

# Travel booking intentions and information searching during COVID-19

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## Abstract

**Purpose** – This exploratory paper examined consumers' use of information sources and intentions to book future travel in the early stages of the COVID-19 pandemic. Authors expected that general news and travel information accessed on the Internet would impact travel intentions.

**Design/methodology/approach** – Data were collected from 547 US online consumer panelists when all states were under “stay-at-home orders” in April 2020.

**Findings** – Differences existed in the impact of three stressors (health, personal and financial) on the use of information sources (general news and travel sources) and ultimately on booking intentions.

**Practical implications** – The lack of influence health stressors had on travel research activity raises a question for the travel industry as to critical choice of messages to be imparted during pandemic environments.

**Originality/value** – A three-factor model was used to assess the determinants of booking intentions during uncertain times. Authors applied the stimulus-organism-response (S-O-R) framework to explore information searching for travel during the pandemic.

**Keywords** Consumer booking intention, Online media, Information search, COVID-19

**Paper type** Research paper

## 1. Introduction

This paper examines key factors related to information search and intentions to book future travel in the early stages of the COVID-19 pandemic. The assumption is that general news and travel information accessed on the Internet would impact travel bookings. Incorporating COVID-19-related stressors, information sources and perceived trust in the travel industry, the authors developed a three-factor model to assess the determinants of booking intentions during uncertain times. This study builds on the stimulus-organism-response (S-O-R) framework (Mehrabian and Russell, 1974), which explains how consumers react to unique external stimuli (Xu *et al.*, 2014). It has been applied to the tourism industry (Kim *et al.*, 2020) and consumer behavior during COVID-19 (Laato *et al.*, 2020); however, this study specifically addresses the knowledge gap on consumer information seeking as a response to perceived stress generated by pandemics.

### 1.1 Rising consumer stress during the COVID-19 era

The coronavirus has prompted consumers to experience unprecedented levels of health and other life concerns and stress (Mowbray, 2020). Torales *et al.* (2020) reported that cases of major depression have increased by 7% since the outbreak. Consumers experience stress as they work to identify accurate information about COVID-19 (Ellis, 2020). News agencies



report the rising death toll throughout the day. It is difficult to avoid hearing about COVID-19 and stressful societal problems, including job loss and virtual schooling. The unemployment rate in the US jumped to 14.7% in April-the highest since the Great Depression (Long and van Dam, 2020).

Consumers with certain profile characteristics experience more stress due to the coronavirus. Parents are juggling work and homeschooling. Education Week (2020) reported that 84% of the largest school districts in the US adopted remote learning during 2020. Remote learning also poses a problem for nearly 12 million children who rely on free meals (Musinski, 2020).

### *1.2 Information search in the era of COVID-19*

Information search during the COVID-19 pandemic is a new behavior; thus, research on this topic is exploratory. No evidence exists as to what type of information is being actively pursued. It is unclear whether available information is beneficial or detrimental during this pandemic. The Internet is a readily accessible information source, but it was found to increase health-related stress (Farooq *et al.*, 2020). Social media usage increases acute stress levels (Torales *et al.*, 2020) and exacerbates worries due to information overload (Farooq *et al.*, 2020).

### *1.3 The increasing importance of Internet information sources for consumers*

In the coronavirus context, online information has taken precedence due to remote working. Even prior to COVID-19, travelers were increasingly using social media, websites and mobile applications to search for information (Law *et al.*, 2014; Xiang *et al.*, 2015). Websites were upgraded to support travel searches, e.g. live chat functionality (McLean *et al.*, 2020).

Internet information flourishes during crises. Health organizations and governmental agencies turned to social media to share coronavirus-related information for two reasons. First, heavy social media users experience higher levels of acute stress (Torales *et al.*, 2020). Second, updates from official sources mitigate the effects of inaccurate information posted online (Purgato *et al.*, 2018). Separately, companies are struggling to manage their corporate communications because of increases in general misinformation (Ma *et al.*, 2019). Thus, it is imperative to determine the proper role of marketing in this pandemic (WanKohn *et al.*, 2015).

### *1.4 Research statement and contribution*

This study contributes to the tourism literature by addressing specific COVID-19 worries that can impact the use of information sources and propensity to book travel services. We rely on the stimulus-organism-response (SOR) framework to determine how consumers are reacting to the coronavirus threat in terms of stress and information seeking (Xu *et al.*, 2014). This study also differentiates between business and pleasure travelers. Findings should be insightful for businesses designing marketing messaging and travel applications to support consumer use of online resources for travel planning during a pandemic.

The remainder of this paper is organized as follows. First, the literature and concepts that are central to this study are reviewed. This is followed by the presentation of research methodology. Finally, the paper concludes by discussing the findings, implications and future research directions.

## **2. Background literature**

The S-O-R framework explains how environmental stimuli impact cognitive, affective processing and resultant human actions (Mehrabian and Russell, 1974). This study views the coronavirus as the operant stimulus that generates health, financial and personal stress. It prompts reactive information searching about the pandemic and travel. Information

searching is further expected to impact trust in the industry and booking intentions. Secondary factors comprised basic *demographics* and *travel for business versus pleasure*.

### *2.1 Intention to book future travel services*

Consumers normally acquire information and form intentions in advance of final purchase (Capriello *et al.*, 2013). Fishbein and Ajzen (1975), advancing the theory of planned behavior, found that psychological intentions strongly inferred subsequent behavior. Previous studies on tourism and crisis situations utilized this theory (Li *et al.*, 2020). Since intention can lead to consumption, this study treats *intention to book travel services* as an appropriate measure of COVID-19's impact on travel.

### *2.2 Exploring the influence of stress on information search*

While stress is well studied in psychology, there is limited research on the relationship between stress and consumer behaviors (van Giesen and Pieters, 2019). People use consumption strategies to manage stressful situations (Lazarus and Folkman, 1984) primarily in two ways—cautious saving or excessive shopping (Durante and Laran, 2016). Online retailers reported a significant increase in sales during the COVID-19 pandemic. However, consumption-based coping behaviors only provide short-term stress relief (Moschis, 2007).

Information search is an alternate way to manage boredom and stress (Prestin and Nabi, 2020). The current study expands this finding by focusing on a specific response, i.e. information searches for COVID-19 news and travel information. A majority of consumers start their search online (Goh *et al.*, 2015). We want to verify if consumers seek out general or travel-specific sites for online news about COVID-19. Moreover, we project that stressor type will influence consumers' information search behavior, suggesting the following hypotheses.

- H1.* Health stressors will have a significant impact on use of general COVID-19 news.
- H2.* Health stressors will have a significant impact on use of online travel information.
- H3.* Financial stressors will have a significant impact on use of general COVID-19 news.
- H4.* Financial stressors will have a significant impact on use of online travel information.
- H5.* Personal stressors will have a significant impact on use of general COVID-19 news.
- H6.* Personal stressors will have a significant impact on use of online travel information.

### *2.3 Information search and booking intentions*

Information searching is fundamental to consumer decision-making. Seminal work by Fodness and Murray (1999) found that travelers rely on different sources of information to manage risk and contingencies. In the case of COVID-19, it is probable that prior travel experience may not be deemed as useful as external sources, since experience with the precise dilemma of traveling during this major pandemic is unknown for most consumers. Consumers rely on search engines and expert travel websites to prepare themselves (Petersen *et al.*, 2017). Travelers who want to travel internationally rely heavily on Internet searches (Pesonen and Pasanen, 2017).

Online travel information is increasingly important to both consumers and businesses seeking to attract travelers (Sotiriadis, 2017). We expect travel-specific research to have a positive influence on travel bookings in this study. Conversely, we hypothesize that “breaking stories” that tend to be highly negative in the general news may reduce booking tendencies. Hypotheses have been formulated as follows.

- H7.* General COVID-19 news will have a significant impact on booking travel services.

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H8. Online travel information will have a significant impact on booking travel services. Travel booking intentions

#### 2.4 The role of trust in travel providers during the COVID-19 crisis

Other factors affect travel bookings, i.e. perceived risk and trust. Travelers evaluate and avoid destinations after a negative occurrence (Stepchenkova *et al.*, 2019). Familiarity with a retailer also influences the impact of information on bookings. Consumers rely less on negative word of mouth and require less information from a familiar retailer (Chatterjee, 2001).

Trust correlates with the use of travel sites (Amaro and Duarte, 2015). Travelers are more likely to book on a trusted website (Pappas, 2016). Websites that are easy to navigate further reduce perceived risk (Mohseni *et al.*, 2018). Thus, we believe use of travel sources should manifest as an observable increase in an individual's trust in the travel industry, which in turn should increase booking propensity.

H9. Online travel information use will have a significant impact on trust in the travel industry.

H10. Trust in the travel industry will have a significant impact on travel booking intentions.

#### 2.5 Pleasure versus business travelers

The use of information sources can be influenced by a multitude of secondary factors, including gender (Yang *et al.*, 2017), age (Cui *et al.*, 2016) and prior experience (Chiu and Lin, 2011). To understand the travel search process more fully, we turn to one characteristic that appeared with frequency in the extant literature: level of leisure versus business travel experience (Bakker *et al.*, 2009). There are several search characteristics. First, leisure travelers actively seek information to minimize financial risks. Etherington and Turgut (1984) note that business travelers pick a flight based on travel time, while leisure travelers focus on price-related factors. Second, leisure travelers search to visualize potential vacation experiences. Lastly, external information is necessary to familiarize leisure travelers with unknown destinations. This supports the argument that leisure travelers spend more time seeking information than business travelers. Experienced business travelers scan internal cues before seeking data from external sources (Chen, 2000). Given these findings, we propose the following hypothesis.

H11. Business and pleasure travelers will show significant differences in the factors that influence intentions to book travel services.

#### 2.6 Overview of model

Included in this study are influences on booking behaviors: COVID-19 stressors on consumers, the role of general news and travel-specific research and trust in representative travel sectors. Figure 1 displays the model and embedded hypotheses.

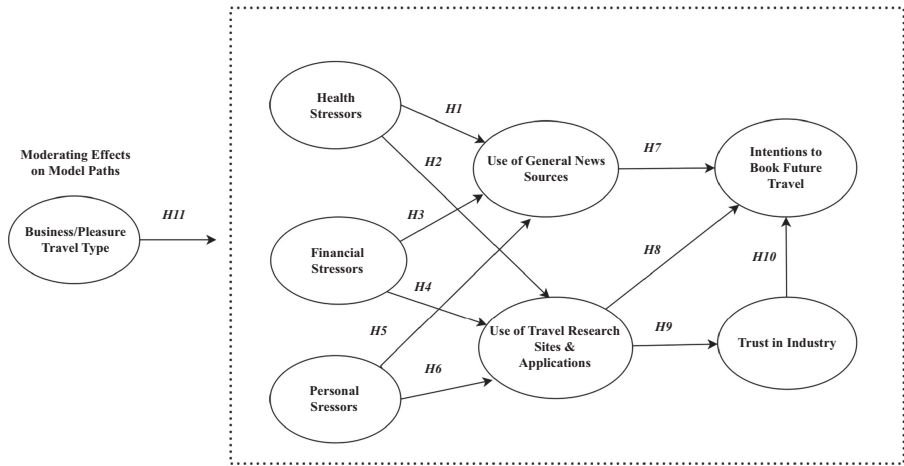
### 3. Materials and methods

Partial least squares structural equation modeling (PLS-SEM) is being increasingly used in tourism research (do Valle and Assaker, 2016) because it provides a prediction-focused approach to SEM (Shmueli *et al.*, 2016; Ali *et al.*, 2018).

#### 3.1 Sampling and data collection

The authors accessed secondary data from a marketing firm that employed Prime Panels to obtain responses from a nationwide group of panelists. Online data collection was used

**Figure 1.**  
The impact of COVID-19 stressors, information search and trust on booking intentions



because the country was sheltering-in-place. This provider is widely used for behavioral research (Yang and Lee, 2019) and produces reliable results with the use of screening questions (Goodman *et al.*, 2012). US residents were targeted; potential respondents were additionally screened to be 18 or older. Survey distribution took place over a two-day span in April 2020 until the marketing firm reached minimal quotas on gender, age, education and income.

The marketing firm applied a tool to detect respondent faults, such as speeding and straight-lining; it performed initial recodes and substituted replacement respondent IDs to facilitate confidentiality. After additional refinements to handle missing data for subsequent PLS treatments, a set of 528 useable records was employed in the present study.

### 3.2 Description of survey instrument

Qualtrics software was used to format the survey for online data collection. The authors had limited control over the question formatting. While multiple scale items were used in the survey, some scales were designed based on the marketing firm's need to compare stock items over time with previous surveys. Therefore, as tables will indicate in the results section, different sections may display different scale item formats, e.g. four-point, five-point, or seven-point scales. Once formatted, the survey was reviewed internally by three individuals associated with the marketing firm, then pretested via the panel provider to check preliminary results with ten respondents to ensure that the survey worked as expected. It took an average of 8.8 minutes for sample respondents to take the survey, with a standard deviation of 5.9 minutes.

Demographic information included age, gender, race/ethnicity, household income, education, marital status and number of children. With respect to the present study, specific data was made available to the authors: items exploring major concerns related to the impact of COVID-19 on personal health, family functioning and financial well-being; use of travel and general news sources/research; trust in the travel industry's reliability; and intentions to book travel or hospitality services within the next six months.

### 3.3 Description of respondent profile

The panel had balanced percentages of men (49.4%) and women (50.6%). Over half of respondents were married (59.5%) followed by single, never married panelists (32.6%). Over

half of the respondents had children under the age of 18 (59.6%). The most frequently reported ethnicity was White (72.0%), followed by Hispanic/Latino (9.5%), Black (7.1%) and Asian (6.6%). Regarding age, the highest percentage (41.1%) fell into the 25 to 34-year-old category, followed by the 35-to-44 age category (23.3%). In terms of education, the majority had a bachelor's degree (52.3%) or higher (22.4%). Residential status by state showed higher numbers of respondents from California (13.4%), Texas (9.3%), New York (7.8%) and Florida (7.0%). All states, except Alaska, were represented in the sample. The income category most frequently selected was \$50,000 to 69,999.

## 4. Results

This section first presents respondent attitudes toward the coronavirus and travel during the time of the survey. Then a review of PLS-SEM analysis and corresponding hypothesis tests will highlight the drivers of booking intentions for future travel.

Table 1 shows that respondents were slightly more concerned with health and financial stressors than with personal stressors. Subjects had a higher propensity to research travel than actively pursue general news related to the coronavirus. Respondent trust in the travel industry was above the midpoint on a five-point scale, but intention to book travel services within six months of the survey was below the midpoint on a seven-point scale. Respondents were somewhat reluctant to pursue travel in general, confirming the need to investigate more deeply into their rationales.

### 4.1 Assessment of the measurement and structural models

Following prior approaches (Ali *et al.*, 2018), PLS-SEM was used to predict intentions to book future travel (see Figure 1). Key constructs included health, personal and financial stressors; the roles of general coronavirus news searches and specific travel sources; and trust in industry safety information and protocols. Prior to assessing the structural model, an assessment of the measurement model was conducted.

**4.1.1 Indicator reliability and discriminant validity.** Table 2 presents item descriptions with corresponding loadings, along with reliability metrics. Loadings above 0.7 were noted for all factors; they signal acceptable item reliability.

Per Hair *et al.* (2012), the pertinent values Table 2 are larger than 0.6, which demonstrates internal consistency of all latent factors. Average variance extracted (AVE) values are greater than 0.5, so convergent validity is supported, suggesting that each construct explains more than 50% of the variability in its indicators.

In Table 3, a Fornell-Larcker criterion analysis indicates that the square roots (on the diagonal) of the item groups' AVEs are larger than the correlation values for their corresponding item groups, thus passing one test for discriminant validity. A newer assessment approach (Henseler *et al.*, 2015) introduced the heterotrait-monotrait (HTMT) ratio of the correlation, proposing 0.85 as a conservative upper limit for constructs to be conceptually distinct. Table 4 presents values that are lower than 0.85, suggesting discriminant validity is present in this study.

**4.1.2 Consideration of hypothesized path relationships.** Based on a bootstrapping analysis of the inner model (with 5000 samples), the significance of path coefficients is presented in Table 5. All but three hypothesized paths exhibit positive relationships that are significant at *p*-values below 0.05.

Results on the inner model suggest that travel research has the strongest effect on intention to book future travel (0.604), followed by trust in industry (0.162). The path between travel research and industry trust was moderately strong (0.422). The hypothesis that general news would directly affect booking intentions was not supported.

| Latent variable                                                                                    | Item descriptor                                         | Mean<br>(n = 528) | Standard<br>Deviation |
|----------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------|-----------------------|
| <i>Items represent Likert-type scales from 1 (not at all concerned) to 4 (extremely concerned)</i> |                                                         |                   |                       |
| How concerned are you about...                                                                     |                                                         |                   |                       |
| Health Stressors                                                                                   | ... getting COVID-19                                    | 2.70              | 0.90                  |
|                                                                                                    | ... access to medical care                              | 2.53              | 1.00                  |
|                                                                                                    | ... availability of testing                             | 2.61              | 0.90                  |
| Personal Stressors                                                                                 | ... increasing family tensions                          | 2.12              | 1.04                  |
|                                                                                                    | ... juggling family and work                            | 2.22              | 1.08                  |
|                                                                                                    | ... handling kids' schooling                            | 2.07              | 1.11                  |
| Financial Stressors                                                                                | ... the security of your job                            | 2.40              | 1.08                  |
|                                                                                                    | ... losing money on purchases                           | 2.12              | 1.09                  |
|                                                                                                    | ... your ability to pay your bills                      | 2.50              | 1.03                  |
| <i>Items represent Likert-type scales from 1 (not at all likely) to 5 (extremely likely)</i>       |                                                         |                   |                       |
| How likely are you to search...                                                                    |                                                         |                   |                       |
| Use of Travel Research and Applications                                                            | ... travel review sites, apps, or blogs                 | 2.84              | 1.31                  |
|                                                                                                    | ... destination marketing sites or apps                 | 2.94              | 1.33                  |
|                                                                                                    | ... brand mobile apps and updates                       | 2.78              | 1.31                  |
| Use of General News Sources                                                                        | ... COVID-19 health data                                | 2.05              | 0.99                  |
|                                                                                                    | ... COVID-19 general stories                            | 2.17              | 0.91                  |
|                                                                                                    | ... COVID-19 impacts on US economy                      | 1.97              | 0.89                  |
| <i>Items represent Likert-type scales from 1 (strongly disagree) to 5 (strongly agree)</i>         |                                                         |                   |                       |
| Trust in Industry                                                                                  | Airlines...                                             | 3.15              | 1.08                  |
|                                                                                                    | Events... will tell us the truth                        | 3.08              | 1.16                  |
|                                                                                                    | Hotels...                                               | 3.13              | 1.15                  |
|                                                                                                    | Airlines...                                             | 3.32              | 1.07                  |
|                                                                                                    | Events... will keep me safe                             | 3.30              | 1.09                  |
|                                                                                                    | Hotels...                                               | 3.39              | 1.08                  |
| <i>Items represent Likert-type scales from 1 (strongly disagree) to 7 (strongly agree)</i>         |                                                         |                   |                       |
| Intentions to Book Future Travel                                                                   | I will book air travel...                               | 3.48              | 2.17                  |
|                                                                                                    | I will book event tickets... within the next six months | 3.28              | 2.09                  |
|                                                                                                    | I will book hotel reservations...                       | 3.77              | 2.14                  |

**Table 1.**  
Mean results for  
factors in the study

In terms of explaining respondents tracking general news regarding the state of the coronavirus and the American economy, two factors showed negative effects: financial (−0.427) and health stressors (−0.111). Personal stressors showed no influence on propensity to follow general news reports. In contrast, financial (0.218) and personal stressors (0.217) showed significant positive effects on propensity to engage in travel research. However, the path between health stressor concern and travel research was not significant in this model.

The coefficient of determination for this sample's intention to book travel services, the adjusted  $R^2$ , is a moderate value of 0.483. Travel research and industry trust jointly explain the variance in a respondent's intention to book travel within six months of the survey (48.3%). The comparative effect sizes of these two predictors of bookings are relatively strong for travel research (0.562) but very low for industry trust (0.041). In turn, travel research explained the variance in perceptions of trust in industry (17.8%) with a moderate effect size of 0.216.

#### 4.2 Comparison of pleasure and business travelers

A grouping variable was created to distinguish experienced leisure from experienced business travelers using two items measured on seven-point scales: pleasure traveler

|                                                                                                    |                                         |          |                       |       |                  |       | Travel booking intentions |
|----------------------------------------------------------------------------------------------------|-----------------------------------------|----------|-----------------------|-------|------------------|-------|---------------------------|
| Latent variable                                                                                    | Item descriptor                         | Loadings | Composite reliability | AVE   | Cronbach's Alpha | Rho-A |                           |
| <i>Items represent Likert-type scales from 1 (not at all concerned) to 4 (extremely concerned)</i> |                                         |          |                       |       |                  |       |                           |
| How concerned are you about...                                                                     |                                         |          |                       |       |                  |       |                           |
| Health Stressors                                                                                   | ...getting COVID-19                     | 0.825    | 0.859                 | 0.670 | 0.754            | 0.758 | <div>215</div>            |
|                                                                                                    | ...access to medical care               | 0.829    |                       |       |                  |       |                           |
|                                                                                                    | ...availability of testing              | 0.802    |                       |       |                  |       |                           |
| Personal Stressors                                                                                 | ...increasing family tensions           | 0.835    | 0.870                 | 0.690 | 0.776            | 0.780 |                           |
|                                                                                                    | ...juggling family and work             | 0.853    |                       |       |                  |       |                           |
|                                                                                                    | ...handling kids' schooling             | 0.804    |                       |       |                  |       |                           |
| Financial Stressors                                                                                | ...the security of your job             | 0.836    | 0.870                 | 0.691 | 0.777            | 0.778 |                           |
|                                                                                                    | ...losing money on purchases            | 0.804    |                       |       |                  |       |                           |
|                                                                                                    | ...your ability to pay your bills       | 0.853    |                       |       |                  |       |                           |
| <i>Items represent Likert-type scales from 1 (not at all likely) to 5 (extremely likely)</i>       |                                         |          |                       |       |                  |       |                           |
| How likely are you to search...                                                                    |                                         |          |                       |       |                  |       |                           |
| Use of Travel Research and Applications                                                            | ... travel review sites, apps, or blogs | 0.880    | 0.933                 | 0.824 | 0.893            | 0.893 |                           |
|                                                                                                    | ... destination marketing sites or apps | 0.921    |                       |       |                  |       |                           |
|                                                                                                    | ... brand mobile apps and updates       | 0.921    |                       |       |                  |       |                           |
| Use of General News Sources                                                                        | ... COVID-19 health data                | 0.912    | 0.853                 | 0.662 | 0.751            | 0.862 |                           |
|                                                                                                    | ... COVID-19 general stories            | 0.762    |                       |       |                  |       |                           |
|                                                                                                    | ... COVID-19 impacts on US economy      | 0.757    |                       |       |                  |       |                           |
| <i>Items represent Likert-type scales from 1 (strongly disagree) to 5 (strongly agree)</i>         |                                         |          |                       |       |                  |       |                           |
| Trust in Industry                                                                                  | Airlines...                             | 0.852    | 0.853                 | 0.662 | 0.751            | 0.862 |                           |
|                                                                                                    | Events... will tell us the truth        | 0.857    |                       |       |                  |       |                           |
|                                                                                                    | Hotels...                               | 0.836    |                       |       |                  |       |                           |
|                                                                                                    | Airlines...                             | 0.831    |                       |       |                  |       |                           |
|                                                                                                    | Events... will keep me safe             | 0.837    |                       |       |                  |       |                           |
|                                                                                                    | Hotels...                               | 0.817    |                       |       |                  |       |                           |
| <i>Items represent Likert-type scales from 1 (strongly disagree) to 7 (strongly agree)</i>         |                                         |          |                       |       |                  |       |                           |
| Intentions to Book Travel Within Six Months                                                        |                                         |          | 0.945                 | 0.850 | 0.912            | 0.913 |                           |
|                                                                                                    | I will book air travel tickets          | 0.906    |                       |       |                  |       |                           |
|                                                                                                    | I will book event reservations          | 0.922    |                       |       |                  |       |                           |
|                                                                                                    | I will book hotel reservations          | 0.918    |                       |       |                  |       |                           |

Table 2. Loadings and reliability for reflective model factors

**Table 2.**  
Loadings and  
reliability for reflective  
model factors

**Table 3.**  
Fornell-Larcker's  
criterion analysis for  
discriminant validity

|                                                        | Intentions<br>to book<br>future<br>travel | Health<br>stressors | Personal<br>stressors | Financial<br>stressors | Use of travel<br>research sites<br>and<br>applications | Use of<br>general<br>news<br>sources | Trust in<br>industry |
|--------------------------------------------------------|-------------------------------------------|---------------------|-----------------------|------------------------|--------------------------------------------------------|--------------------------------------|----------------------|
| Intentions to<br>Book Future<br>Travel                 | 0.922                                     |                     |                       |                        |                                                        |                                      |                      |
| Health<br>Stressors                                    | 0.204                                     | 0.818               |                       |                        |                                                        |                                      |                      |
| Personal<br>Stressors                                  | 0.451                                     | 0.402               | 0.831                 |                        |                                                        |                                      |                      |
| Financial<br>Stressors                                 | 0.404                                     | 0.438               | 0.554                 | 0.831                  |                                                        |                                      |                      |
| Use of Travel<br>Research<br>Sites and<br>Applications | 0.680                                     | 0.145               | 0.322                 | 0.321                  | 0.908                                                  |                                      |                      |
| Use of General<br>News Sources                         | -0.139                                    | -0.463              | -0.201                | -0.281                 | -0.151                                                 | 0.813                                |                      |
| Trust in<br>Industry                                   | 0.414                                     | -0.024              | 0.224                 | 0.116                  | 0.422                                                  | 0.045                                | 0.838                |

**Table 4.**  
Heterotrait-monotrait  
(HTMT) ratio

|                                                        | Intentions<br>to book<br>future<br>travel | Health<br>stressors | Personal<br>stressors | Financial<br>stressors | Use of travel<br>research sites<br>and<br>applications | Use of<br>general<br>news<br>sources | Trust in<br>industry |
|--------------------------------------------------------|-------------------------------------------|---------------------|-----------------------|------------------------|--------------------------------------------------------|--------------------------------------|----------------------|
| Intentions to<br>Book Future<br>Travel                 |                                           |                     |                       |                        |                                                        |                                      |                      |
| Health<br>Stressors                                    | 0.247                                     |                     |                       |                        |                                                        |                                      |                      |
| Personal<br>Stressors                                  | 0.538                                     | 0.521               |                       |                        |                                                        |                                      |                      |
| Financial<br>Stressors                                 | 0.474                                     | 0.573               | 0.705                 |                        |                                                        |                                      |                      |
| Use of Travel<br>Research<br>Sites and<br>Applications | 0.752                                     | 0.176               | 0.387                 | 0.381                  |                                                        |                                      |                      |
| Use of General<br>News Sources                         | 0.169                                     | 0.568               | 0.253                 | 0.359                  | 0.193                                                  |                                      |                      |
| Trust in<br>Industry                                   | 0.086                                     | 0.052               | 0.261                 | 0.133                  | 0.461                                                  | 0.086                                |                      |

(144 records), where taking lots of pleasure trips > 4 and business trips < 4; business traveler (34 records), where business trips > 4 and pleasure trips < 4. Records of people selecting the item scale midpoint of 4 were disregarded. Multi-group analysis was conducted in SmartPLS using trip experience type as a grouping factor.

Table 6 provides insights. Experienced pleasure travelers showed a stronger relationship between concern about financial stressors and using travel research sources, compared to

|                                                                             | Coefficients | T statistics | P values | CI (2.5%) | CI (97.5%) | Test Result               |
|-----------------------------------------------------------------------------|--------------|--------------|----------|-----------|------------|---------------------------|
| Health Stressors -> Use of General News Sources                             | -0.427       | 10.963       | 0.000    | -0.504    | -0.349     | <i>H1</i> : Supported     |
| Health Stressors -> Use of Travel Research and Applications                 | -0.038       | 0.747        | 0.455    | -0.138    | 0.062      | <i>H2</i> : Not supported |
| Financial Stressors -> Use of General News Sources                          | -0.111       | 2.408        | 0.016    | -0.203    | -0.02      | <i>H3</i> : Supported     |
| Financial Stressors -> Use of Travel Research and Applications              | 0.218        | 4.049        | 0.000    | 0.111     | 0.319      | <i>H4</i> : Supported     |
| Personal Stressors -> Use of General News Sources                           | 0.032        | 0.724        | 0.469    | -0.059    | 0.119      | <i>H5</i> : Not supported |
| Personal Stressors -> Use of Travel Research and Applications               | 0.217        | 4.067        | 0.000    | 0.114     | 0.322      | <i>H6</i> : Supported     |
| Use of General News Sources -> Intentions to Book Future Travel             | -0.055       | 1.719        | 0.086    | -0.118    | 0.006      | <i>H7</i> : Not supported |
| Use of Travel Research and Applications -> Intentions to Book Future Travel | 0.604        | 18.548       | 0.000    | 0.539     | 0.665      | <i>H8</i> : Supported     |
| Use of Travel Research and Applications -> Trust in Industry                | 0.422        | 10.301       | 0.000    | 0.341     | 0.501      | <i>H9</i> : Supported     |
| Trust in Industry -> Intentions to Book Future Travel                       | 0.162        | 4.326        | 0.000    | 0.088     | 0.236      | <i>H10</i> : Supported    |

Table 5.  
Coefficients

|                                                                             | Coefficients-difference<br>Pleasure-business | t-Value | p-Value |
|-----------------------------------------------------------------------------|----------------------------------------------|---------|---------|
| Health Stressors -> Use of General News Sources                             | 0.227                                        | 1.268   | 0.207   |
| Health Stressors -> Use of Travel Research and Applications                 | 0.262                                        | 1.076   | 0.284   |
| Financial Stressors -> Use of General News Sources                          | -0.285                                       | 1.343   | 0.181   |
| Financial Stressors -> Use of Travel Research and Applications              | 0.916                                        | 3.640   | 0.000   |
| Personal Stressors -> Use of General News Sources                           | -0.001                                       | 0.004   | 0.997   |
| Personal Stressors -> Use of Travel Research Applications                   | -0.605                                       | 2.065   | 0.041   |
| Use of General News Sources -> Intentions to Book Future Travel             | -0.163                                       | 0.891   | 0.375   |
| Use of Travel Research and Applications -> Intentions to Book Future Travel | 0.172                                        | 0.806   | 0.421   |
| Use of Travel Research and Applications -> Trust in Industry                | -0.546                                       | 2.503   | 0.013   |
| Trust in Industry -> Intentions to Book Future Travel                       | -0.205                                       | 0.765   | 0.445   |

Table 6.  
Comparison between  
pleasure and business  
traveler structural  
relationships (*H11*)

experienced business travelers. Business travelers showed larger effects of personal stressors on travel research and of travel research on trust in the industry than did people traveling primarily for pleasure. Demographics showed that business travelers were predominantly male, younger, married and college-educated. No significant effects of gender were seen on the PLS-SEM model in a follow-up comparison of multi-group analysis based on gender as a grouping variable.

## 5. Discussion

This paper focused on the attention paid by consumers to two sources of information during the stressful early months of the COVID-19 pandemic in spring of 2020. The authors focused on factors that might enhance or impede intentions to book travel. Though the crisis was evolving over time, major findings point to specific consumer behaviors worth considering when marketing travel in risky environments.

### 5.1 Key findings

**5.1.1 The impact of COVID-19-related stressors.** Following the S-O-R logic of [Mehrabian and Russell \(1974\)](#), worry about crisis-related stressors was significantly related to information searching behavior of respondents. However, relationships varied depending on stressor type. First, health and financial stressors were inversely related to people's propensity to search for general news on the crisis. Even though health stressors were deemed more worrisome (closer to three on a four-point scale) than personal or financial stressors, respondents with higher health stress avoided news of the COVID-19 crisis. This finding is contrary to expectations set by the extant literature ([Bogg and Vo, 2014](#)) where health concerns for a family member were associated with more frequent health-related Internet searches. To put this in its larger context, [Bogg and Vo \(2014\)](#) note that alternatives to the Internet are likely to be used as information sources, including "consulting with a physician, attempting self-remedies, or seeking advice from close others" (p. 9).

Both financial and personal stressors had positive associations with travel searches. This could be explained in two ways. First, travel research could be an antidote to personal and financial stress (providing some sort of emotional release from experienced distress). This was supported by respondents identifying travel research as a dominant relaxation technique during shutdowns. Relaxation benefits would counter either financial or personal stress. Armchair travel is not affected by present limitations on expenditures; it could also offset psychological demands of family/work issues. A second plausibility is that travel research was pursued by respondents wanting to verify the actual risks (to their wallet or to their family) of attempting to take trips within near future. Either explanation would rationalize a positive relationship between travel research activity and level of concern about financial and personal stressors. That health concerns had no significant relationship with travel research was unexpected, since of the three types of stressors, it could be imagined that health concerns would be a core factor in reducing travel research or travel planning due to the widespread beliefs that travelers would have a higher chance of contracting the coronavirus ([Ellis, 2020](#)).

**5.1.2 Searching general COVID-19 news versus conducting travel research.** One notable finding was the difference in levels of activity between searching general news and conducting travel research during the initial stages of the COVID-19 crisis. Our study demonstrated that, for this sample of 528 consumers, avid following of coronavirus news was low, constituting an S-O-R avoidance strategy ([Mehrabian and Russell, 1974](#)). Moreover, general news searching did not appear to have any significant impact on booking intentions. A small percentage of the sample (9.6%) actively pursued general COVID-19 news with detailed reports (6.2%). These findings are inconsistent with documented spikes in Internet searching in times of risk ([Reintjes et al., 2016](#)). One plausible explanation for low attention to general COVID-19 news is the lack of immediate personal relevance to consumers at the time of the study. People tend to search information more actively when information is necessary to achieve specific solutions or goals ([Punj and Staelin, 1983](#)).

In contrast to limited respondent searching on general COVID-19 news, our study showed that the sample researched future travel destinations as a relaxation method during shelter-in-place periods (63.8%) by visiting online travel resources (34.4%), printed travel magazine (16.%) or a mixture of sources (12.5%). This represents an S-O-R approach strategy

(Mehrabian and Russell, 1974) and is consistent with Ayeh *et al.* (2013), who found that perceived enjoyment or hedonic value was significantly influential in determining people's intentions to use online sources for travel planning. Relaxation through travel research becomes its own motivation-whether or not the trip is ever taken.

*5.1.3 The role of trust in predicting booking intentions.* Subjects reported moderate trust that airlines, hotels and event venues would be truthful about risks and their ability to keep consumers safe. Trust scores ranged from 3.08 to 3.40 on a scale where 5 indicated high trust. This suggested that consumer trust was not deterred by health concerns at this stage of the COVID-19 pandemic in the final days of April 2020. The study showed significant effects of travel research on trust and booking intentions both. This underscores the close association of these three constructs as depicted in Figure 1. As in previous studies, propensity to pursue travel information (rather than general news) correlates with perceptions of travel industry trustworthiness and consumer booking behaviors (Amaro and Durante, 2015).

Although prior research reported that gender was a significant moderator between risk perception and booking intention, this study found no difference based on gender. Conversely, business versus pleasure travelers were distinct in that only pleasure travelers showed a significant relationship between financial concerns and travel research activity, which is consistent with prior research documenting that leisure travelers will actively seek more information to minimize financial risks (Tan and Chen, 2012). Business travelers are inelastic to price changes (Knutson, 1988) and able to pay more than leisure travelers.

### *5.2 Implications for practitioners and theory*

Our findings suggest that people are not seeking out general COVID-19 news in any significant way related to health concerns. They do however, search online for other stimulation, including travel research. Travel research was perceived as a source of entertainment during house-bound coronavirus lock-downs. The lack of attention to general news about COVID-19 raises an interesting problem for practitioners in the travel marketing field. We did not find sufficient direct evidence of consumer interest in health information to justify the expense of revamping travel websites or applications to offer precise COVID-19 information to potential travelers. Moreover, consumer avoidance of crisis news might lessen the negative impact of the coronavirus on travel decisions, thus benefitting travel firms. Negative impacts on travel have been evidenced during multiple traumatic events, such as Ebola (Petersen *et al.*, 2017), COVID-19 (Bae and Chang, 2020); and terrorist attacks (Stepchenkova *et al.*, 2019).

However, from ethical and social marketing perspectives, general news can be instrumental in informing the public about preventive measures. If respondents prefer to ignore general sources of news about the coronavirus, then other methods of imparting learning about desirable coronavirus protocols are required. Already, application-design companies have undertaken a critical role in developing COVID-19 planning features. Yelp added a COVID-19 updates section outlining business COVID-19 practices. Google Maps has a service to alert users about COVID-19-related travel restrictions. Similarly, the travel industry has the potential and possibly a moral imperative to become a critical source of COVID-19 information for potential travelers and citizens (He and Harris, 2020).

The travel industry has a role to play in instructing the public about the virus and implications for travelers. However, the rationale for doing so is not what would be expected. The travel industry has a better chance at accessing the eyes and ears of the public than do general media news outlets—at least with respect to online searching activity measured in this study. In addition, the present study found that respondents viewed the travel industry as moderately trustworthy, which makes the travel industry voice an important source of COVID-19 safety information. This is further reflected in the fact that benchmark travel

companies have made great efforts to revise their websites, email communications and mobile applications to be transparent with safety and sanitation measures (Ma *et al.*, 2019).

The positive relationship between financial stressors and engagement in travel research confirms that financial protection in booking travel is a core marketing message (Bashir *et al.*, 2018). From a travel marketing perspective, the present study has various implications. First, our findings reaffirm the importance of concrete booking strategies that reduce perceived and real financial risks that negatively influence consumer trust in travel companies. Second, this study may help travel marketers to understand the uncertainty that potential travel purchasers face so they can prioritize their communications. Guarantee language needs to explain reimbursement policies clearly. Such clarity, thereby, can generate consumer loyalty to a brand when booking activity resumes. Lastly, this study might encourage policymakers to regard the issues of consumer rights and coverage of losses as important ones in handling a crisis like this and stimulating resumption of travel activity.

From a theoretical stance, this study has demonstrated the continued usefulness of theory on S-O-R relationships (Mehrabian and Russell, 1974) by demonstrating that concern with crisis stressors partially explains the use of information searches, and indirectly, travel booking intentions. Our study also shows that the three stressors studied (i.e. health, financial and personal) are discrete constructs that may operate uniquely in their impacts on information search. Propensity to engage in travel research while sheltering-in-place was positively influenced by personal and financial stressors, but not by health stressors.

Concomitantly, this study builds on previous tourism research by treating health and financial concerns separately. Reisinger and Mavondo (2005) aggregated health and financial risks into a single factor because it was positively associated with traveler anxiety, which negatively impacted intentions to book future travel. In contrast, we found that financial concerns positively associated with travel research but not health concerns.

### *5.3 Limitations and future research*

One limitation is the lack of data on respondents' personal traits that might influence their level of interest in general COVID-19 news. In particular, Bogg and Vo (2014) have suggested the important role of the personality trait of openness in health-related Internet search behavior. Another issue is that information use may vary across consumers at different stages of the crisis. Since this study was a cross-sectional inspection of consumer behavior as a defined point in time, such investigation was not possible. We have noted that consumers can explore information to satisfy curiosity about travel destinations and to pass time during the coronavirus. Collecting research data that would permit further comparisons between these two temporal states (i.e. intentional product search versus entertainment) would be useful, following prior studies such as Cui *et al.* (2016). Research could also closely examine the subgroup of individuals who reported using travel research as a relaxation technique to determine their unique profiles. Online travel sites have been encouraged to improve their marketing efforts to cater to hedonic shopping values of travelers (Mohseni *et al.*, 2018).

Future research should also investigate how travel resources and mobile applications reduce perceived risks of traveling during high-risk conditions. Based on our findings that business travelers used more travel apps more frequently, they are valuable target markets for mobile travel applications. Business travelers are more focused on local search goals; they use their mobile phone for directions and destination information (Memarzadeh *et al.*, 2016).

Researchers should consider creating experimental studies to simulate marketing messages to allow further comparison of the relationships between health, financial and personal stressors. It should also compare searches about cleaning protocols against marketing appeals to offset financial losses. Given that we found the different stressors to

have diverse relationships with information searching, we feel such future research would be warranted. Travel booking intentions

## 6. Conclusion

This paper investigated an S-O-R model to explore Internet searching while US residents were sheltering-in-place due to the COVID-19 pandemic in April 2020. Respondents were more likely to research travel information than search for general news about the coronavirus. Health stressors were not significant drivers of information searching. Financial stress was found to have significant negative effects on consumption of general news. Conversely, financial and personal stressors showed significant positive effects on propensity to engage in travel research. Travel research was deemed a high-ranking relaxation technique by respondents. Thus, travel marketers can contribute to social marketing of coronavirus protocols since travel sources were preferred over general news sources.

Traveler type also impacted the relationship between stress and consumption of travel information. Financial stress is more significant for pleasure travelers. Thus, travel providers should clearly communicate how financial risk can be reduced (e.g. cancellation policy) and provide flexibility in booking to reduce stress. While trust in the travel industry was reported above the scale midpoint, booking intentions within six months fell below the midpoint. This suggests the importance of company guarantees to motivate travel decisions in times of crisis.

## References

- Ali, F., Rasoolimanesh, S.M., Sarstedt, M., Ringle, C.M. and Ryu, K. (2018), "An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research", *International Journal of Contemporary Hospitality Management*, Vol. 30 No. 2, pp. 514-538, doi: [10.1108/IJCHM-10-2016-0568](https://doi.org/10.1108/IJCHM-10-2016-0568).
- Amaro, S. and Duarte, P. (2015), "An integrative model of consumers' intentions to purchase travel online", *Tourism Management*, Vol. 46, pp. 64-79, doi: [10.1016/j.tourman.2014.06.006](https://doi.org/10.1016/j.tourman.2014.06.006).
- Ayeh, J.K., Au, N. and Law, R. (2013), "Predicting the intention to use consumer-generated media for travel planning", *Tourism Management*, Vol. 35, pp. 132-143, doi: [10.1016/j.tourman.2012.06.010](https://doi.org/10.1016/j.tourman.2012.06.010).
- Bae, S. and Chang, P.J. (2020), "The effect of coronavirus disease-19 risk perception on behavioural intention towards 'untact' tourism in South Korea during the first wave of the pandemic", *Current Issues in Tourism*. doi: [10.1080/13683500.2020.1798895](https://doi.org/10.1080/13683500.2020.1798895).
- Bakker, A.B., Westman, M., Hetty van Emmerik, I., Westman, M., Etzion, D. and Chen, S. (2009), "Crossover of positive experiences from business travelers to their spouses", *Journal of Managerial Psychology*, Vol. 24 No. 3, pp. 269-284, doi: [10.1108/02683940910939340](https://doi.org/10.1108/02683940910939340).
- Bashir, S., Anwar, S., Awan, Z., Qureshi, T. and Memon, A. (2018), "A holistic understanding of the prospects of financial loss to enhance shopper's trust to search, recommend, speak positive and frequently visit an online shop", *Journal of Retailing and Consumer Services*, Vol. 42, pp. 169-174, doi: [10.1016/j.jretconser.2018.02.004](https://doi.org/10.1016/j.jretconser.2018.02.004).
- Bogg, T. and Vo, P.T. (2014), "Openness, neuroticism, conscientiousness, and family health and aging concerns interact in the prediction of health-related Internet searches in a representative U.S. sample", *Frontiers in Psychology*, Vol. 5, doi: [10.3389/fpsyg.2014.00370](https://doi.org/10.3389/fpsyg.2014.00370).
- Capriello, A., Mason, P.R., Davis, B. and Crotts, J.C. (2013), "Farm tourism experiences in travel reviews: a cross-comparison of three alternative methods for data analysis", *Journal of Business Research*, Vol. 66 No. 6, pp. 778-785, doi: [10.1016/j.jbusres.2011.09.018](https://doi.org/10.1016/j.jbusres.2011.09.018).
- Chatterjee, P. (2001), *Online Reviews: Do Consumers Use Them?*, Association for Consumer Research, pp. 129-134, available at: <https://ssrn.com/abstract=900158>.

- Chen, J.S. (2000), "A comparison of information usage between business and leisure travelers", *Journal of Hospitality and Leisure Marketing*, Vol. 7 No. 2, pp. 65-76, doi: [10.1300/J150v07n02\\_05](https://doi.org/10.1300/J150v07n02_05).
- Chiu, S.P. and Lin, S.Y. (2011), "Study on risk perceptions of international tourists in India", *African Journal of Business Management*, Vol. 5 No. 7, pp. 2742-2752, doi: [10.5897/AJBM10.1099](https://doi.org/10.5897/AJBM10.1099).
- Cui, F., Liu, Y., Chang, Y., Duan, J. and Li, J. (2016), "An overview of tourism risk perception", *Natural Hazards*, Vol. 82 No. 1, pp. 643-658, doi: [10.1007/s11069-016-2208-1](https://doi.org/10.1007/s11069-016-2208-1).
- do Valle, P. and Assaker, G. (2016), "Using partial least squares structural equation modeling in tourism research: a review of past research and recommendations for future applications", *Journal of Travel Research*, Vol. 55 No. 6, pp. 695-708, doi: [10.1177/0047287515569779](https://doi.org/10.1177/0047287515569779).
- Durante, K.M. and Laran, J. (2016), "The effect of stress on consumer saving and spending", *Journal of Marketing Research*, Vol. 53 No. 5, pp. 814-828, doi: [10.1509/jmr.15.0319](https://doi.org/10.1509/jmr.15.0319).
- Education Week (2020), "School districts' reopening plans: a snapshot", available at: [www.edweek.org/ew/section/multimedia/school-districts-reopening-plans-a-snapshot.html](http://www.edweek.org/ew/section/multimedia/school-districts-reopening-plans-a-snapshot.html) (accessed: 21 August 2020).
- Ellis, E.G. (2020), *The Coronavirus Outbreak Is a Petri Dish for Conspiracy Theories*, available at: [www.wired.com/story/coronavirus-conspiracy-theories/](http://www.wired.com/story/coronavirus-conspiracy-theories/) (accessed 4 November 2020).
- Etherington, L.D. and Turgut, V. (1984), "Establishing a measure of airline preference for business and nonbusiness travelers", *Journal of Travel Research*, Vol. 22, pp. 22-27, doi: [10.1177/004728758402200407](https://doi.org/10.1177/004728758402200407).
- Farooq, A., Laato, S. and Islam, A. (2020), "Impact of online information on self-isolation intention during the COVID-19 pandemic: cross-sectional study", *Journal of Medical Internet Research*, Vol. 22 No. 5, p. 19128, doi: [10.2196/19128](https://doi.org/10.2196/19128).
- Fishbein, M. and Ajzen, I. (1975), *Intention and Behavior: An Introduction to Theory and Research*, Addison-Wesley, Boston, MA.
- Fodness, D. and Murray, B. (1999), "A model of tourist information search behavior", *Journal of Travel Research*, Vol. 37 No. 3, pp. 220-230, doi: [10.1177/004728759903700302](https://doi.org/10.1177/004728759903700302).
- Goh, K.Y., Chu, J. and Wu, J. (2015), "Mobile advertising: an empirical study of temporal and spatial differences in search behavior and advertising response", *Journal of Interactive Marketing*, Vol. 30, pp. 34-45, doi: [10.1016/j.intmar.2014.12.002](https://doi.org/10.1016/j.intmar.2014.12.002).
- Goodman, J.K., Cryder, C.E. and Cheema, A. (2012), "Data collection in a flat world: the strengths and weaknesses of Mechanical Turk samples", *Journal of Behavioral Decision Making*, Vol. 26 No. 3, pp. 213-224, doi: [10.1002/bdm.1753](https://doi.org/10.1002/bdm.1753).
- Hair, J.F., Sarstedt, M., Pieper, T.M. and Ringle, C.M. (2012), "The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications", *Long Range Planning*, Vol. 45 Nos 5-6, pp. 320-340, doi: [10.1016/j.lrp.2012.09.008](https://doi.org/10.1016/j.lrp.2012.09.008).
- He, H. and Harris, L. (2020), "The impact of COVID-19 pandemic on corporate social responsibility and marketing philosophy", *Journal of Business Research*, Vol. 116, pp. 176-182, doi: [10.1016/j.jbusres.2020.05.030](https://doi.org/10.1016/j.jbusres.2020.05.030).
- Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), "A new criterion for assessing discriminant validity in variance-based structural equation modeling", *Journal of the Academy of Marketing Science*, Vol. 43 No. 1, pp. 115-135, doi: [10.1007/s11747-014-0403-8](https://doi.org/10.1007/s11747-014-0403-8).
- Kim, M.J., Lee, C.K. and Jung, T. (2020), "Exploring consumer behavior in virtual reality tourism using an extended stimulus-organism-response model", *Journal of Travel Research*, Vol. 59 No. 1, pp. 69-89, doi: [10.1177/0047287518818915](https://doi.org/10.1177/0047287518818915).
- Knutson, B.J. (1988), "Frequent travelers: making them happy and bringing them back", *The Cornell Hotel and Restaurant Administration Quarterly*, Vol. 29 No. 1, pp. 82-87, doi: [10.1177/001088048802900121](https://doi.org/10.1177/001088048802900121).
- Laato, S., Islam, N., Farooq, A. and Dhir, A. (2020), "Unusual purchasing behavior during the early stages of the COVID-19 pandemic: the stimulus-organism-response approach", *Journal of Retailing and Consumer Services*, Vol. 57, doi: [10.1016/j.jretconser.2020.102224](https://doi.org/10.1016/j.jretconser.2020.102224).

- Law, R., Buhalis, D. and Cobanoglu, C. (2014), "Progress on information and communication technologies in hospitality and tourism", *International Journal of Contemporary Hospitality Management*, Vol. 26 No. 5, pp. 727-750, doi: [10.1108/IJCHM-08-2013-0367](https://doi.org/10.1108/IJCHM-08-2013-0367).
- Lazarus, R.S. and Folkman, S. (1984), *Stress, Appraisal, and Coping*, Springer, New York, NY.
- Li, J., Nguyen, T.H.H. and Coca-Stefaniak, J.A. (2020), "Coronavirus impacts on post-pandemic planned travel behaviours", *Annals of Tourism Research*. doi: [10.1016/j.annals.2020.102964](https://doi.org/10.1016/j.annals.2020.102964).
- Long, H. and van Dam, A. (2020), "April 2020 jobs report", available at: [www.washingtonpost.com/business/2020/05/08/april-2020-jobs-report/](https://www.washingtonpost.com/business/2020/05/08/april-2020-jobs-report/) (accessed: 20 August 2020).
- Ma, J., Tse, Y.K., Wang, X. and Zhang, M. (2019), "Examining customer perception and behaviour through social media research—an empirical study of the United Airlines overbooking crisis", *Transportation Research Part E: Logistics and Transportation Review*, Vol. 127, pp. 192-205, doi: [10.1016/j.tre.2019.05.004](https://doi.org/10.1016/j.tre.2019.05.004).
- McLean, G., Osei-Frimpong, K., Wilson, A. and Pitardi, V. (2020), "How live chat assistants drive travel consumers' attitudes, trust and purchase intentions", *International Journal of Contemporary Hospitality Management*, Vol. 32 No. 5, pp. 1795-1812, doi: [10.1108/IJCHM-07-2019-0605](https://doi.org/10.1108/IJCHM-07-2019-0605).
- Mehrabian, A. and Russell, J.A. (1974), *An Approach to Environmental Psychology*, MIT Press, Boston, MA.
- Memarzadeh, F., Blum, S. and Adams, C. (2016), "Business travelers' intention to purchase: the application of technology acceptance model (TAM)", *Journal of Quality Assurance in Hospitality and Tourism*, Vol. 17 No. 4, pp. 412-424, doi: [10.1080/1528008X.2015.1096755](https://doi.org/10.1080/1528008X.2015.1096755).
- Mohseni, S., Jayashree, S., Rezaei, S., Kasim, A. and Okumus, F. (2018), "Attracting tourists to travel companies' websites: the structural relationship between website brand, personal value, shopping experience, perceived risk and purchase intention", *Current Issues in Tourism*, Vol. 21 No. 6, pp. 616-645, doi: [10.1080/13683500.2016.1200539](https://doi.org/10.1080/13683500.2016.1200539).
- Moschis, G.P. (2007), "Stress and consumer behavior", *Journal of the Academy of Marketing Science*, Vol. 35 No. 3, pp. 430-444, doi: [10.1007/s11747-007-0035-3](https://doi.org/10.1007/s11747-007-0035-3).
- Mowbray, H. (2020), "In Beijing, Coronavirus 2019-nCoV has created a siege mentality", *British Medical Journal*, Vol. 368, doi: [10.1136/bmj.m516](https://doi.org/10.1136/bmj.m516).
- Musinski, B. (2020), "Planning and flexibility are key as students go back to school", available at: [www.usnews.com/education/Coronavirus-and-schools-guide](https://www.usnews.com/education/Coronavirus-and-schools-guide) (accessed: 1 August 2020).
- Pappas, N. (2016), "Marketing strategies, perceived risks, and consumer trust in online buying behaviour", *Journal of Retailing and Consumer Services*, Vol. 29, pp. 92-103, doi: [10.1016/j.jretconser.2015.11.007](https://doi.org/10.1016/j.jretconser.2015.11.007).
- Pesonen, J. and Pasanen, K. (2017), "A closer look at tourist information search behaviour when travelling abroad: what is the role of online marketing in choice of destination?", *Information and Communication Technologies in Tourism (Tourism Proceedings of the International Conference in Rome, Italy)*, Springer International Publishing, Cham, Switzerland, pp. 431-443, doi: [10.1007/978-3-319-51168-9\\_31](https://doi.org/10.1007/978-3-319-51168-9_31).
- Petersen, J., Simons, H., Patel, D. and Freeman, J. (2017), "Early detection of perceived risk among users of a UK travel health website compared with Internet search activity and media coverage during the 2015–2016 Zika virus outbreak: an observational study", *BMJ Open*, Vol. 7, doi: [10.1136/bmjopen-2017-015831](https://doi.org/10.1136/bmjopen-2017-015831).
- Prestin, A. and Nabi, R. (2020), "Media prescriptions: exploring the therapeutic effects of entertainment media on stress relief, illness symptoms, and goal attainment", *Journal of Communication*, Vol. 70 No. 2, pp. 145-170, doi: [10.1093/joc/jqaa001](https://doi.org/10.1093/joc/jqaa001).
- Punj, G.N. and Staelin, R. (1983), "A model of consumer information search behavior for new automobiles", *Journal of Consumer Research*, Vol. 9 No. 4, pp. 366-380, doi: [10.1086/208931](https://doi.org/10.1086/208931).
- Purgato, M., Gross, A.L., Betancourt, T., Bolton, P., Bonetto, C., Gastaldon, C., Gordon, J., O'Callaghan, P., Papola, D., Peltonen, K. and Punamaki, R.L. (2018), "Focused psychosocial interventions for children in low-resource humanitarian settings: a systematic review and individual participant

- data meta-analysis", *The Lancet Global Health*, Vol. 6 No. 4, pp. e390-e400, doi: [10.1016/S2214-109X\(18\)30046-9](https://doi.org/10.1016/S2214-109X(18)30046-9).
- Reintjes, R., Das, E., Klemm, C., Richardus, J.H., Keßler, V. and Ahmad, A. (2016), "Time series analysis of the 2009/10 influenza A / H<sub>1</sub>N<sub>1</sub> epidemiology, media attention, risk perception and public reactions in 5 European countries", *Pandemic Public Health Paradox, PLoS ONE*, Vol. 11 No. 3, p. e0151258, doi: [10.1371/journal.pone.0151258](https://doi.org/10.1371/journal.pone.0151258).
- Reisinger, Y. and Mavondo, F. (2005), "Travel anxiety and intentions to travel internationally: implications of travel risk perception", *Journal of Travel Research*, Vol. 43 No. 3, pp. 212-225, doi: [10.1177/0047287504272017](https://doi.org/10.1177/0047287504272017).
- Shmueli, G., Ray, S., Estrada, J.M.V. and Chatla, S.B. (2016), "The elephant in the room: predictive performance of PLS model", *Journal of Business Research*, Vol. 69 No. 10, pp. 4552-4564, doi: [10.1016/j.jbusres.2016.03.049](https://doi.org/10.1016/j.jbusres.2016.03.049).
- Sotiriadis, M.D. (2017), "Sharing tourism experiences in social media", *International Journal of Contemporary Hospitality Management*, Vol. 29 No. 1, pp. 179-225, doi: [10.1108/IJCHM-05-2016-0300](https://doi.org/10.1108/IJCHM-05-2016-0300).
- Stepchenkova, S., Su, L. and Shichkova, E. (2019), "Intention to travel internationally and domestically in unstable world", *International Journal of Tourism Cities*, Vol. 5 No. 2, pp. 232-246, doi: [10.1108/IJTC-01-2018-0012](https://doi.org/10.1108/IJTC-01-2018-0012).
- Tan, W.K. and Chen, T.H. (2012), "The usage of online tourist information sources in tourist information search: an exploratory study", *The Service Industries Journal*, Vol. 32 No. 3, pp. 451-476, doi: [10.1080/02642069.2010.529130](https://doi.org/10.1080/02642069.2010.529130).
- Torales, J., O'Higgins, M., Castaldelli-Maia, J. and Ventriglio, A. (2020), "The outbreak of COVID-19 coronavirus and its impact on global mental health", *International Journal of Social Psychiatry*, Vol. 66 No. 4, pp. 317-320, doi: [10.1177/0020764020915212](https://doi.org/10.1177/0020764020915212).
- van Giesen, R.I. and Pieters, R. (2019), "Climbing out of an economic crisis: a cycle of consumer sentiment and personal stress", *Journal of Economic Psychology*, Vol. 70, pp. 109-124, doi: [10.1016/j.joep.2018.12.004](https://doi.org/10.1016/j.joep.2018.12.004).
- WanKohn, S.R., Ong, A. and Pang, A. (2015), "Parody social media accounts: influence and impact on organizations during crisis", *Public Relations Revelations*, Vol. 41 No. 3, pp. 381-385, doi: [10.1016/j.pubrev.2015.01.002](https://doi.org/10.1016/j.pubrev.2015.01.002).
- Xiang, Z., Wang, D., O'Leary, J.T. and Fesenmaier, D.R. (2015), "Adapting to the Internet: trends in travelers' use of the web for trip planning", *Journal of Travel Research*, Vol. 54 No. 4, pp. 511-527, doi: [10.1177/0047287514522883](https://doi.org/10.1177/0047287514522883).
- Xu, J., Benbasat, I. and Cenfetelli, R.T. (2014), "The nature and consequences of trade-off transparency in the context of recommendation agents", *MIS Quarterly*, Vol. 38 No. 2, pp. 379-406, doi: [10.25300/MISQ/2014/38.2.03](https://doi.org/10.25300/MISQ/2014/38.2.03).
- Yang, H. and Lee, H. (2019), "Understanding user behavior of virtual personal assistant devices", *Information Systems and e-Business Management*, Vol. 17, pp. 65-87, doi: [10.1007/s10257-018-0375-1](https://doi.org/10.1007/s10257-018-0375-1).
- Yang, E.C.L., Khoo-Lattimore, C. and Arcodia, C. (2017), "A systematic literature review of risk and gender research in tourism", *Tourism Management*, Vol. 58, pp. 89-100, doi: [10.1016/j.tourman.2016.10.011](https://doi.org/10.1016/j.tourman.2016.10.011).

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