for more.

Frustration regression and Simple frustration also occur when the following respondents pointed out their *Existence*, *Relatedness* and *Growth* related frustrations:

“Previous to COVID-19, I was always thinking about how to make friends and spend time going out to restaurants and cafes, to meet new people and impressing people. I spent a lot of money on how I looked, grooming, and salons. But since we had to stay home, and what we wear doesn’t matter much, I started to spend money more on masks and sanitary items instead of make-up and clothes.”- J5

“I am pretty worried, anxious, and angry about COVID-19. There was a shortage of masks, a shortage of hygiene products and supplies, and even shortage of daily supplies in the supermarket which makes me feel very helpless, fearful and hopeless”- C6

“...I’m isolated at home. I felt very insecure, afraid of being infected even when isolated at home. I felt very lonely with only the Internet to connect to the outside world. The whole world would cease to exist if I turned off my mobile phone, television and computer. I have lost freedom, having to register and measure temperature when going in and out of my neighborhood. There was a quota on number of citizens going out and only allowed within the given times. Isolation at home made me very depressed and physically weak because I could not eat well, poor sleep but to remain motionless.” – C3

“I had feeling like a ‘lost...’... The invisible and novel virus has caused numerous deaths, and I was so frustrated because there were no clear measures, no vaccines, and no proper cure. Additionally, it was also frustrating for me to see insufficient government's guidelines” – K6

As described by J5, her *Relatedness* needs frustration was due to not being able to meet her friends. She ‘regressed’ to focus on the *Existence* needs of health and safety. This result confirms the Frustration-regression pattern of the desires during isolation. The less *Relatedness* needs were satisfied, the more *Existence* needs were desired. The Simple Frustrations became visible when C6 was frustrated with materials shortages and C3 had no sense of belonging. Both C6 and C3 experienced *Existence* frustration and *Relatedness* frustration, and turned out to have higher desires for *Existence* and *Relatedness* needs. Finally, K6 was frustrated with the uncertainty of the harmful effect of the pandemic. She had less *Growth* needs and had a strong desire for the government to provide more information. Her *Growth* needs frustration led her desire for more government or

community support. This result confirms P5: the less *Growth* needs are satisfied, the more *Relatedness* needs will be desired. The significant findings during the pandemic was the occurrence of Simple Frustration and Frustration Regression. *Existence* needs and *Relatedness* needs are strong predictors for dissatisfaction experienced by respondents and unconstructive outcomes such as anxiety and depressive symptoms were common among respondents who stayed isolated at home during the pandemic. The themes and propositions during COVID-19 pandemic are shown in Table 3.

[Please insert Table 3 here]

Respondents were asked about how they perceive the aftermath of the pandemic in terms of their psychological and travel needs as tourists. *Existence* needs and *Growth* needs were perceived to be the most important due to the intense effects of safety needs. Interestingly, *Relatedness* needs did not emerge strongly from the data. Tourists' respondents perceived that they might experience mixed emotions. On one hand they might have the fear of being infected with the disease and will stay alert during travel. Their personal hygiene, the safety and cleanliness of the destination, and the ability for local tourism and hospitality service providers to provide hygienic food and clean public environment are important. On the other hand, they have the desire to travel again and will cherish travel upon gradual lifting of travel restrictions. Chinese tourists in particular have the *Relatedness* desire to be welcomed by the destinations around the world again. Chinese tourists are seen by some nations to be a high risk group for carrying the coronavirus disease abroad. Most respondents have high *Growth* needs of knowledge such as safety information updates provided by the local government about the risks and dangers of the pandemic development. They will also search for destinations that are free of the coronavirus when planning their trips.

In terms of the ERG propositions, it is predicted according to the data that P1 and P4, the two simple frustration of *Existence* and *Relatedness* will continue from during pandemic to aftermath pandemic recovery. The former emerged to be stronger than the latter from the data collected in this study. The less *Existence* needs are satisfied, the more will be desired. The less *Relatedness* are satisfied, the more will be desired. Interestingly, the dominance of *Growth* in this

study findings leads to an addition of one new Simple Frustration of *Growth* proposition, which was not included in Alderfer's model. The new proposition P8 reckoned as the less *Growth* needs are satisfied, the more will be desired. The following quotes from C5, C3, J7 and K5 suggest a predicted high *Growth* needs for tourists in the future:

'I will keep myself well-informed of the latest news about any risk, danger, accident, disaster, etc. before and during my future travels.'- C5

'I have to always watch out for any updated news of the local situation.'- C3

'My major concern would be information available from the government when we travel. I need to know what the current status is of the outbreak. Tokyo is crowded, so we need to be more cautious ... We need more community support and real understanding of the medical developments on how the virus is being dealt with. It is really a global issue. It's hard to say, but I think this relates to my safety concerns, and hygiene of public areas.' – J7

'When I travel again, I may have higher level of satisfaction' – K5

The themes and propositions in the aftermath of COVID 19 pandemic are shown in Table 4.

[Please insert Table 4 here]

Theoretical Implications

The present study extends ERG theory in the field of tourism and hospitality psychology. It provides evidence that the lens of ERG theory is a tool to address tourists' needs as well as individuals' psychological basic needs in the three phases of the pandemic. This study offers a number of theoretical implications.

This study contributes by providing support to the three forms of ERG propositions of tourists' psychological needs before pandemic and during isolation or lockdown at a city. First, before the pandemic, propositions of Satisfaction-Progression pattern of desires occurred. Second, during the pandemic, propositions of Simple Frustration and Frustration Regression occurred. Third, the perceived aftermath, Simple Frustration might occur. The overall findings have strong implications to the strength of ERG theory in explaining the changes in psychological needs of tourists in different situations.

Additionally, this study significantly contributes by highlighting a new proposition, P8, which provides a model to rethink the application of ERG theory in the study of psychological

basic needs. It enriches the understanding of psychological needs of tourists in the post-pandemic phase. This finding is important to extend and translate the ERG theory into practice.

This study also contributes by embedding ERG theory within a cultural lens. Regard for family, a kind of *Relatedness* is a primary standard that often guides individuals' actions within an Asian culture (Kang, 2004; Yang and Tung, 2018). Nevertheless, according to the need to belong theory (Baumeister and Leary, 1995) *Relatedness* is found to some degree in all humans in all cultures, there are individual differences in strength and intensity, as well as cultural and individual differences in how people communicate and satisfy the need. In line with this theory, the present study suggested that family needs in *Relatedness* is the primary motivation for Asian travelers in our study to travel before COVID-19, and to support others during isolation. The universality, of *Relatedness* needs might also be the core motivator to travel again for tourists in all cultures after the pandemic situation.

Finally, this study contributes to the literature by connecting research on risk and safety mitigation with ERG theory. A recent study on the impact of COVID-19 on the psychological consequences of active Weibo users in China found that negative emotions (e.g., anxiety, depression and indignation) and sensitivity to social risks increased, while positive emotions (e.g. Oxford happiness) and life satisfaction decreased (Li, Wang, Xue, Zhao and Zhu, 2020). Users were also concerned more about their health and family, while less about leisure and friends. These findings are challenging for the tourism and hospitality industry that is premised on leisure and travel experiences. However, insights from the present study on the differences in perceptions to travel pre-COVID and post-COVID through the sample in China offers potential mitigating strategies. For instance, respondents noted that taking temperature as a measure is not considered a rude behavior but an essential measure to protect travelers. Respondents are also prepared for additional measures to address *Existential* safety.

Managerial Implications

The present study contributes by connecting theoretical relevance with practical implications for the tourism and hospitality industry. For instance, the findings reveal the importance of personal wellbeing, such as health and food, during isolation from COVID-19.

Feelings of frustration and isolation of *Existence* led many individuals to social media channels (e.g., YouTube) for indoor fitness routines and exercises, as well as cooking videos for new recipes. This desire for personal wellbeing will likely continue or even magnify after the pandemic. Research suggests that such feelings of frustration may drive individuals to pursue active lifestyles (Edwards et al., 2016; Selvi and Bozo, 2020); hence, tourism and hospitality businesses that cater to active clienteles and brand that portray energy and dynamism may benefit from such needs in the market after the pandemic.

Relatedness frustration during COVID-19 also encouraged individuals to stay directly connected with friends and family through platforms such as LINE, WeChat, WhatsApp, and Kakao, or to express themselves to others through social media such as Facebook, Instagram, Twitter, and YouTube. Tourism and hospitality marketing that encourage self-expression could be in a position to form and maintain stronger bonds with guests (Tung, Cheung, and Law, 2018). Brands that immerse themselves in social media channels to relate, inform and help future guests fulfill their desire for relatedness may benefit in the long term after the COVID-19. Guests who search for holiday information and long for holidays after the pandemic may turn to these brands that convey a feeling of relatedness and familiarity.

Previous research suggests that the assurance of safety is the most crucial service quality dimension among international travelers (Gilbert and Wong, 2003). This is particularly important as concerns about risks will generally resurface after a crisis event, such as COVID-19. It is thus vital for the tourism and hospitality industry at this critical juncture to address the safety concerns of travelers by educating them about the measures that businesses are undertaking to alleviate their concerns.

The tourism and hospitality industry could consider realigning current customer perceptions of 'risk avoidance' to 'risk management'. It is impossible to mitigate 'all' risks; hence, external marketing communication that suggests risk elimination may be received with skepticism by customers. Customers may also mistrust brands that overpromise during these difficult times. Brand managers could seek to convey a sense of 'risk management' so that customers recognize and understand the realistic service quality and safety initiatives that are being done. The goal is to address psychological elements such as feelings of worry as they are antecedents to both travel

health risk perceptions and their associated risk-protective behaviors (Chien, Sharifpour, Ritchie and Watson, 2017).

The COVID-19 pandemic has forced hospitals and companies to use robotics and other automation technologies to fight the pandemic (Yang et al., 2020), including companies in travel, tourism, and hospitality (Wolfe, 2020). Thinking about how to create "service innovation" is the top priority of all walks of life, and the hotel industry is no exception (Hollebeek & Andreassen, 2018; Shi et al., 2018). Den Hertog and Bliderbeek (1999) proposed a service innovation model that points out the technology choices of service delivery, new service concepts, new customer interfaces and new delivery systems. The use of the cutting-edge technology applications can enhance the customers' confidence to stay at hotels by providing contactless interactions, contactless check-in and housekeeping services, ultra-violet light technology and electrostatic spraying devices.

To conclude, there are many opportunities for the tourism and hospitality industry to address the psychological needs of travelers using the lens of ERG theory, and many businesses have begun to do so. For example, Four Seasons Hotel in China have developed a "Lead with Care" campaign to enhance cleanliness through the appointment of a Hygiene Officer for each property. This campaign includes a number of aspects, such as re-training programs for housekeeping teams on cleaning protocols; the use of ozone technology for air purification; the availability of masks, hand sanitizer and sanitization wipes for each guest room, with additional masks supplied on demand; and the application of digital menus wherever possible for restaurants providing a-la-carte service (Four Seasons Hotel Beijing, 2020). In South Korea, the Hilton CleanStay program in Hilton Seoul uses hospital-grade cleaning products and room seals to indicate guest rooms that have not been accessed since they were cleaned (Hilton CleanStay, 2020). Meanwhile in Korean Air, cabin crews wear goggles, masks and gloves, as well as protective gowns on medium- and long-haul inbound flights. Customers are educated through in-flight announcements on measures that will be taken in case a passenger shows symptoms of COVID-19 during a flight (Korean Air, 2020). In Japan, the Imperial Hotel Japan has installed thermography at the entrance to measure physical temperature of guests, and trays are used to hold cash or credit during payment procedures (Imperial Hotel Osaka, 2020).

Limitations and directions for future research

There are limitations and opportunities for future research. The sample size in this qualitative study is limited and the results cannot be generalized to the broader population. Interviews were conducted with travelers in three countries only (i.e., Japan, South Korea, and mainland China), and future research can explore the psychological needs of travelers in different Asian regions. All except for two interviewees are in their midlife career, which could have limited the scope of views that were presented. Future research can investigate the views from different demographics (e.g., age and various stages of the lifecycle) as personal attributes could affect their interpretations of needs, desires, emotions, and behaviors in relation to travel after COVID-19. Future research can also measure the extent in which the different ERG attributes are expressed through a quantitative approach. Finally, the present study suggested that the less growth needs are satisfied, the more will be desired. This is a new proposition for the ERG theory in the context of tourism and hospitality that could be further investigated by future research. This could be done beyond the three major Asian countries of tourist perspectives after COVID-19.

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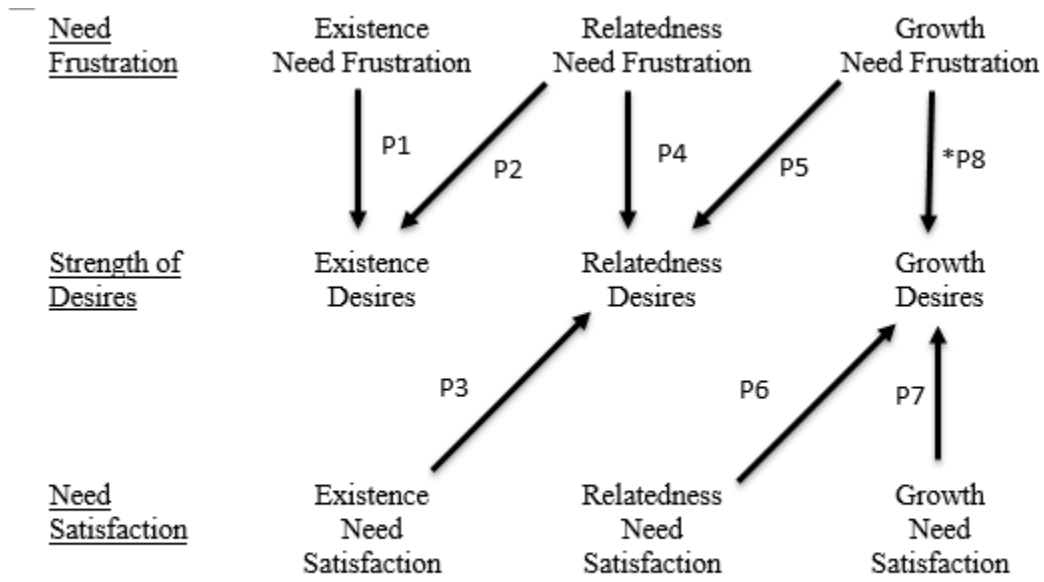


Figure 1. ERG theory in diagrammatic form (Alderfer, 1969)
 *P8 is a new proposition developed from this study

Table 1: Demographic Profiles of the Respondents

Interviewee (K=Korean, J= Japanese, C = Chinese)	Age	Gender (F/M)	Number of times travelled every year (domestic or international)	Occupation	Education	Approximate duration for the interview
K1	35-40	F	4-5 times (both)	Housewife	Bachelor	45 min by phone
K2	35-40	M	More than 5 times (both)	Doctor	Bachelor	35 min by phone
K3	40-45	F	More than 10 times (both)	Officer in Foreign investment company	Bachelor	35 min by phone
K4	50-55	M	More than 10 times (both)	Hotel CEO	Master	40 min by phone
K5	50-55	M	More than 5 times (both)	Tourism Management Professor	Doctoral	45 min in person
K6	50-55	F	More than 5 times (both)	Hotel Management Professor	Doctoral	45 min by phone
K7	40-45	F	More than 6 times (both)	Restaurant Management Professor	Doctoral	35 min by phone
C1	30-35	F	4-5 times (both)	Hospitality Education	Master	45 min by WeChat
C2	50-55	M	More than 5 times (domestic)	Tourism industry	Master	50 min by WeChat
C3	25-30	F	More than 4 times (both)	Doctoral student	Doctoral	30 min by WeChat
C4	30-35	M	12 times (both)	Hospitality Tertiary Education	Doctoral	35 min by WeChat
C5	40-45	M	More than 6 times (both)	Businessman	Higher Diploma	40 min by WeChat
C6	45-50	F	More than 5 times (domestic)	Tertiary Education	Doctoral	30 min by WeChat
C7	30-35	M	More than 5 times (domestic)	Hotel General Manager	Master	35 min by WeChat

J1	30-40	M	More than 6 times	Project Manager (Consulting company)	Bachelor	50 min by LINE
J2	40-50	F	More than 4 times	Client Manager (Interpretation company)	Bachelor	60 min by LINE
J3	30-40	M	More than 4 times	Chief Operating Officer (Technology Startup Company)	Bachelor	60 min by Facebook Messenger
J4	40-50	F	More than 4 times	Project Manager (Research company)	Bachelor	60 min by LINE
J5	30-40	F	More than 4 times	Systems Manager (Technology company)	Bachelor	60 min by LINE
J6	30-40	M	More than 4 times	Hotel General Manager	Bachelor	60 min by LINE
J7	30-40	F	More than 4 times	Teacher's Assistant	Bachelor	60 min by LINE

Table 2: Summary of findings on ERG attributes and propositions before COVID-19 pandemic

Before COVID-19 pandemic	Existence	Relatedness	Growth
Psychological needs attributes	Physiological needs and positive emotions <ul style="list-style-type: none"> ● <i>Escape from daily routine</i> ● <i>Free, recharge, relax, leisure, sleep, happiness and enjoy</i> ● <i>Safety and security</i> ● <i>Choose hotel with nice accommodation, convenient location and good customer service</i> 	Socializing, interpersonal needs <ul style="list-style-type: none"> ● <i>Share travel experiences with others</i> ● <i>Interaction with the local people</i> ● <i>Strengthen the bonds of friendship by spending time together and creating good memories together</i> ● <i>Sense of belongings to be with the travel companions</i> <p>Family needs</p> <ul style="list-style-type: none"> ● <i>Fulfil immediate family needs for enjoyment and happiness</i> ● <i>Enjoy time with family</i> ● <i>Obligated as a father, a husband and a son</i> 	<i>Learn more about the world</i> <ul style="list-style-type: none"> ● <i>Broaden my horizon</i> ● <i>Experience local culture</i> ● <i>Learn new things</i> ● <i>Explore different foods</i> <p>Need for self esteem</p> <ul style="list-style-type: none"> ● <i>Discover oneself</i> ● <i>Get inspired</i> ● <i>Challenge oneself</i> ● <i>Pre-trip planning satisfaction</i>
ERG Propositions	P3: The more Existence needs are satisfied, the more Relatedness will be desired.	P6: The more Relatedness are satisfied, the more Growth needs will be desired.	P7: The more Growth needs are satisfied, the more Growth needs will be desired.

Table 3: Summary of findings on ERG attributes & propositions during COVID-19 pandemic

During COVID-19 pandemic isolation	Existence	Relatedness	Growth
Psychological needs attributes	<p>Negative Emotions: <i>unhappy, worry, upset, frustration, depress, anxious, no mood, hopeless, helpless, fearful, panic, inconvenience at work, try to be optimistic, anger, mixed feelings, nervous about the lockdown, missing travel, very sad, disappointed, confused.</i></p>	<p>Family needs</p> <ul style="list-style-type: none"> ● <i>Affect family especially children when public playgrounds were closed</i> ● <i>Cannot return to hometown to see parents</i> ● <i>Give psychological support to immediate family members</i> 	<ul style="list-style-type: none"> ● <i>Pandemic news made me even more upset, stress, anxious and depress.</i> ● <i>Need more information</i> ● <i>Strong desire to look for websites for travel</i> ● <i>Strong desire to travel</i>
	<p>Positive emotions: <i>stay positive, wait until government directions and recommendations, and follow government restriction measures.</i></p>	<p>Sense of belonging</p> <ul style="list-style-type: none"> ● <i>Lost freedom during quarantine, lonely</i> ● <i>Extremely dissatisfied with government measures and community as they can do much better</i> ● <i>Empathy and psychological support from employers</i> ● <i>Support from family at home, support from friend virtually</i> 	<ul style="list-style-type: none"> ● <i>Free time to stay at home, have time to reflect on one's future</i>
	<p>Safety and security needs</p> <ul style="list-style-type: none"> ● <i>uncertainty, unsafe, physically weak (affect eat and sleep)</i> ● <i>no desire to travel</i> 		
	<p>Physiological needs</p> <ul style="list-style-type: none"> ● <i>Adapt to change of lifestyle</i> ● <i>No power</i> ● <i>Use service based App to order food.</i> 	<p>Socializing, interpersonal needs</p> <ul style="list-style-type: none"> ● <i>Desire for gatherings with friends or joining outdoor activities</i> ● <i>Connect to friends using phone or online</i> ● <i>Worry about others</i> 	
	<p>Material needs</p> <ul style="list-style-type: none"> ● <i>Satisfy to have a job</i> ● <i>Sad as business was affected and profit loss</i> 		

ERG
Propositions

P1: The less *Existence* needs are satisfied, the more they will be desired.

P2: The less *Relatedness* needs are satisfied, the more *Existence* needs will be desired.

P4: The less *Relatedness* needs are satisfied, the more they will be desired.

P5: The less *Growth* needs are satisfied, the more *Relatedness* will be desired.

Table 4: Summary of findings on ERG attributes and propositions perceived in the aftermath of COVID-19 pandemic

After COVID-19 pandemic	Existence	Relatedness	Growth
Psychological needs attributes	<p>Negative emotions</p> <ul style="list-style-type: none"> • <i>Fear, worry, alert when travelling, cautious</i> <p>Positive emotions</p> <ul style="list-style-type: none"> • <i>Very happy, excited, cherish life, more empathy, looking forward</i> <p>Safety and security needs</p> <ul style="list-style-type: none"> • <i>Personal hygiene, safety and the cleanliness of the destination environment, food, local hygiene, service providers to provide public hygiene</i> • <i>Cleanliness of the local money</i> 	<p>Sense of belonging needs</p> <ul style="list-style-type: none"> • <i>If local government welcome Chinese tourists</i> 	<p>Safety information needs</p> <ul style="list-style-type: none"> • <i>Well informed of latest news about risk, danger etc.</i> • <i>Government to inform travelers in a timely manner on COVID situation</i> • <i>Search for coronavirus free destinations</i>
ERG Proposition	P1: The less <i>Existence</i> needs are satisfied, the more they will be desired.	P4: The less <i>Relatedness</i> needs are satisfied, the more they will be desired.	*P8: The less <i>Growth</i> needs are satisfied, the more they will be desired.

*P8 is a new proposition developed from this study