The Effect of COVID-19 on hotel booking intentions: Investigating the roles of message appeal type and brand loyalty

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ABSTRACT

The unprecedented global health concerns pertaining to COVID-19 have impacted the hotel industry. In order to ameliorate such concerns, hotels are sending out marketing communication messages. However, whether the messages effectively impact hotel consumers' behaviors is still unknown. To fill this research gap, this study empirically tested the effect that the perceived severity of COVID-19 (PSC) has on hotel booking intentions as well as the roles of message appeal type (rational vs. emotional) and brand loyalty. The data was collected using a scenario-based online survey (n = 311) and analyzed using hierarchical multiple regression. The rational appeal type had a greater positive influence on hotel booking intentions, which suggests that it is preferable for COVID-19 related messages. The results also indicated that PSC had a negative influence on booking intentions for the low loyalty group, and brand loyalty still played a key role even amidst the COVID-19 crisis.

1. Introduction

What word better describes the impact of the current COVID-19 crisis on the lodging industry than unprecedented? An executive report by the American Hotel and Lodging Association (AHLA) published amid the COVID-19 pandemic showed its devastating effects on the lodging industry. In 2020, 65 % of hotels had an occupancy rate of 50 % or less, and the unemployment rate in the lodging industry was approximately 38 %. Further, only 38 % of U.S. consumers were considering traveling (AHLA, 2020). Even now that the world is months into adapting to this new normal, the occupancy rate for 2021 is still only a little over 50 % (ALHA, 2021).

In a desperate attempt to bring back guests to fill their rooms and survive, hotel brands have been sending out COVID-19 related messages to their consumers via their brand websites, emails, and social media pages. Although it would be ideal if sending just any type of message could persuade potential customers, how consumers perceive communication messages could differ based on various factors, including the receiver's involvement and motivation (Petty and Cacioppo, 1986). Further, certain types of messages are expected to have a greater influence on behavioral intentions than others (Andrews and Shimp, 1990). Given that concerns regarding COVID-19 could influence the persuasiveness of marketing communication messages, an important question arises: Which message appeal type is more effective in the COVID-19

context?

Traditionally, marketing communication messages have often been categorized into two appeal types: rational and emotional. This categorization is referred to as the emotional and rational appeal type framework and has frequently been adopted to investigate the potential outcomes of messages (Albers-Miller and Stafford, 1999b). As an example, a study by Albers-Miller and Stafford (1999a) examined the frequency of appeal types used in advertisements and found that emotional appeals were utilized more for experiential services, while rational appeals were frequently used for utilitarian services. In fact, a handful of empirical studies revealed that the emotional appeal type works better for the hospitality industry. A study conducted by Zhang et al. (2014) revealed that the emotional appeal type had a greater positive influence on purchase intentions for restaurants, whereas the rational appeal type generated more booking intentions for dentists. For the lodging industry, the emotional appeal type had the highest advertising effectiveness (Mattila, 1999) and yielded higher brand attitudes and purchase intentions (Mattila, 2001). However, the results of extant studies regarding appeal type also showed that the effectiveness of each message appeal type varied based on the context, including medium (Stafford and Day, 1995) and price (Burman et al., 2017).

In the COVID-19 context, people's perceptions of the risks associated with COVID-19 are generally high (Dryhurst et al., 2020). The elaboration likelihood model (ELM) suggests that consumers tend to be more

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engaged in the central route when they have the motivation and ability to process information (Petty and Cacioppo, 1986). Hence, it is likely that consumers would have a higher level of elaboration when processing COVID-19 related marketing communication messages from hotel brands. Given this unique context and the variability in the extant literature, an empirical study is needed to investigate the effectiveness of message appeal types in the context of COVID-19.

Existing studies regarding consumers' health-related behaviors have almost exclusively been conducted in tourism and restaurants in the hospitality and tourism context. Accordingly, although COVID-19 has had a devastating impact on the lodging industry, it has provided a unique context in which consumers' health-related behaviors could be examined in a lodging industry setting. The health belief model (HBM), which is one of the most widely adopted health-related behavior models, states that how serious and susceptible people perceive a disease to be influences their behaviors (Rosenstock, 1974). However, the model has only been adopted in the restaurant context, and previous studies discovered that the perceived severity of a disease—specifically, foodborne illness—negatively influences future behavioral intentions (Ali et al., 2019; Harris et al., 2018). Hence, there is a need for academic studies that investigate the influence of customers' concerns regarding COVID-19 and its possible effects on consumer behaviors in the lodging context.

In addition, the importance of loyalty has been studied in various hospitality and tourism-related contexts (e.g., Shoemaker and Lewis, 1999; Kandampully et al., 2015; Tanford, 2016; Tepeci, 1999). Specifically, consumer brand loyalty has been proven to work like a magic wand and is closely related to various positive outcomes, including repurchase intentions (Chi and Yeh, 2009; Oliver, 1999). However, given that the COVID-19 era is often described as unprecedented, without empirical evidence, the extant literature may not provide sufficient evidence that brand loyalty still works its magic even in a pandemic context.

The hospitality industry is built on reciprocal interactions between service providers and recipients that involve the exchange of services and experiences (King, 1995). However, the focus of recent COVID-19 related studies has primarily been from the service provider's perspective. Despite the fact that consumers' decision-making processes may have been influenced by the unprecedented COVID-19 crisis, to date little has been done to investigate influence of COVID-19 on consumer behavior—especially in the lodging context. one recent study that did examine such influences revealed interesting findings in that the relationship between perceived health status and anxiety is negatively moderated by the length of stay, which suggests a need for more studies in this context (Wong and Yang, 2020).

The objectives of this study were to provide answers to the following questions:

(1) How do consumers' perceptions of the severity of COVID-19 influence their hotel booking intentions?
(2) Which appeal type—rational or emotional—is likely to have a greater influence on hotel booking intentions during the COVID-19 pandemic?
(3) What role does brand loyalty play when it is factored into the aforementioned relationships?

In this regard, the current study aimed to provide answers to the questions above and fill the research gaps in terms of consumers' behaviors in the lodging context by examining the influence of consumers' perceptions of the severity of COVID-19 on hotel booking intentions and whether the relationship varies by message appeal type and level of consumer brand loyalty. The findings of this study make unique contributions to the existing hospitality and lodging literature by expanding the understanding of consumer behavior in the context of health-related crisis communications. Moreover, the results of this study add to the body of knowledge pertaining to the role of loyalty and the dynamic

influence it has on consumer behaviors when a global health-related crisis, such as the COVID-19 pandemic, is present.

2. Literature review

2.1. Perceived severity of COVID-19 (PSC)

In the lodging context, how do people behave when health-related concerns are factored into their decision-making processes? Before COVID-19, this question seemed irrelevant to the lodging industry since there had never been a situation in which consumer behaviors were critically impacted due to a global health-related concern. However, given that the pandemic has significantly impacted the lodging industry, it is necessary to build an underlying rationale to understand consumer behaviors in this context. Reflecting the massive impact that the COVID-19 crisis has had on the hospitality industry, there has been an influx of COVID-19 related research in hospitality and tourism-related studies. The existing research seems to mainly focus on the industry-wide impact (Alonso et al., 2020), assessing the implications of prevention measures (Hu et al., 2021), investigating the effect on the labor market (Baum et al., 2020; Filimonau et al., 2020; Huang et al., 2020), testing the relationship between tourism and outbreaks (Farzanegan et al., 2021), and providing future research directions and agendas (Hao et al., 2020; Jiang and Wen, 2020; Zenker and Kock, 2020).

It is evident from lodging industry reports that the threat of COVID-19 influenced consumers' decision-making regarding purchasing lodging accommodation services. Previous epidemic-related studies found that the perceived severity was high for similar diseases, such as severe acute respiratory syndrome (Kwok et al., 2020; De Zwart et al., 2009). Dryhurst et al. (2020) investigated risk perceptions of COVID-19 globally and found that risk perceptions were significantly high across all countries situated in Europe, Asia, and North America. Therefore, the results of relevant studies suggest that the majority of the global population considers COVID-19 to be a severe disease.

The current study suggests that the health belief model (HBM) originally developed by Hochbaum (1958) provides an underlying foundation for understanding consumer behaviors in this context. According to the HBM, people's behaviors are influenced by the perceived severity of the disease, their perceived susceptibility to the disease, and the expected benefits and barriers related to the behavior (Champion and Skinner, 2008; Rosenstock, 1974). The HMB has been adopted and modified in later studies, and the model has been expanded to encompass a variety of factors, including self-efficacy, to better explain people's health-related behaviors in a holistic way (e.g., Rosenstock et al., 1988; Yoon and Kim, 2016).

In the context of health communication, a meta-analysis of HBM-related studies showed that the perceived severity of a disease significantly affects behaviors (Carpenter, 2010). People are more likely to engage in preventative actions when a disease is perceived as severe. Accordingly, it could be postulated that when the perceived severity of a disease is high, people are less likely to engage in behaviors that could potentially expose them to the disease. This relationship is expected to be more prominent in the service industry since purchasing a service, including booking a hotel room, is perceived to be riskier than purchasing a manufactured product due to the increased uncertainty (Mitchell and Greatorex, 1993). Using HBM as the underlying framework, this study focused on the perceived severity of COVID-19 (PSC) to further investigate consumer behavior in the COVID-19 context. In addition, considering this study's context, hotel booking intention was defined as a consumer's intention to stay at a particular hotel brand if they needed to travel amidst the pandemic.

In hospitality and tourism studies, the HBM has been implemented almost exclusively in the restaurant context to examine customers' return intentions after foodborne illness outbreaks. Previous studies found that perceived severity negatively influences future behavioral intentions (Ali et al., 2019; Harris et al., 2018). The current study focused

on how the perceived severity of disease influences consumer behaviors when making a decision to stay at a particular hotel brand during the COVID-19 pandemic. I perceived severity of COVID-19 was defined as how seriously COVID-19 is perceived to be by consumers as a disease that could (1) cause severe illness and pain and (2) negatively influence their daily life including social and economic activities.

Adopting the HBM in this context, it is likely that the perceived severity of a disease negatively influences consumers' behavioral intentions—including hotel booking intentions. In other words, consumers perceive COVID-19 as a severe disease, and the strength of such perceptions is expected to influence hotel booking intentions negatively. Consumers with higher levels of PSC are likely to refrain from booking a hotel room during the pandemic, while the presence of the pandemic may have a limited effect on the behavioral intentions of consumers with low PSC. Therefore, the current study posited that PSC has a negative effect on hotel booking intentions during the COVID-19 pandemic.

H1. : The perceived severity of COVID-19 has a negative effect on hotel booking intentions.

2.2. Message appeal type: the rational and emotional framework

The rational and emotional appeal framework has widely been adopted in marketing communication message studies (Albers-Miller and Stafford, 1999a, 1999b). According to the framework, the functional aspects of a product, including its quality, economy, value, and performance, are emphasized when making rational appeals (Kotler and Armstrong, 2010). For emotional appeals, however, the goal of the message is to generate feelings that will motivate purchases (Albers-Miller and Stafford, 1999a, 1999b). In the lodging setting, few studies have been conducted regarding message appeal type, but the emotional appeal type had higher overall effectiveness and generated higher brand attitudes and purchase intentions (Mattila, 1999, 2001). Therefore, there is a lack of academic work that specifically compares the

effectiveness of emotional and rational appeal types in the hotel industry context.

In the service industry context, the effectiveness of appeal types has been studied in terms of both internal and external factors that could influence consumers' decision-making processes. In terms of internal factors, which include consumers' involvement and arousal levels, Fu and Chen's (2012) study suggested that emotional appeals are more effective when customer involvement is low, while rational appeals are more effective when involvement is high. Moreover, Herhausen et al. (2019) investigated the effect of message type in social media settings and found that an explanation response, which is a type of rational appeal, reduced virality (spreading negative WOM) and was more effective in high arousal situations. Conversely, empathic responses, a type of emotional appeal, increased virality.

On the other hand, studies regarding external factors showed that the effectiveness of each appeal type varies based on the medium or channel through which the message was provided (Nekmat et al., 2019; Stafford and Day, 1995). A study conducted by Burman et al. (2017) revealed that the effectiveness of message appeal types also varies based on the level of price for hotels. This study investigated consumers' perceptions of the severity of a disease and its effect on their behaviors; thus, it is positioned in the stream of studies focused on internal factors. Table 1 summarizes relevant studies that have examined the effectiveness of emotional and rational appeal types.

Applying the rational and emotional appeal framework to the COVID-19 context, a rational message appeal type could be interpreted as providing information about prevention measures and disinfectant practices to reasonably persuade customers that staying at the hotel is safe. In contrast, an emotional appeal type message could be interpreted as aiming to make the audience personalize the message (e.g., acknowledging the impact that COVID-19 has had on consumers) or evoke a feeling of empathy by showing the negative impact that COVID-19 has had on hotel employees and surrounding communities.

Table 1
Summary of emotional and rational appeal type studies.

Author	Context	Study design	Outcome Variables	Relevant findings
Stafford and Day (1995)	Retail service (restaurant and photo processing)	Experimental design	Attitude toward the ad, attitude toward the service and patronage/recommendation intention	Rational appeal more effective for both experiential and utilitarian service type; this result varied by medium (radio and print)
Mattila (1999)	Hotel	Quasi-experimental design	Attitude toward the ad, service expectations, attitude toward the company, purchase intention	Emotional appeal induced a more positive initial attitude
Mattila (2001)	Hotel	Experimental design	Ad-induced emotions, brand attitude, ad attitude, service expectations, purchase intention	Emotional appeal had the highest advertisement effectiveness
Nysveen and Breivik (2005)	Hotel	Experimental design	Attitude to advertised product, attitude to advertisement, decision support	Rational appeals more effective when high involvement; interaction of the medium not significant
Fu and Chen (2012)	Product (webcam)	Experimental design	Attitude change (pre-attitude and post-attitude)	Emotional appeal had a stronger effect when customer involvement low
Zhang et al. (2014)	Service (restaurant and dental)	Experimental design	Consumer attitude toward the ad, purchase intention	Purchase intention higher when emotional appeal provided for restaurant
Burman et al. (2017)	Hotel	Experimental design	Value perception, purchase intention, attitude toward hotel	For the low-price hotel, purchase intention higher for rational appeal but for the high-priced hotel no interaction observed
Wang et al. (2017)	Tourist destination	Scenario-based online survey	Attitude towards destination, intention to recommend destination, attitude toward the message	Attitude toward destination significantly higher when emotional appeal type message provided
Xiang et al. (2019)	Crowdfunding (hotels, restaurants, education, etc.)	Secondary research (web scrapping)	Consumer backer's support, investment backer's support	Investment backer's support higher when emotional appeal provided; consumer backer's support higher when informative appeal given
Herhausen et al. (2019)	Facebook brand community	Secondary research (Facebook posts)	Virality (negative eWOM measured by likes and comments on a negative post)	Empathic response more effective to reduce virality, but not for high emotional arousal condition
Chen et al. (2020)	COVID-19	Secondary research (government social media post)	Citizen engagement	During the COVID-19 crisis, people preferred textual content (low media richness)
Im et al. (2021)	COVID-19	Qualitative design (CEO letters from hospitality firms)	Corporate narrative strategies	More rational and credible appeals used in COVID-19 corporate narratives

According to the elaboration likelihood model (ELM), when consumers have the motivation and ability to process information, they tend to be more engaged in the central route, which involves cognitively processing the provided information (Petty and Cacioppo, 1986). In contrast, when motivation or ability is absent, consumers engage in the peripheral route, which involves emotionally processing the provided information (Petty and Cacioppo, 1986). Due to these different processing routes, how a marketing message is constructed is crucial because it can alter consu'ers' attitudes (Andrews and Shimp, 1990). The ELM has also been implemented as either a primary research model or an underlying rationale in a handful of hospitality and tourism studies (e.g., Ha and Jang, 2010; Hlee et al., 2019; Tang et al., 2012; Xu and Huang, 2019).

In the COVID-19 context, hotels have been sending messages via email, social media, and brand websites since the pandemic hit the lodging market. How consumers process such messages could generate different outcomes (Fu and Chen, 2012; Petty and Cacioppo, 1986). The ELM suggests that this difference could be caused by which processing route (central or peripheral) and appeal type (rational or emotional appeal) was utilized (Xiang et al., 2019). In this regard, the ELM was adopted in this study to postulate the effect of rational and emotional appeals when consumers process COVID-19 related messages from hotels.

To date, limited studies have specifically investigated the effectiveness of rational and emotional appeal types pertaining to COVID-19 related messages in the context of the lodging industry. A study conducted by Im et al. (2021) examined the contents of COVID-19 related messages from CEO letters in the hospitality industry and discovered that rational appeals were primarily utilized. In the field of health communication, Mongiovi et al. (2017) revealed that rational appeals were used more frequently for medication-related advertisements. Also, when a health-related crisis such as COVID-19 occurs, the public relies more on the textual content of government social media posts (Chen et al., 2020). These findings from prior studies were consistent with Fu and Chen's (2012) conclusion that a rational appeal type is more effective when consumers have high involvement.

Given the above rationale, which appeal type would be more effective at generating hotel booking intentions when a health-related concern is present? The HBM explains that the perceived severity of a disease influences people's behaviors (Carpenter, 2010). In the COVID-19 context, the general population considers the disease to be serious (Dryhurst et al., 2020) and, thus, is likely to have greater motivation and involvement when processing COVID-19 related messages. Moreover, previous studies confirmed that when consumers have high involvement, the rational appeal type is more effective (Fu and Chen, 2012). Therefore, it is likely that the rational appeal type would have a more positive effect on hotel booking intentions than the emotional appeal type.

In addition, based on the HBM and ELM, consumers with high PSC are likely to have greater motivation to process COVID-19 related messages from hotels. Because they are engaging in the central processing route, the effectiveness of a rational appeal is expected to increase. On the other hand, when consumers do not perceive COVID-19 as a severe disease, they have less motivation to process COVID-19 related messages from hotels. Thus, they are more likely to process the message using the peripheral route and be persuaded by an emotional appeal. Accordingly, it is likely that consumers are motivated to process the message when the PSC level is high and, thus, they are engaging in the central information processing route. Thus, the effect of PSC on hotel booking intentions is hypothesized to be positively moderated by the appeal type.

H2. : For COVID-19 related hotel marketing messages, the rational appeal type has a stronger positive effect on hotel booking intentions than the emotional appeal type.

H3. : The effect of the perceived severity of COVID-19 on hotel

booking intentions is moderated by the message appeal type.

2.3. The role of loyalty in the COVID-19 era

There is a consensus that loyalty has a positive influence on purchase intentions. For example, the results from Tellis's (1988) study confirmed that loyalty has the highest explanatory power for brand choice and volume purchased, and a study conducted by Chi and Yeh (2009) also found that brand loyalty has a positive effect on purchase intentions. Furthermore, Oliver (1997) developed a framework for the phases of loyalty that originates in cognitive loyalty and ultimately leads to action loyalty, which means that customers are ready to act. Specifically, the importance of loyalty has also been studied in various hospitality and tourism-related research (Shoemaker and Lewis, 1999; Kandampully et al., 2015; Tanford, 2016; Tepeci, 1999). However, this study argued that consumer behaviors influenced by COVID-19, which brought an unprecedented crisis to many industry sectors, present a unique condition. Accordingly, previously proven relationships need to be empirically tested in this context. In this regard, another question remains: Is loyalty still effective for the lodging industry in the COVID-19 crisis?

A handful of previous studies investigating brand loyalty considered it to be a multidimensional construct that includes both attitudinal and behavioral aspects of loyalty (Bandyopadhyay and Martell, 2007; Dick and Basu, 1994; Tranberg and Hansen, 1986). In contrast, another line of studies suggested that the attitudinal dimension of loyalty should be emphasized when brand loyalty is studied in the hospitality industry context (Back, 2005) because marketers in the hospitality industry aim to develop this aspect of loyalty by providing special treatment and developing relationships and emotional commitment (Mason et al., 2006; Schall, 2003). Considering that the primary focus of this study was to explore the role of loyalty in the lodging context during the COVID-19 pandemic, this study focused on investigating the effect that consumers' attitudinal loyalty has on their decision-making processes rather than considering multiple dimensions of brand loyalty. Thus, in this study, brand loyalty was operationalized as consumers' commitment to a brand that primarily encompasses the attitudinal aspects of loyalty.

Kim et al. (2018) revealed that customers with greater loyalty had higher revisit intentions, and the level of loyalty buffers the influence of negative information (sanitation violations) on revisit intentions. Another study examining the interaction effect of loyalty found that restaurant customers' revisit intentions vary based on their level of loyalty (Namkung et al., 2011). Considering its strong effect in generating positive behavioral intentions and buffering barriers to repurchasing, it is likely that brand loyalty will have a positive influence on hotel booking intentions even amidst the COVID-19 crisis. In fact, brand loyalty could even have a stronger effect in the global pandemic context. Brand loyalty and trust are strongly correlated (Bowen and Shoemaker, 2003; Garcia de Leaniz and Rodríguez Del Bosque Rodríguez, 2015), and consumers are likely to prefer a brand that they already trust since all alternatives are also being impacted by the pandemic. Accordingly, brand loyalty is expected to work as a buffer to limit the negative influence of customers' concerns related to COVID-19 and negatively moderate the effect of PSC on hotel booking intentions.

The effect of marketing messages could vary based on the level of brand loyalty, and Raj (1982) revealed that advertising positively affects consumers' purchasing behaviors for the high loyalty group but not for the low loyalty group. In addition, when consumers have high brand loyalty, they are likely to purchase products and services from the brand they are loyal to unless there is a significant barrier to repurchasing (Oliver, 1999). Thus, it is expected that booking intentions would be greater for the high loyalty group regardless of the message appeal type. In other words, the effect of message appeal type will be significant for the low loyalty group, whereas the effect will decrease for the high loyalty group. Expanding on this, it could also be postulated that the interaction effect between PSC and appeal type will be significant for the low loyalty group; however, no interaction is expected to be observed

for the high loyalty group.

In sum, this study postulated that the perceived severity of COVID-19 influences consumers' hotel booking intentions, and this relationship is moderated by message appeal type and brand loyalty. Furthermore, the interaction effect of the perceived severity of COVID-19 and message appeal type is expected to significantly differ (moderated-moderation) based on the level of customers' brand loyalty (see Fig. 1 for the conceptual framework).

H4. : Brand loyalty has a positive influence on hotel booking intentions during the COVID-19 crisis.

H5. : The effect of message appeal type on hotel booking intentions is moderated by the level of brand loyalty.

H6. : The effect of the perceived severity of COVID-19 on hotel booking intentions is moderated by the level of brand loyalty.

H7. : The interaction effect of the perceived severity of COVID-19 and message appeal type on hotel booking intentions is moderated by the level of brand loyalty.

3. Methodology

3.1. Data

To test the proposed hypotheses, data were collected via a scenario-based online survey, which was constructed on Qualtrics. Respondents were recruited using the convenience sampling method via Amazon Mechanical Turk (MTurk) during the month of August 2020, when the impact of COVID-19 on the lodging industry was still prevalent. Since this study focused on the U.S. lodging market, only participants who reside in the U.S. were recruited. A total of 311 respondents participated in this survey.

3.2. Variables and measurements

3.2.1. Perceived severity of COVID-19 (PSC)

The measurement items for PSC were adopted from the HBM (Janz and Becker, 1984) and modified to fit the context of this research. Three measurement items were used to capture PSC, and a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree) was used. Since this study investigated multiple interaction effects, PSC was mean-centered to avoid multicollinearity issues. Further, the mean-centering method provides a parsimonious way to interpret the results and is considered a proper method to use when examining the direction of predictor variables in social science settings (Iacobucci et al., 2016).

3.2.2. Message appeal types

Utilizing the rational and emotional appeal framework, two message types were constructed based on actual messages sent from multiple hotel brands (see Appendix A). Before reading the message, participants were instructed to imagine that they were in the process of choosing among several lodging options for a business trip that would occur in a

Fig. 1. Conceptual framework.

couple of weeks. Then, they were instructed to think about a hotel brand and pretend that the message they were about to read was sent from that hotel brand. The randomizer function in Qualtrics was utilized, and survey participants were randomly assigned to either (1) the emotional appeal type message or (2) the rational appeal type message.

3.2.3. Brand loyalty

Brand loyalty was operationalized in this study as a concept encompassing the attitudinal dimension of loyalty. To measure this concept, participants indicated self-reported brand loyalty based on four questions adapted from Back and Parks (2003) that focused on investigating lodging consumers' attitudinal loyalty. Participants' responses were measured using a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). Since this study also intended to explore the varying effect of loyalty on hotel booking intentions, the data were divided into two groups using the median split for further analysis. A median split method is a valid statistical technique that can be used to investigate effects on different groups given that no multicollinearity issues are present (Iacobucci et al., 2015).

3.2.4. Hotel booking intentions during COVID-19

The measurement items were constructed based on Chiang and Jang's study (2007) and measured on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). Survey participants were instructed to imagine that they were going on a business trip in a couple of weeks. They were then asked to answer questions about their intentions to stay at the hotel brand that presumably sent the COVID-19 related message, which aimed to persuade consumers by using either a rational or emotional appeal type. Table 2 displays a detailed list of measurement items used in the analysis.

3.2.5. Control and manipulation check variables

Consumers' purchase intentions can vary based on their demographic profiles (Akhter, 2003). Specifically, it was expected that making a decision regarding lodging options during the COVID-19 pandemic would be influenced by demographic factors, including age, income, and gender. Moreover, Teichert et al. (2018) found that

Table 2
Measurements.

Constructs		Items	Source
Perceived severity of COVID-19 (PSC)	PSC1 PSC2 PSC3	I think COVID-19 could cause serious illness. If I caught COVID-19, it would significantly influence my social and economic activities. If I caught COVID-19, I would suffer severe pain.	Janz and Becker (1984)
Brand loyalty	BL1 BL2 BL3 BL4	This hotel provides me superior service quality as compared to any other hotel brands. I like this hotel more than other hotel brands. I consider this hotel brand to be my first lodging choice. I would do more business with this hotel brand in the next few years.	Back and Parks (2003)
Booking intention	BI1 BI2 BI3	**Assuming that you are going to be on a business trip in a couple of weeks, …** … I intend to book a room in one of its hotel properties. … My willingness to book this hotel brand for my future travel is high. If I were to be on a trip and book a hotel room amid COVID-19 pandemic, I would rather stay at this hotel brand than other brands.	Chiang and Jang (2007)

Note. All instruments were measured with a seven-point Likert scale.
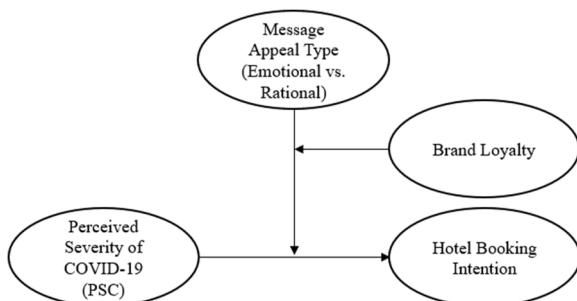
consumers' demographic profiles could influence the effectiveness of emotional and informational ad appeals. Hence, these demographic variables were included as control variables. In addition, although perceived message effectiveness (PME) could influence participants' attitudes and behavioral intentions (Dillard et al., 2007), the focus of the current study was investigating the varying influence of each type of appeal rather than the result of each appeal type's effectiveness or the role that PME has on behavioral intentions. Thus, considering its potential effect on behavioral intentions, the analysis used PME as a control variable.

After being randomly assigned a message, participants were presented with either an emotional or rational appeal that was hypothetically sent from the hotel brand that they indicated earlier in the survey. Then, they were asked to measure their general response toward and impression of the provided message immediately after reading it. Two manipulation check questions were asked (e.g., "I think this message was trying to make a rational appeal to its audiences," and "I think this message was trying to make an emotional appeal to its audiences.") and argetedionmeasured on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree).

3.3. Analyses

Statistical tests were performed using hierarchical regression analysis to test the hypotheses. The statistical significance of each model was tested using R^2 change and its significance based on F statistics. In particular, the proposed three-way interaction effect—or moderated moderation—was tested in Eq. (1).

displayed in Table 3.

4.2. Manipulation check

Before testing the proposed hypotheses, a manipulation check was performed. The emotional appeal type group was used as a reference group and coded as '0,' while the rational appeal type group was coded as '1.' Participants who were presented with the emotional appeal type message indicated that the message was making an emotional rather than rational appeal (Emotional: M = 5.59, Rational: M = 4.21; $F(1, 309) = 63.390$, $p < .01$). Conversely, participants who were assigned to the rational appeal type message indicated that it was making a rational rather than emotional appeal (Emotional: M = 4.84, Rational: M = 6.00; $F(1, 309) = 59.471$, $p < .01$). Overall, the results of the manipulation check confirmed that the two message appeal types were effective and perceived as intended by participants.

4.3. Hypothesis testing

The reliability of the measurements was tested, and the result indicated that all measurements had good internal consistency ranging from .833 to .931 based on the cutoff Cronbach's alpha value of 0.7 (Hair et al., 2010). To test the convergent and discriminant validity, confirmatory factor analysis (CFA) was conducted, and the goodness-of-fit indices indicated an acceptable model fit ($\chi2$ (32) = 128.463, $p < .05$; RMSEA < 0.1; SRMR < 0.5; CFL > 0.9; TLI > 0.9). Standardized factor loadings ranged from 0.731 to 0.905, and average variance extracted (AVE) ranged from 0.630 to 0.789; thus, all indicators in the measurement model were in the acceptable range. The square roots of AVE and

$$BOOKING\ INTENTION_i = \beta_0 + \beta_1 AGE_i + \beta_2 GENDER_i + \beta_3 INCOME_i + \beta_4 PME_i + \beta_5 PSC_i$$
$$+\beta_6 APPEAL\_TYPE_i + \beta_7 LOYALTY_i + \beta_8 PSC_i * APPEAL\_TYPE_i + \beta_9 PSC_i * LOYALTY_i$$
$$+\beta_{10} APPEAL\_TYPE_i * LOYALTY_i + \beta_{11} PSC_i * APPEAL\_TYPE_i * LOYALTY_i + \varepsilon_i \tag{1}$$

$$BOOKING\ INTENTION_i = \beta_0 + \beta_1 AGE_i + \beta_2 GENDER_i + \beta_3 INCOME_i + \beta_4 PME_i$$
$$+\beta_5 PSC_i + \beta_6 APPEAL\_TYPE_i + \beta_8 PSC_i * APPEAL\_TYPE_i$$
$$+(\beta_7 + \beta_9 APPEAL\_TYPE_i + \beta_{10} PSC_i + \beta_{11} APPEAL\_TYPE_i * PSC_i) * LOYALTY_i + \varepsilon_i \tag{2}$$

Eq. (2), a modified version of Eq. (1), was constructed to demonstrate the three-way interaction—or moderated moderation effect. The three-way interaction being tested in this study could be simplified as: examining a statistically significant change in β_8 coefficient based on the level of $LOYALTY_i$ while holding all other variables constant. In other words, this study tested whether the coefficient for the interaction between PSC and message appeal type significantly varies based on the level of brand loyalty.

4. Results

4.1. Sample profile

Of the total sample, 57.2 % were male (n = 178) and 42.8 % were female (n = 133). In terms of ethnicity, the majority of respondents were white/Caucasian (75.6 %, n = 235), followed by African American (8.7 %, n = 27), and Asian (8.7 %, n = 27). Over 50 % of the respondents were between 26 and 39 years old, and approximately 50 % had earned a bachelor's degree. The demographic profile of the respondents is

the correlations between each construct were examined, and the result showed that the square roots of AVE are larger than the correlations among constructs. Therefore, no evident issues were identified regarding the convergent and discriminant validity of the measurement items. Before conducting the hierarchical multiple regression analysis, correlation analysis was performed to investigate the relationship among all proposed variables in this study. The result showed that hotel booking intention had positive correlations with PME, appeal type, and loyalty. The correlation analysis also indicated that PSC has positive correlations with age and gender (see Fig. 2).

In order to statistically test a possible issue regarding common method bias (CMB), Harman's single-factor test was performed. An explanatory factor analysis was conducted using the covariance matrix of all survey items, and no single factor that could account for the majority of covariances was observed (Podsakoff et al., 2003). Moreover, a single-method-factor approach was adopted to further test the common method bias in a more rigorous way (Kock et al., 2021; Podsakoff et al., 2003). In particular, the unmeasured latent method construct (ULMC) technique was utilized. A common latent factor was added to the model, and the paths between the common latent factor and other variables

Table 3

Demographic profiles of participants.

Variables	Frequency (n = 311)	Percent
Gender		
Male	178	57.2
Female	133	42.8
Ethnicity		
African American	27	8.7
Asian	27	8.7
Hispanic	15	4.8
Native American	3	1.0
White/Caucasian	235	75.6
Other	4	1.3
Age		
18–25 years	19	6.1
26–39 years	161	51.8
40–54 years	77	24.8
55–65 years	39	12.5
66 years and above	15	4.8
Education level		
Less than high school	1	0.3
High school graduate	25	8
Some college	48	15.4
Associate degree	38	12.2
Bachelor's degree	151	48.6
Master's degree	38	12.2
Professional degree	8	2.6
Doctorate degree	2	0.6
Annual household income		
Below $20,000	32	10.3
$20,000 - $39,999	66	21.2
$40,000 - $59,999	61	19.6
$60,000 - $79,999	58	18.6
$80,000 - $99,999	36	11.6
$100,000 - $149,999	45	14.5
$150,000 - $199,999	8	2.6
$200,000 or above	5	1.6

were constrained to be equal (Eichhorn, 2014; Podsakoff et al., 2003). The differences in standardized factor loadings between the two models ranged from 0.066 to 0.127, and the variance explained by the common method variance was lower than the commonly used 50 % threshold
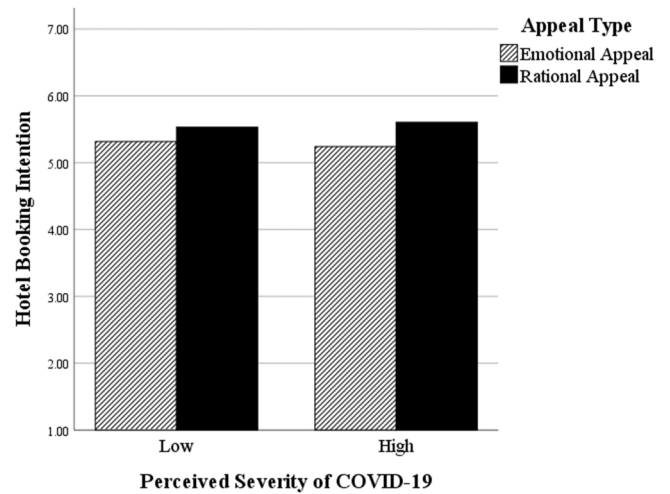
Fig. 3. Two-way interaction: the interaction effect of PSC and appeal type on hotel booking intention. Note: perceived severity of COVID-19 (PSC) was categorized into two levels using a ± 1 standard deviation value.

(Min et al., 2016). Therefore, the test results showed that common method bias was not evident in this study.

To test the statistical significance of the proposed relationships, hierarchical multiple regression was performed. Since this study involves testing interaction effects, PSC was mean-centered. In order to test for a possible multicollinearity issue, the variance inflation factor (VIF) was checked for all models. The VIF values ranged from 1.019 to 4.077 and were lower than the threshold value of 10. Thus, there was no significant indicator of multicollinearity issues in this study (Hair et al., 2010; Neter et al., 1996). Since this study aimed to explore consumer behavior in the unique context of the COVID-19 pandemic, the hypothesis test was performed at a 10 % significance level due to the nature of the current study.

As shown in Table 3, Model 1 ($F_{(4, 306)}$ = 14.904, p < .01, R^2 = .163) included only control variables to test their possible effects on
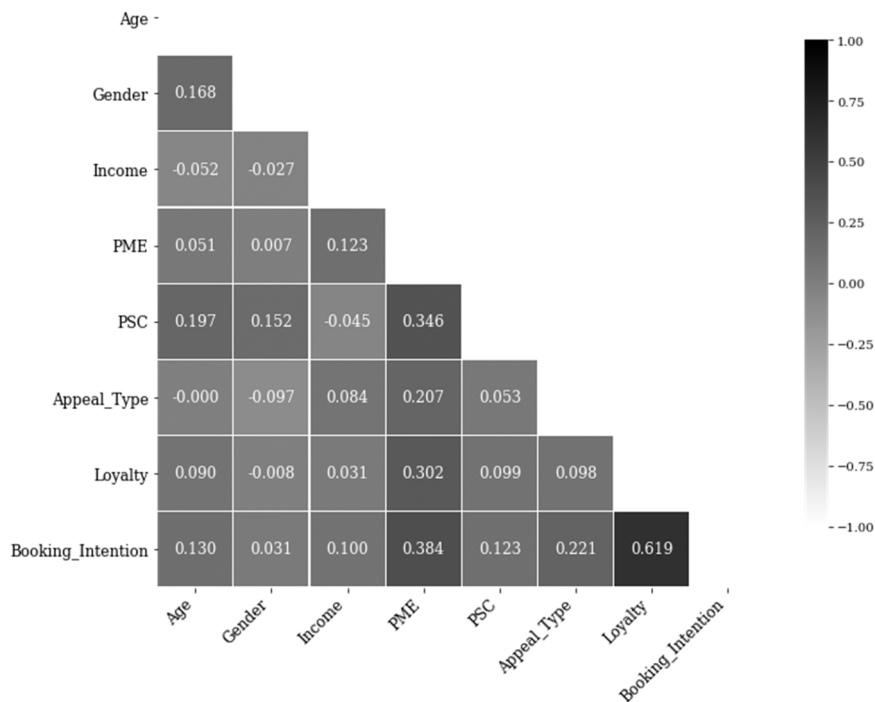
Fig. 2. Correlation matrix of all variables. *Note. Pearson correlation values are shown, and darker color indicates a higher correlation between variables; PME = perceived message effectiveness; PSC = perceived severity of COVID-19; age, gender, income, PME were control variables.*
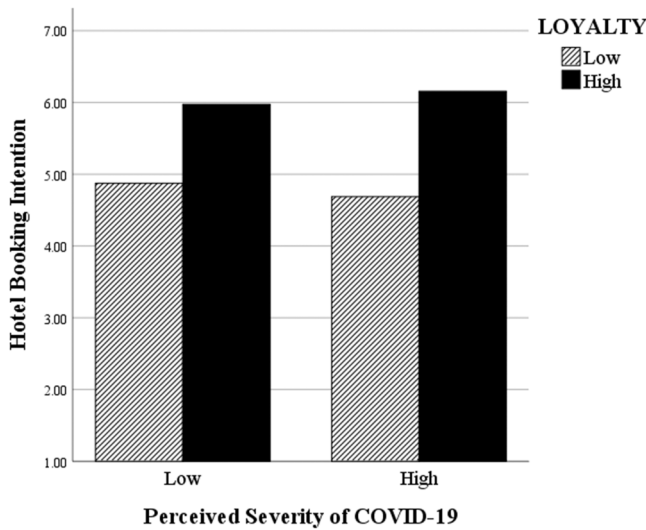
Fig. 4. Two-way interaction: the interaction effect of PSC and loyalty on hotel booking intention. Note: perceived severity of COVID-19 (PSC) was categorized into two levels using a ± 1 standard deviation value.

hotel booking intentions. Age (b =.139, p <[0.05 and PME (b =.352, p <[0.01 had a positive influence on the dependent variable, while gender (b =.028, p >[0.1 and income (b =.041, p >[0.1 did not have a statistically significant influence on hotel booking intentions.

The main effects of appeal type, PSC, and loyalty were tested in Model 2 (F(7, 303) = 35.474, p < .01, R^2 = .438). Although it had a negative coefficient as expected, the effect of PSC on hotel booking intentions was not statistically significant (b = −.018, p >[0.1, which did not support *H1*. As predicted, the rational appeal type positively affected hotel booking intentions compared to the emotional appeal type (b =.303, p <[0.05, which supported *H2*. The result also confirmed that brand loyalty had a strong positive effect on hotel booking intentions even amidst the COVID-19 crisis (b = 1.290, p < .01), which supported *H4*.

Model 3 (F(10, 300) = 25.850, p < .01, R2 = .463) tested the interaction effects. The statistically significant R^2 change between Models 3 and 4 (R^2 change ==0.012 p <[0.1 confirmed that the interaction effects were statistically significant. First, this study did not verify that the effect of the rational appeal type increased as PSC
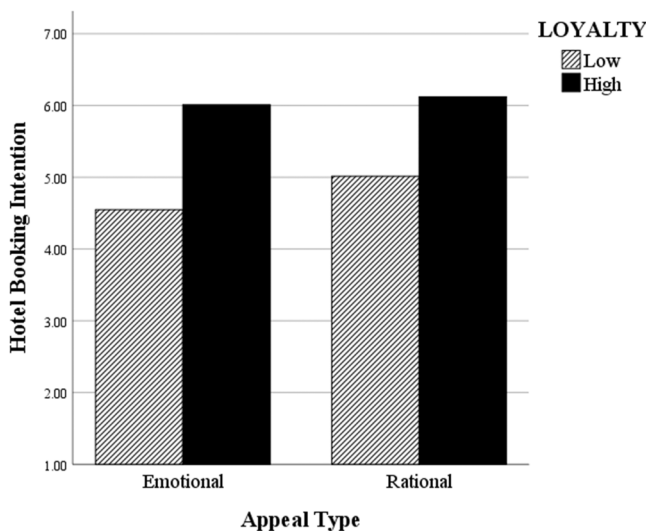

Fig. 5. Two-way interaction: the interaction effect appeal type and loyalty on hotel booking intention.

increased due to an insignificant positive moderating effect (b =.075, p >[0.1. Therefore, *H3* was not supported (see Fig. 3). Second, according to the results, the effect of appeal type on hotel booking intentions decreased for the high loyalty group compared to the low loyalty group, which supported *H5* (b = −.354, p <[0.1. Fig. 4 displays the two-way interaction between appeal type and loyalty. Third, *H6* postulated that the negative effect of PSC on hotel booking intentions would decrease when a consumer's loyalty level is high. The result of the two-way interaction was statistically significant (β = .271, p <[0.05. Fig. 5 provides a graphical representation of this interaction effect.

The final model, Model 4 (F(11, 299) = 24.016, p < .01, R^2 = .469), is the full model and was comprised of all variables from the prior models as well as a three-way interaction term between PSC, appeal type, and brand loyalty. The R^2 change from Model 4 to Model 5 was statistically significant (R^2 change =.006, p <[0.1. Further, *H7*, which tested the three-way interaction—or moderated moderation—was supported at an alpha level of.1 (b = −.276). Therefore, this result supported that the interaction between appeal type and PSC significantly decreased for the high loyalty group. Table 4 displays the detailed results for Model 4. Fig. 6 provides a visual representation of the three-way interaction. The interaction effects were further tested using PROCESS v3.5.2 macro for SPSS (Hayes, 2017). The interaction between appeal type and PSC was significant when the level of brand loyalty was low (F (1, 299) = 4.017, p <[0.05, whereas the interaction was not significant (F(1299) = .567, p >[0.1 for the high loyalty group.

Moreover, additional analysis was performed to investigate the interaction between PSC and brand loyalty for the emotional appeal type. The result showed that the interaction was significant (F(1, 150) = 6.269, p < .05). As shown in Fig. 7, when both PSC and brand loyalty levels were low, emotional appeals led to more hotel booking intentions compared to the high PSC group.

5. Conclusions

5.1. Summary and discussion

The COVID-19 crisis has had an unprecedented impact on the lodging industry. It is predicted that it will take several years for the industry to recover fully (American Hotel and Lodging Association, 2021). In hopes of bringing back guests, hotels are sending out messages via different channels, including social media and emails. However, COVID-19 may have shifted consumer behaviors in an unexpected direction. To date, there has been little research on consumers' health-related concerns and their possible effects on consumer behaviors in the lodging industry context. Hence, this study aimed to investigate the influence of consumers' perceptions of the severity of COVID-19 on hotel booking intentions and examine whether this relationship could be ameliorated by providing a particular message appeal type (emotional vs. rational). Furthermore, this study intended to test how the interaction effect between PSC and appeal type varies based on the consumer's level of loyalty.

The statistical analysis results showed that'PSC's effect on hotel booking intentions was not statistically significant as hypothesized (*H1*). A possible explanation for this could be attributed to the context of this study. The assumed context was that participants would be going on an upcoming business trip, which is usually something that is required rather than freely chosen compared to a leisure trip. Additional analysis results showed that significantly different behaviors were observed between the high and low loyalty groups. The interaction effect between PSC and brand loyalty was significant, and this result confirmed that the negative effect of PSC decreased when brand loyalty was high.

The general population considers COVID-19 to be a severe disease (Dryhurst et al., 2020), and the rational appeal type works better in high-involvement situations (Herhausen et al., 2019). Accordingly, although the emotional appeal type has generally been considered more appropriate for the service industry (Mattila, 2001; Zhang et al., 2014),

Table 4
Result of hierarchical multiple regression analysis.

	Model 1			Model 2			Model 3			Model 4		
	Coefficient	S.E.	P-value	Coefficient	S.E.	P-value	Coefficient	S.E.	P-value	Coefficient	S.E.	P-value
Constant	2.821 ***	0.374	0.000	3.120 ***	0.329	0.000	3.016 ***	0.330	0.000	3.012 ***	0.329	0.000
Age$_i$	0.139 **	0.066	0.036	0.088	0.055	0.108	0.086	0.055	0.117	0.084	0.054	0.124
Gender$_i$	0.028	0.127	0.825	0.094	0.104	0.369	0.097	0.104	0.350	0.094	0.103	0.363
Income$_i$	0.041	0.036	0.253	0.036	0.029	0.226	0.027	0.030	0.361	0.028	0.029	0.349
PME$_i$	.352 ***	0.050	0.000	0.181 * **	0.046	0.000	0.192 ***	0.046	0.000	0.193 ***	0.046	0.000
PSC$_i$				- .018	0.040	0.652	- 0.111 *	0.061	0.071	- 0.163 * *	0.067	0.016
Appeal type$_i$				0.303 **	0.103	0.004	0.453 **	0.138	0.001	0.466 ***	0.137	0.001
Loyalty$_i$				1.290 ***	0.107	0.000	1.456 ***	0.148	0.000	1.461 ***	0.148	0.000
PSC$_i$ × Appeal type$_i$							0.075	0.073	0.303	0.191 **	0.096	0.046
Appeal type$_i$ × Loyalty$_i$							-0.361 *	0.207	0.082	- 0.354 *	0.206	0.086
PSC$_i$ × Loyalty$_i$							0.129 *	0.075	0.086	0.271 **	0.106	0.011
PSC$_i$ × Appeal type$_i$ × Loyalty$_i$										- 0.276 *	0.147	0.062
F	14.904 ***		0.000	35.474 ***		0.000	25.850 ***		0.000	24.016 ***		0.000
R^2	0.163			0.450			0.463			0.469		
Adj.R^2	0.152			0.438			0.445			0.450		
R^{2}Δ	—			0.287			0.012			0.006		
ΔF	—			52.807 ***		0.000	2.316 *		0.076	3.512 *		0.062

Note. DV = booking intention; coefficient = unstandardized coefficient; S.E. = standard error; PME = perceived message effectiveness; PSC = perceived severity of COVID-19, the variable was mean-centered; Appeal type (0 = emotional appeal type, 1 = rational appeal type); Loyalty was dichotomized using the median split method (0 = low loyalty group, 1 = high loyalty group)

*, **, and *** represents less than 10 %, 5 %, and 1 % significance level, respectively.
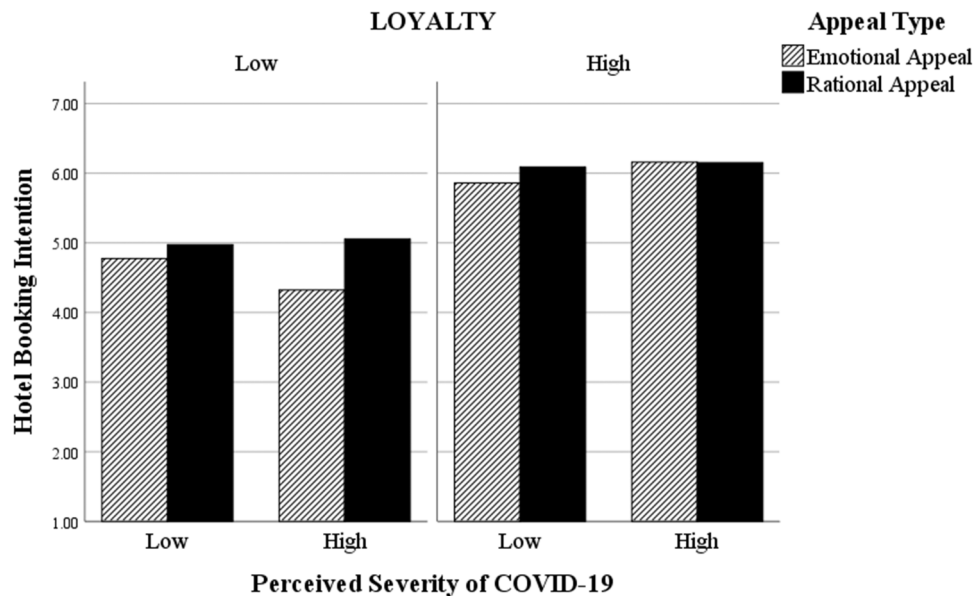

Fig. 6. Three-way interaction: the interaction effect of PSC and appeal type differentiating based on the level of loyalty. *Note: perceived severity of COVID-19 (PSC) was categorized into two levels using a ± 1 standard deviation value.*

this study hypothesized that the rational appeal type would have a more significant effect on hotel booking intentions compared to the emotional appeal type (*H2*). The result of this study supported hypothesis *H2*. This result contrasts with previous studies that suggested that emotional appeal types are generally more suitable for creating positive consumer behaviors in the hospitality and tourism context (Mattila, 1999, 2001; Wang et al., 2017; Zhang et al., 2014). However, it should be noted that the context of this study is a global health-related pandemic. Thus, the rational appeal type was expected to have higher effectiveness, which was confirmed. In addition, this result confirmed that hotels correctly utilized the rational appeal type more often during the COVID-19 crisis, as the results of Im 's et al. (2021) descriptive study suggested.

Based on ELM, PSC was conceptualized as motivation to process COVID-19 related messages. The effect of the rational appeal type message was postulated to increase as PSC increased. However, the results showed that although the interaction had a positive coefficient, it

was not statistically significant (*H3*). The medium of the message is delivered through could influence the effectiveness of the appeal type (Stafford and Day, 1995). This study utilized electronic text displayed via a computer screen as a medium; thus, it could have an impact on the effectiveness of the appeal types. Future related studies should consider investigating the influence of the medium on consumers' perceptions of health-related messages. Another potential factor to consider is hotel price. Burman et al. (2014) revealed that the rational appeal type is more effective for lower-priced hotels, while the emotional appeal type is more effective for high-priced hotels. Thus, future studies need to separately examine message effectiveness based on hotel scales.

Brand loyalty is often regarded as a remedy to ameliorate negative situations (Kim et al., 2018) and increase purchase intentions (Chi and Yeh, 2009). The findings of this study suggested that brand loyalty plays an important role even in the COVID-19 era (*H4*). This result is in line with previous studies that proved loy'lty's vital role in generating
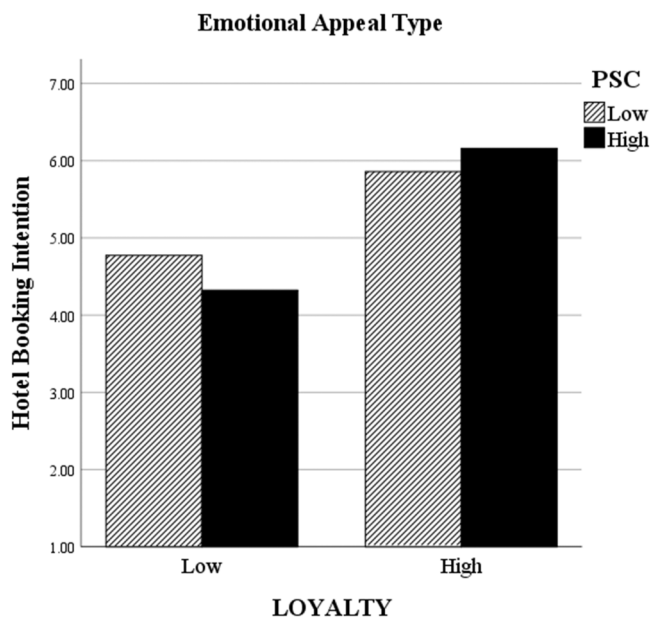
Emotional Appeal Type

Fig. 7. The interaction effect of loyalty and PSC for emotional appeal type condition. *Note: PSC = perceived severity of COVID-19; PSC was categorized into two levels using a ± 1 standard deviation value.*

booking intentions (e.g., Chi and Yeh, 2009; Kim et al., 2018; Namkung et al., 2011; Tanford, 2016). The results also showed that brand loyalty had a buffering effect on the relationship between PSC and hotel booking intentions (*H6*). This result is consistent with Kim 's et al. (2018) study that showed brand loyalty buffers the effect of negative information. In addition, since consumers with high loyalty are already poised to act in favor of the brand (Oliver, 1999), the effect of appeal type decreased for the high loyalty group (*H5*). The effectiveness of marketing communications has often been examined as a tool to increase loyalty, but this result suggests that brand loyalty could be an independent factor that creates varying levels of message effectiveness.

The three-way interaction—or moderated moderation—showed that the interaction between PSC and appeal type was significant for the low loyalty group but not for the high loyalty group (*H7*). This shows that when brand loyalty is high, the distinction between appeal type and its effect on ameliorating consumer concern, operationalized as PSV in this study, weakens. In sum, considering the fact that the unprecedented COVID-19 pandemic may have influenced consumer behaviors, this study provided crucial empirical evidence about the dynamic relationships among PSC, message appeal type, and brand loyalty in the lodging industry context.

5.2. Implications

5.2.1. Theoretical implications

The findings of this study contribute to understanding unique lodging industry consumer behaviors in the context of the COVID-19 crisis. COVID-19 presented a rare context to investigate the influence of consumers' health-related concerns on behavioral intentions in the lodging industry. This study is the first to investigate (1) the influence of PSC on hotel booking intentions and (2) how its impact could be ameliorated by utilizing a particular message appeal type and the level of brand loyalty. The results showed that PSC negatively influenced hotel booking intentions only when the level of brand loyalty was low. On the other hand, the negative influence was buffered when brand loyalty was high. Additionally, this study also confirmed that the HBM could be applied to examine consumers' perceptions of the risk associated with a disease and its influence on their behavioral intentions in the lodging industry context. Thus, future studies should utilize the full HBM model or

investigate other constructs from the HBM (e.g., perceived barrier, perceived benefit, etc.) in a similar context.

Building on the Elaboration Likelihood Model (ELM), this study postulated and tested the effectiveness of emotional and rational appeal types for COVID-19 related marketing communication messages. Emotional appeals are used more frequently in the service industry (Albers-Miller and Stafford, 1999a) and prior studies suggested that emotional appeals are more effective for hospitality firms (Fu and Chen, 2012; Mattila, 1999, 2001; Zhang et al., 2014). However, this study revealed that the rational appeal type had a greater positive influence on hotel booking intentions compared to the emotional appeal type when the aim of the message is to address health-related concerns, such as COVID-19.

Lastly, this study confirmed that brand loyalty works even amidst the COVID-19 crisis and varying degrees of loyalty generate different consumer behaviors. Brand loyalty not only positively influenced hotel booking intentions but also buffered the negative influence of PSC on hotel booking intentions during the COVID-19 pandemic. In this study, brand loyalty was a strong predictor of hotel booking intentions and ameliorated the influence of health-related concerns that consumers might have during the global health crisis. Furthermore, this study discovered an interesting consumer behavior: for the high loyalty group, the message appeal type was irrelevant regardless of the level of PSC. This interesting interaction between appeal type and brand loyalty needs to be investigated further in future research.

5.2.2. Practical implications

This study provides valuable practical implications for hotel marketers and managers pertaining to communicating with potential guests regarding COVID-19 preparedness. The results from this study suggest that marketing communication messages that address consumers' health-related concerns and target the general public should use a rational appeal type in order to persuade customers that staying at the hotel is safe. Specifically, hotel marketers and managers should consider providing information about the hotel's prevention measures and disinfectant practices to increase consumers' hotel booking intentions.

This study also provided another interesting finding. When the level of both PSC and brand loyalty were low, the emotional appeal type was more effective for the low PSC group compared to the high PSC group. This finding suggests that hotel managers and marketers also need to consider the dynamic relationship between PSC, message appeal type, and loyalty in order to create more effective marketing communications amidst the COVID-19 crisis. Specifically, hotel managers and marketers should consider using the emotional appeal type when a communication message regarding COVID-19 targets a specific consumer group (e.g., consumers with low PSC and loyalty). When an emotional appeal type is utilized, it should aim to (1) encourage the audience to personalize the message by providing an appeal that targeted consumers can relate to (e. g., create a sense of belonging and acknowledge the impact of COVID-19 on the consumer's life) and (2) generate a feeling of empathy (e.g., emphasize the impact of COVID-19 on hotel employees and how the hotel brand is supporting surrounding communities).

Lastly, although consumer brand loyalty and its critical role in generating positive consumer behavioral intentions is not an unfamiliar concept in the hospitality industry context (Shoemaker and Lewis, 1999; Kandampully et al., 2015; Tanford, 2016; Tepeci, 1999), the results of this study revealed that loyalty even works as a buffer to abate the negative influence of consumers' health-related concerns. Thus, it confirmed that 'consumers' love conquers the worries' even when a global pandemic is present. Therefore, hotel managers and marketers should continue to remember that building a strong relationship with consumers is essential to prepare for other possible health-related crises.

5.3. Limitations and future studies

Although the current study provided unique contributions, it is not

Table 5
Detailed regression analysis result for Model 4.

	Model 4						
	Coefficient	S.E.	t	P-value	VIF	90 % Lower Limit	90 % Upper Limit
Constant	3.012 ***	0.329	9.161	0.000		2.470	3.555
Age_i	0.084	0.054	1.542	0.124	1.087	- 0.006	0.174
$Gender_i$	0.094	0.103	0.912	0.363	1.058	- 0.076	0.265
$Income_i$	0.028	0.029	0.939	0.349	1.058	- 0.021	0.076
PME_i	.193 ***	0.046	4.195	0.000	1.324	0.117	0.269
PSC_i	- .163 **	0.067	-2.430	0.016	3.495	- 0.273	- 0.052
$Appeal\ type_i$	0.466 ***	0.137	3.391	0.001	1.908	0.239	0.692
$Loyalty_i$	1.461 ***	0.148	9.888	0.000	2.178	1.217	1.705
$PSC_i \times Appeal\ type_i$	0.191 **	0.096	2.004	0.046	3.558	0.034	0.349
$PSC_i \times Loyalty_i$	.271 **	0.106	2.551	0.011	3.707	0.096	0.446
$Appeal\ type_i \times Loyalty_i$	- 0.354 *	0.206	- 1.722	0.086	3.137	- 0.694	- 0.015
$PSC_i \times Appeal\ type_i \times Loyalty_i$	- 0.276 *	0.147	- 1.874	0.062	4.077	- 0.519	- 0.033
N	311						
F	24.016 ***	0.000					
R^2	0.469						
$Adj.R^2$	0.450						

Note. DV = booking intention; coefficient = unstandardized coefficient; S.E = standard error; VIF = variance inflation factor; PME = perceived message effectiveness; PSC = perceived severity of COVID-19; appeal type (0 = emotional appeal type, 1 = rational appeal type); loyalty was dichotomized using the median split method (0 = low loyalty group, 1 = high loyalty group).
*, **, and *** represents less than 10 %, 5 %, and 1 % significance level, respectively.

free from limitations. First, the data used in this study were from people who reside in the U.S. Thus, the results may not be generalizable on a global scale. Second, this study explored consumer behaviors when a health-related concern was present in the lodging context. Nevertheless, it did not aim to assess the entire decision-making process that consumers go through when they decide whether or not to stay at a particular hotel brand. As shown in the correlation matrix in Fig. 2, PME had moderate positive correlations with PSC, appeal type, loyalty, and hotel booking intentions, which implies that there could be additional relationships left to be investigated in terms of COVID-19 marketing communications research.

Hence, in order to better understand consumer behaviors and their decision-making processes in the COVID-19 crisis, future studies need to consider investigating other factors that could influence this process (e. g., message frequency, timing, source credibility, message order effect, etc.). Moreover, the topics (e.g., cleaning, disinfecting, community, etc.) mentioned in COVID-19 related messages and their relative effects on ameliorating consumers' health risk perceptions should be investigated in order to increase consumers' hotel booking intentions in the COVID-19 era—or another global health crisis. Table 5.

Appendix A

Emotional appeal type message

Without a doubt, COVID-19 has impacted our families and community. Our heart goes out to those who have been affected by this unprecedented global event. We understand the challenge and frustration of not being able to enjoy things that you loved—especially if you took pleasure in exploring new places. The safety and health of our family, including our guests and team members, are our top priority. We are here to provide you with a safe and clean room where you can rest and rejuvenate if your travel needs arise in the future.

We also would like to let you know that, as it did to our community, COVID-19 has severely impacted our hotel family, as well. Consequently, we were not able to welcome as many guests as we used to and had to make the difficult decision to furlough many of our staff members. Yet, we believe that there is a silver lining, and this difficult season will come to an end. Most importantly, we will overcome this 'together.' We truly hope that day would come quickly, and it all starts from welcoming you back to our hotel.

Once again, we would like to let you know that we miss you and we are here waiting for you.

Rational appeal type message

In response to COVID-19, we have taken additional preventative measures to ensure health and safety of our guests. All employees are required to wear personal protective equipment (e.g. face masks, gloves). The check-in and out process is designed to keep six-foot distance between guests and employees. No contact check-in options, including mobile check-in, are also available.

In addition, our cleaning and disinfecting practices have also been rigorously reinforced. All rooms are cleaned thoroughly and treated with disinfectant upon check-out, and hospital-grade disinfectant is frequently applied to clean public areas (doors, stairwell handles, bathroom, elevator switch etc.). Lastly, hand sanitizers are placed in public areas, including the entrance, and disinfectant soap and wipes are provided to our guests upon request.

Once again, we would like to inform you know that we are ready and here to meet your future travel needs.

References

Akhter, S.H., 2003. Digital divide and purchase intention: why demographic psychology matters. J. Econ. Psychol. 24 (3), 321–327.

Albers-Miller, N.D., Stafford, M.R., 1999a. An international analysis of emotional and rational appeals in services vs goods advertising. J. Consum. Mark. 16 (1), 42–57.

Albers-Miller, N.D., Stafford, M.R., 1999b. International services advertising: an examination of variation in appeal use for experiential and utilitarian services. J. Serv. Mark. 13 (4), 390–406.

Alonso, A.D., Kok, S.K., Bressan, A., O'Shea, M., Sakellarios, N., Koresis, A., Santoni, L.J., 2020. COVID-19, aftermath, impacts, and hospitality firms: an international perspective. Int. J. Hosp. Manag. 91, 102654.

American Hotel & Lodging Association, 2020, August). State of the hotel industry analysis: COVID-19 six months later. Retrieved from ⟨https://ahla.com⟩.

American Hotel & Lodging Association , 2021, January). State of the hotel industry report. Retrieved from ⟨https://ahla.com⟩.

Andrews, J.C., Shimp, T.A., 1990. Effects of involvement, argument strength, and source characteristics on central and peripheral processing of advertising. Psychol. Mark. 7 (3), 195–214.

Back, K.J., 2005. The effects of image congruence on customers' brand loyalty in the upper middle-class hotel industry. J. Hosp. Tour. Res. 29 (4), 448–467.

Back, K.J., Parks, S.C., 2003. A brand loyalty model involving cognitive, affective, and conative brand loyalty and customer satisfaction. J. Hosp. Tour. Res. 27 (4), 419–435.

Bandyopadhyay, S., Martell, M., 2007. Does attitudinal loyalty influence behavioral loyalty? a theoretical and empirical study. J. Retail. Consum. Serv. 14 (1), 35–44.

Baum, T., Mooney, S.K., Robinson, R.N., Solnet, D., 2020. COVID-19's impact on the hospitality workforce–new crisis or amplification of the norm? Int. J. Contemp. Hosp. Manag. 32 (9), 2813–2829.

Bowen, J.T., Shoemaker, S., 2003. Loyalty: a strategic commitment. Cornell Hotel Restaur. Adm. Q. 44 (5–6), 31–46.

Burman, B., Albinsson, P.A., Hyatt, E., Robles, B., 2017. The impact of price level and appeal type in hotel advertising: a pilot study. Serv. Mark. Q. 38 (1), 46–56.

Carpenter, C.J., 2010. A meta-analysis of the effectiveness of health belief model variables in predicting behavior. Health Commun. 25 (8), 661–669.

Champion, V.L., Skinner, C.S., 2008. The health belief model. Health Behav. Health Educ.: Theory, Res., Pract. 4, 45–65.

Chen, Q., Min, C., Zhang, W., Wang, G., Ma, X., Evans, R., 2020. Unpacking the black box: how to promote citizen engagement through government social media during the COVID-19 crisis. Comput. Hum. Behav. 110, 106380.

Chi, H.K., Yeh, H.R., 2009. The impact of brand awareness on consumer purchase intention: the mediating effect of perceived quality and brand loyalty. J. Int. Manag. Stud. 4, 135–144.

Chiang, C.F., Jang, S.S., 2007. The effects of perceived price and brand image on value and purchase intention: Leisure travelers' attitudes toward online hotel booking. J. Hosp. Leis. Mark. 15 (3), 49–69.

De Zwart, O., Veldhuijzen, I.K., Elam, G., Aro, A.R., Abraham, T., Bishop, G.D., Brug, J., 2009. Perceived threat, risk perception, and efficacy beliefs related to SARS and other (emerging) infectious diseases: results of an international survey. Int. J. Behav. Med. 16 (1), 30–40.

Dick, A.S., Basu, K., 1994. Customer loyalty: toward an integrated conceptual framework. J. Acad. Mark. Sci. 22 (2), 99–113.

Dillard, J.P., Shen, L., Vail, R.G., 2007. Does perceived message effectiveness cause persuasion or vice versa? 17 consistent answers. Hum. Commun. Res. 33 (4), 467–488.

Dryhurst, S., Schneider, C.R., Kerr, J., Freeman, A.L., Recchia, G., Van Der Bles, A.M., Van Der Linden, S., 2020. Risk perceptions of COVID-19 around the world. J. Risk Res. 23 (7–8), 994–1006.

Eichhorn, B.R., 2014. Common Method Variance Techniques. Cleveland State University, Department of Operations & Supply Chain Management. SAS Institute Inc, Cleveland, OH, pp. 1–11. Cleveland State University, Department of Operations & Supply Chain Management.

Farzanegan, M.R., Gholipour, H.F., Feizi, M., Nunkoo, R., Andargoli, A.E., 2021. International tourism and outbreak of coronavirus (COVID-19): a cross-country analysis. J. Travel Res. 60 (3), 687–692.

Filimonau, V., Derqui, B., Matute, J., 2020. The COVID-19 pandemic and organisational commitment of senior hotel managers. Int. J. Hosp. Manag. 91, 102659.

Fu, J.R., Chen, J.H., 2012. An investigation of factors that influence blog advertising effectiveness. Int. J. Electron. Bus. Manag. 10 (3), 194.

Garcia de Leaniz, P.M., Rodríguez Del Bosque Rodríguez, I., 2015. Exploring the antecedents of hotel customer loyalty: a social identity perspective. J. Hosp. Mark. Manag. 24 (1), 1–23.

Ha, J., Jang, S., 2010. Effects of service quality and food quality: the moderating role of atmospherics in an ethnic restaurant segment. Int. J. Hosp. Manag. 29 (3), 520–529.

Hair, J.F., Anderson, R.E., Babin, B.J., Black, W.C., 2010. Multivariate Data Analysis: A Global Perspective, Vol. 7. Pearson,, Upper Saddle River, NJ.

Hao, F., Xiao, Q., Chon, K., 2020. COVID-19 and China's hotel industry: impacts, a disaster management framework, and post-pandemic agenda. Int. J. Hosp. Manag. 90, 102636.

Hayes, A.F., 2017. Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach. Guilford Publications.

Herhausen, D., Ludwig, S., Grewal, D., Wulf, J., Schoegel, M., 2019. Detecting, preventing, and mitigating online firestorms in brand communities. J. Mark. 83 (3), 1–21.

Hlee, S., Lee, J., Yang, S.B., Koo, C., 2019. The moderating effect of restaurant type on hedonic versus utilitarian review evaluations. Int. J. Hosp. Manag. 77, 195–206.

Hochbaum, G.M., 1958. Public participation in medical screening programs. Public Health Serv. Publ. 12, 572–577.

Hu, X., Yan, H., Casey, T., Wu, C.H., 2021. Creating a safe haven during the crisis: how organizations can achieve deep compliance with COVID-19 safety measures in the hospitality industry. Int. J. Hosp. Manag. 92, 102662.

Huang, A., Makridis, C., Baker, M., Medeiros, M., Guo, Z., 2020. Understanding the impact of COVID-19 intervention policies on the hospitality labor market. Int. J. Hosp. Manag. 91, 102660.

Iacobucci, D., Posavac, S.S., Kardes, F.R., Schneider, M.J., Popovich, D.L., 2015. Toward a more nuanced understanding of the statistical properties of a median split. J. Consum. Psychol. 25 (4), 652–665.

Iacobucci, D., Schneider, M.J., Popovich, D.L., Bakamitsos, G.A., 2016. Mean centering helps alleviate "micro" but not "macro" multicollinearity. Behav. Res. Methods 48 (4), 1308–1317.

Im, J., Kim, H., Miao, L., 2021. CEO letters: Hospitality corporate narratives during the COVID-19 pandemic. Int. J. Hosp. Manag. 92, 102701.

Janz, N.K., Becker, M.H., 1984. The health belief model: a decade later. Health Educ. Q. 11 (1), 1–47.

Jiang, Y., Wen, J., 2020. Effects of COVID-19 on hotel marketing and management: a perspective article. Int. J. Contemp. Hosp. Manag. 32 (8), 2563–2573.

Kandampully, J., Zhang, T.C., Bilgihan, A., 2015. Customer loyalty: a review and future directions with a special focus on the hospitality industry. Int. J. Contemp. Hosp. Manag. 27 (3), 379–414.

Kim, M.G., Yang, H., Mattila, A.S., 2018. The impact of customer loyalty and restaurant sanitation grades on revisit intention and the importance of narrative information: the case of New York restaurant sanitation grading system. Cornell Hosp. Q. 59 (3), 275–284.

King, C.A., 1995. What is hospitality? Int. J. Hosp. Manag. 14 (3–4), 219–234.

Kock, F., Berbekova, A., Assaf, A.G., 2021. Understanding and managing the threat of common method bias: detection, prevention and control. Tour. Manag. 86, 104330.

Kotler, P., Armstrong, G., 2010. Principles of Marketing. Pearson Education.

Kwok, K.O., Li, K.K., Chan, H.H., Yi, Y.Y., Tang, A., Wei, W.I., Wong, Y.S., 2020). Community responses during the early phase of the COVID-19 epidemic in Hong Kong: risk perception, information exposure and preventive measures. MedRxiv.

Mason, D.D., Tideswell, C., Roberts, E., 2006. Guest perceptions of hotel loyalty. J. Hosp. Tour. Res. 30 (2), 191–206.

Mattila, A.S., 1999. Do emotional appeals work for services? Int. J. Serv. Ind. Manag. 10 (3), 291–307.

Mattila, A.S., 2001. Do emotional appeals work for hotels? an exploratory study. J. Hosp. Tour. Res. 25 (1), 31–45.

Min, H., Park, J., Kim, H.J., 2016. Common method bias in hospitality research: a critical review of literature and an empirical study. Int. J. Hosp. Manag. 56, 126–135.

Mitchell, V.W., Greatorex, M., 1993. Risk perception and reduction in the purchase of consumer services. Serv. Ind. J. 13 (4), 179–200.

Mongiovi, J., Hillyer, G.C., Basch, C.H., Ethan, D., Hammond, R., 2017. Characteristics of medication advertisements found in US women's fashion magazines. Health Promot. Perspect. 7 (1), 28.

Namkung, Y., Jang, S., Choi, S.K., 2011. Customer complaints in restaurants: do they differ by service stages and loyalty levels? Int. J. Hosp. Manag. 30 (3), 495–502.

Nekmat, E., Gower, K.K., Zhou, S., Metzger, M., 2019. Connective-collective action on social media: moderated mediation of cognitive elaboration and perceived source credibility on personalness of source. Commun. Res. 46 (1), 62–87.

Neter, J., Kutner, M.H., Nachtsheim, C.J., Wasserman, W., 1996. Applied Linear Statistical Models, fourth ed. WCB McGraw-Hill, New York.

Nysveen, H., Breivik, E., 2005. The influence of media on advertising effectiveness a comparison of internet, posters and radio. Int. J. Mark. Res. 47 (4), 381–404.

Oliver, R.L., 1999. Whence consumer loyalty? J. Mark. 63 (4), 33–44.

Petty, R.E., Cacioppo, J.T., 1986. The elaboration likelihood model of persuasion. Communication and persuasion. Springer,, New York, NY, pp. 1–24.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., Podsakoff, N.P., 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. J. Appl. Psychol. 88 (5), 879.

Raj, S.P., 1982. The effects of advertising on high and low loyalty consumer segments. J. Consum. Res. 9 (1), 77–89.

Rosenstock, I.M., 1974. The health belief model and preventive health behavior. Health Educ. Monogr. 2 (4), 354–386.

Rosenstock, I.M., Strecher, V.J., Becker, M.H., 1988. Social learning theory and the health belief model. Health Educ. Q. 15 (2), 175–183.

Schall, M., 2003. Best practices in the assessment of hotel-guest attitudes. Cornell Hotel Restaur. Adm. Q. 44 (2), 51–65.

Shoemaker, S., Lewis, R.C., 1999. Customer loyalty: the future of hospitality marketing. Int. J. Hosp. Manag. 18 (4), 345–370.

Stafford, M.R., Day, E., 1995. Retail services advertising: the effects of appeal, medium, and service. J. Advert. 24 (1), 57–71.

Tanford, S., 2016. Antecedents and outcomes of hospitality loyalty: a meta-analysis. Cornell Hosp. Q. 57 (2), 122–137.

Tang, L.R., Jang, S., Morrison, A., 2012. Dual-route communication of destination websites. Tour. Manag. 33 (1), 38–49.

Teichert, T., Hardeck, D., Liu, Y., Trivedi, R., 2018. How to implement informational and emotional appeals in print advertisements: A framework for choosing ad appeals based on advertisers' objectives and targeted demographics. J. Advert. Res. 58 (3), 363–379.

Tellis, G.J., 1988. Advertising exposure, loyalty, and brand purchase: a two-stage model of choice. J. Mark. Res. 25 (2), 134–144.

Tepeci, M., 1999. Increasing brand loyalty in the hospitality industry. Int. J. Contemp. Hosp. Manag. 11 (5), 223–230.

Tranberg, H., Hansen, F., 1986. Patterns of brand loyalty: their determinants and their role for leading brands. Eur. J. Mark. 20 (3), 81–109.

Wang, S., Kirillova, K., Lehto, X., 2017. Reconciling unsatisfying tourism experiences: message type effectiveness and the role of counterfactual thinking. Tour. Manag. 60, 233–243.

Wong, I.A., Yang, F.X., 2020. A quarantined lodging stay: the buffering effect of service quality. Int. J. Hosp. Manag. 91, 102655.

Xiang, D., Zhang, L., Tao, Q., Wang, Y., Ma, S., 2019. Informational or emotional appeals in crowdfunding message strategy: an empirical investigation of backers' support decisions. J. Acad. Mark. Sci. 47 (6), 1046–1063.

Xu, X., Huang, Y., 2019. Restaurant information cues, Diners' expectations, and need for cognition: experimental studies of online-to-offline mobile food ordering. J. Retail. Consum. Serv. 51, 231–241.

Yoon, H.J., Kim, Y.J., 2016. Understanding green advertising attitude and behavioral intention: an application of the health belief model. J. Promot. Manag. 22 (1), 49–70.

Zenker, S., Kock, F., 2020. The coronavirus pandemic–a critical discussion of a tourism research agenda. Tour. Manag. 81, 104164.

Zhang, H., Sun, J., Liu, F., Knight, J.G., 2014. Be rational or be emotional: advertising appeals, service types and consumer responses. Eur. J. Mark. 48 (11), 2105–2126.