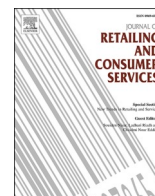




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The impact of hotel attributes, well-being perception, and attitudes on brand loyalty: Examining the moderating role of COVID-19 pandemic

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ABSTRACT

This research sought to investigate the relationships between hotel attributes, well-being perceptions, attitudes, and brand loyalty in the hotel context considering the COVID-19 pandemic. The results of the study's data analyses revealed how tangible and intangible hotel attributes improved individuals' well-being perceptions before and during the COVID-19, as well as how these perceptions in turn influenced cognitive attitudes, affective attitudes, and brand loyalty during these periods. Furthermore, the moderating role of COVID-19 was identified in the link between well-being perceptions and cognitive attitudes and in the association between cognitive attitudes and affective attitudes. In light of these findings, a discussion and insightful implications for both theory and practice were provided. Finally, the limitations of the study and future research directions were addressed.

1. Introduction

Many people have lost their daily routines since the coronavirus (COVID-19) outbreak. Current evidence indicates that COVID-19 is primarily spread through human-to-human interactions (WHO, 2020). Thus, governments and worldwide organizations have promoted various rules and regulations involving these interactions, including prohibiting gatherings and meetings, making people stay locked indoors, and ensuring that people maintain a safe distance between one another (Losada-Baltar et al., 2020; O'Connor et al., 2020). Even though the recent development of COVID-19 vaccine is a positive signal, that does not guarantee that people will resume all of their pre-pandemic activities any time soon (McKinsey and Company, 2021). This new environment under COVID-19 has been blamed for negative emotional and physical states such as depression and loneliness, which result in a lower quality of life. Likewise, the new term *Corona blue*, which is a combined word of "coronavirus" and "blue", has been coined (Ann, 2020).

People are facing an increased risk of prolonged COVID-19, and scholars have recently identified the perceived risk of the COVID-19 pandemic as an influencing factor in the context of consumer behaviour (Laato et al., 2020; Yu et al., 2021). The theory of perceived risk involves changes in consumer behaviour intended to avoid or decrease

the unpleasant results or negative outcomes stemming from behaviour (Bauer, 1960). The theory is widely endorsed in the existing literature in terms of predicting the behaviour of consumers who acknowledge potential risks and endeavour to mitigate them (Foroudi et al., 2021). Likewise, this study employs risk perception theory to understand how the COVID-19 pandemic has changed brand loyalty formation in the hotel context.

Recently, the well-being phenomenon has become a way of life (Han and Hyun, 2019). Since the outbreak of COVID-19, various precautionary measures, such as restrictions regarding movement and social isolation, have been implemented to cope with COVID-19. However, these new measures have also induced challenges in terms of individuals' well-being (Tuzovic and Kabadayi, 2020). Anxiety, depression, fear, nervousness, and stress have been the most frequently mentioned issues in relation to COVID-19, and high levels of distress have become common around the world (Ann, 2020; Wang et al., 2020). In fact, similar trends were found when people were suffering from other infectious diseases such as MERS and SARS (De Brier et al., 2020). In other words, a great deal of evidence suggests that well-being deteriorates during a pandemic and that people are even more adamant about improving their quality of life during such times (Losada-Baltar et al., 2020).

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The function of hotels has expanded during recent years. People visit hotels for multiple purposes, such as healing, refreshing, or relaxing, and they do this by staying overnight, enjoying exotic food, experiencing spa treatments, participating in social events, and engaging in many other activities (Kim et al., 2019b). Moreover, a new set of hotel attributes, which include those related to sustainability and technological innovation, has grown out of changes in individuals' beliefs and lifestyles and the advancement of technology (Kim and Han, 2020; Trang et al., 2019). Thus, hotels are becoming increasingly enriched with various attributes (Marić et al., 2016). The extant studies pertaining to hotel attributes largely deal with a wide range of characteristics that are important for hotel selection, customer satisfaction, and post-behaviours (Kim et al., 2019b; Millar and Baloglu, 2011). As the experience of a hotel stay involves both tangible products and intangible services (Slevitch and Oh, 2010; Yen and Tang, 2019), in previous studies, hotel attributes are often categorized into tangible attributes and intangible attributes. Staying at hotels is obviously one means of improving individuals' well-being. Likewise, well-being is regarded as a central concept in the context of hospitality (Hwang and Lee, 2019; Vada et al., 2019). Nevertheless, studies on the association between hotel attributes and well-being perceptions remain scarce, and this study identifies this issue as a research gap.

Brand loyalty is regarded as the main asset needed for the success of a business (Kotler et al., 2017). Thus, numerous studies identify various driving forces of the development of brand loyalty. Of them, individuals' perceptions of well-being and attitude are fundamental predictors that are built through their evaluations of products or services and their perceptions of offerings (Ahn et al., 2015; Moon et al., 2017; Troebbs et al., 2018). Academic work has begun to offer insights regarding effective hotel management practices to fight against COVID-19; however, these studies mainly deal with the impact of COVID-19 on the hotel sector (Filimonau et al., 2020; Jiang and Wen, 2020). However, endeavours that consider the disruptive influence of COVID-19 on the formation of customers' brand loyalty have seldom been made until today, which indicates another research gap. Moreover, in consideration of the increased demand for well-being perceptions in the COVID-19 environment, the identification of a moderating effect on the impact of COVID-19 on the development of individuals' behavioural intentions would be critical. Thus, this study is designed to address the following research questions:

RQ1: What difference does the COVID-19 pandemic induce in terms of the influence of hotel attributes on well-being perceptions?

RQ2: How does the COVID-19 pandemic influence well-being perceptions in the development of brand loyalty through cognitive and affective attitudes?

RQ3: Does a moderating role of the COVID-19 outbreak exist in the relationships between well-being perceptions, cognitive attitudes, affective attitudes, and brand loyalty?

The world has witnessed changes in consumer behaviour during the COVID-19 pandemic (Foroudi et al., 2021; Untaru and Han, 2021). Every change in consumer demand presents an opportunity for industries. This research provides new perspectives by determining the variance in the formation of brand loyalty before and during the COVID-19. Specifically, this research fills the void of the existing literature by examining how the COVID-19 pandemic has changed brand loyalty formation while focusing on hotel attributes and well-being perceptions. In addition, this paper provides insights into the preparation of crisis management after the COVID-19 pandemic. The remainder of this research is structured as follows. Section 2 discusses the existing literature pertaining to each study variable and the associations between them. Likewise, the conceptual research framework and hypotheses development process are articulated in detail. Section 3 provides the study's methodology, and Section 4 presents the analysis results obtained. Section 5 includes a discussion and implications for theory and

practice. Finally, the limitations of the study and directions for future research are addressed in Section six.

2. Literature review

2.1. Hotel attributes

Hotel products and services are shaped by tangible and intangible attributes that are highly intertwined. The term tangibility refers to the elements of man-made physical environments (Marić et al., 2016). Hence, tangibility in the hotel business usually encompasses the appearance and form of various facilities, which include guest rooms and restaurants (Kim et al., 2019b), whereas intangibility is the most important factor in terms of distinguishing services from goods (Zeithaml et al., 1985); thus, intangibility is a pillar of the characteristics of hospitality (Wolak et al., 1998). Marić et al. (2016) engaged with 220 people to explore the hotel attributes that comprise service quality. They derived six tangible hotel attributes, including a hotel's appearance and furnishings, the comfort and cleanliness of rooms, restaurants and bars, sports and recreational facilities, swimming pools and saunas, and the size of rooms and event spaces. Additionally, they categorized intangible attributes according to three latent factors: personal attention, staff helpfulness, and the accuracy of service. Jang et al. (2018) conducted a longitudinal study and examined the changes in importance of 30 hotel attributes through applying a text mining technique to hotel reviews from 2011 to 2016. They discovered that employee attributes are a consistent salient factor in the hotel industry. Additionally, space and the views of rooms have increased in significance, and internet access has become less important over the years. Yen and Tang (2019) viewed various hotel facilities and reservation systems as tangible aspects of hotel attributes, whereas they indicated that the intangible aspects of hotel operations include interpersonal interactions between employees and customers.

Regarding binary approaches to hotel attributes, a number of authors emphasize the importance of intangible attributes in the service sector (Kim et al., 2019b; Vargo and Lusch, 2004). Fang et al. (2008) noted that intangible cues are innate characteristics of hospitality that enable a firm's offerings to be more attractive and distinctive than those of other firms. Accordingly, they argued that intangible attributes offer improved chances to sharpen a firm's competitive edge, since they are difficult to copy. On the other hand, some scholars claim that the role of intangible attributes is often overestimated and emphasize the essential role of tangible attributes. For example, Albayrak et al. (2010) explained that tangible hotel attributes can be easily adjusted, modified or renewed; thus, tangible attributes have a greater impact on consumers' responses than intangible attributes. Sharma et al. (2014) determined that offerings with improved tangible attributes reduce perceived risk and consequently increase individuals' buying intentions. More recently, Ding and Keh (2017) nested their study within construal level theory and investigated how individuals perceive the relative importance of tangible and intangible attributes in evaluating a service. They observed that individuals with a high construal level depend relatively heavily on intangible elements, whereas people with a low construal level tend to rely on tangible elements.

The previous studies in this field generally examine tangible hotel attributes such as interior design, fitness centres, saunas, pools, well-maintained facilities and furniture, and room features including beds, bathrooms, size, layout, and amenities. Additionally, the current literature commonly explores intangible hotel attributes, namely, accessibility, brand, cleanliness, convenient check-in/out, class, hygiene, human capital such friendliness and professionalism, reputation, value for money, safety, and security. The extant studies on this topic discuss the effects of tangible attributes and intangible attributes; however, there is no easy reconciliation between these two distinctive elements (Albayrak et al., 2010; Ding and Keh, 2017; Vargo and Lusch, 2004). In spite of this, it is indeed meaningful to evaluate hotel attributes that are

divisible and measurable in terms of the aspects of tangibility and intangibility.

2.2. Well-being perceptions

An individual's judgement of the wellness of his/her mind and body illustrates his/her well-being perception (Diener, 2009). One of the frequently cited definitions of well-being perception in the literature is "consumers' perception of the extent to which a brand positively contributes to a quality of life enhancement" (Grzeskowiak and Sirgy, 2007, p. 289). Specifically, quality of life is a broad term that includes individuals' perceptions about their health in relation to all human life dimensions; therefore, the notion of well-being is one of the essential components of enhancing a person's position in life (Pinto et al., 2017). Today, people are more inclined to have optimal mental, physical, and social health, and a large body of studies have examined the factors that increase well-being perceptions. They determine that people can attain a sense of well-being through events such as holiday, leisure, and sports activities (Gilbert and Abdullah, 2004; Heintzman and Mannell, 2003; Lin and Chang, 2020). Indeed, well-being perceptions deserve increased attention in the context of hospitality and tourism (Sirgy, 2019).

Well-being in hospitality depends on individuals' evaluations of the extent to which the attributes of a specific product or service promote their quality of life (Han and Hyun, 2019; Vada et al., 2019). Following this notion, the quality of hotel attributes and/or customer experiences related to well-being have often been explored in the hospitality and tourism context (Kim et al., 2012; Mody et al., 2020). Lin and Chang (2020) focused on the atmosphere of hotel restaurants and explained that well-being is a subjective element of individuals' satisfaction with experiences. Additionally, the role of well-being in consumer behaviour has been widely investigated, and its contribution to the development of consumer behaviour has been validated. More specifically, much evidence indicates that individuals' perceptions of well-being create a positive attitude and brand loyalty (Huang et al., 2019; Hwang and Lee, 2019; Lin and Chang, 2020). Therefore, well-being perceptions represent an important concept bridging between core attributes and consumers' repatronage in the hotel industry.

2.3. Attitude

Attitude is defined as "an individual's propensity to evaluate a particular entity with some degree of favourability or unfavourability" (Eagly and Chaiken, 2007, p.583). Many studies have provided evidence that personal attitudes are a critical driving force of consumer behaviour (Hosany and Prayag, 2013; Kiatkawsin and Han, 2017; Kim et al., 2019a).

In the existing social psychology literature, attitude is often treated with two-dimensional approaches (Bagozzi and Burnkrant, 1979, 1985; Crites et al., 1994), suggesting the existence of cognitive attitudes and affective attitudes. Cognitive attitudes refer to a person's specific beliefs about an object (Bagozzi and Burnkrant, 1979, 1985). In contrast, the affective facet of attitudes describes how much an individual likes or dislikes an object (Bagozzi and Burnkrant, 1979, 1985). Cognitive attitudes and affective attitudes operate through different psychological mechanisms (Moon et al., 2017; Yang and Yoo, 2004), and the cognitive-affective model of attitude has been determined to be appropriate in the contexts of both self-reported and behavioural intentions (Bagozzi and Burnkrant, 1979, 1985). Crites et al. (1994) determined that cognitive attitudes best illustrate the characteristics and nature of an object, and conversely, they articulated that affective attitudes best illustrate an individual's feelings towards an object. Thus, they used love, delight, happiness, excitement, likability, and relaxation to measure the affective facet of attitudes, whereas benefits, perfection, value, and wisdom were adapted to assess the cognitive aspects of attitudes (Crites et al., 1994). As a fundamental distinction between cognitive attitudes and affective attitudes exists, Triandis (1979) argued that an

adequate comprehension of the association between attitudes and consumer behaviour is possible when attitude is dealt with by separating its cognitive and affective components. Similarly, Yang and Yoo (2004) examined whether the two aspects of attitude should be treated separately, and they confirmed that this should be done with a high degree of reliability and validity in the field of technology adoption.

2.4. Brand loyalty

Brand loyalty is conceptualized as "a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour" (Oliver, 1997, p. 392). Likewise, intentions to revisit and a willingness to spread the word about a product or service indicate a person's level of brand loyalty across various sectors (Yen and Tang, 2019; Yoon and Park, 2018). Even though attracting new customers is vital to increasing a firm's market share, retaining existing customers is recognized as the more effective way to increase profits (Kotler et al., 2017). Hence, cultivating brand loyalty has been the ultimate goal of companies, and the same concept applies to the hotel industry (Kiatkawsin and Han, 2017; Trang et al., 2019).

2.5. Relationship among the study variables

Satisfying the interests of consumers' changing demand is of great importance (Kim and Han, 2020; Lin and Chang, 2020). There has been a general increase in concern regarding well-being (Hwang and Lee, 2019), and according to the theory of leisure well-being, various leisure activities increase well-being by fulfilling a set of individuals' basic needs and growth needs (Sirgy et al., 2017). Basic needs encompass benefits related to escape, health, safety and sensory needs, while growth needs involve benefits related to aesthetics, distinctiveness, and symbolic needs (Sirgy, 2019). Therefore, it is reasonable to state that hotel attributes affect customers' well-being perceptions. More concretely, attributes that customers appreciate evoke an increased degree of perceived well-being.

A link between attributes and well-being perceptions has been supported in previous studies. Han et al. (2020) observed that green spaces and hotel environments influence the well-being of visitors; thus, they suggested that efforts involving nature-based solutions are required to enhance customers' mental health and consequently improve customer retention in the hotel industry. Lin and Chang (2020) determined that a person's sense of well-being is affected by the atmosphere and service performance of upscale restaurants. Particularly, their results indicated that interior decorations, furniture, and employee attributes are crucial factors that influence individuals' feelings. Mody et al. (2020) conducted an empirical study involving 527 patients to assess the role of hotel-like attributes of hospitals, such as luxury bedding, designer-inspired furniture, hospitable manners, and concierge services. Their study revealed that the availability of hotel-like offerings enriches patients' well-being perceptions. Jiang and Wen (2020) discussed hotel marketing and management strategies in the context of COVID-19, and they suggested that personalized products should be offered, as they could improve individuals' well-being. These studies imply that hotel attributes may have a substantial impact on individuals' mental and physical states and that they may tend to enhance their experiences, which aids their level of well-being. Thus, the following hypotheses were formulated:

H1a Before the COVID-19, & **H1b** During the COVID-19, tangible hotel attributes (have) significantly promoted well-being perceptions.

H2a Before the COVID-19, & **H2b** During the COVID-19, intangible hotel attributes (have) significantly promoted well-being perceptions.

Individuals' growing interest in well-being is currently often

discussed, and the COVID-19 pandemic reinforces the value of well-being in the hospitality context (Huang et al., 2019; Mody et al., 2020; Tuzovic and Kabadayi, 2020). A wide range of existing studies have determined the meaningful role of well-being perceptions in creating positive behaviours. Specifically, the role of well-being perceptions has been validated, as they facilitate individual attitudes and brand loyalty (Lin and Chang, 2020; Troebs et al., 2018).

In the context of a selection of restaurants, Kim et al. (2012) confirmed that individual well-being perceptions exert an influence on patrons' decision-making processes. They particularly emphasized the salient role of well-being perceptions, which are driven by hedonic value. That is, customers' dining experiences maximize their personal well-being, which induces positive behavioural intentions in the restaurant industry. Ahn et al. (2015) analysed data collected from 205 airline passengers to assess the impact of in-flight and ground service factors, and they documented a significant relationship between passengers' well-being perceptions and brand loyalty. The same findings exist in the retail setting (e.g., Shafiee and Es-Haghi, 2017), confirming that individuals' loyalty towards a mall is affected by their shopping well-being. Hwang and Lee (2019) empirically examined the outcomes of well-being perceptions in the context of senior tourism, and their results revealed significant associations between well-being perceptions, consumer attitudes, and brand loyalty. Baloglu et al. (2019) focused on emotional well-being in the field of spa and wellness, and they highlighted the close relationship between emotional well-being and loyalty. Kim et al. (2019a) reported that the well-being perceptions of Chinese travellers affected their brand attitudes and brand preferences such that they eventually led to greater commitment to a specific brand. Lin and Chang (2020) confirmed that once increased well-being perceptions are formed through the atmosphere and service performance of restaurants, individuals exhibit intentions to repurchase and a willingness to recommend those specific places to relatives or friends. Based on this evidence, the current study developed the following hypotheses:

H3a Before the COVID-19, & **H3b** During the COVID-19, well-being perceptions (have) significantly promoted cognitive attitudes.

H4a Before the COVID-19, & **H4b** During the COVID-19, well-being perceptions (have) significantly promoted affective attitudes.

H5a Before the COVID-19, & **H5b** During the COVID-19, well-being perceptions (have) significantly promoted brand loyalty.

Evidence of a significant link between attitude and brand loyalty in the hospitality and tourism field is abundant (Kiatkawsin and Han, 2017; Trang et al., 2019). For example, previous studies focus on the fact that hotels have embraced various technology-mediated services and green practices, and the findings of these studies have supported how an individual's attitude towards these services affects his/her decision-making process (Sun et al., 2020; Trang et al., 2019). Additionally, existing studies contain empirical evidence about the significant role of the effect of cognitive attitudes on affective attitudes in developing loyalty (Hwang and Lee, 2019; Yang and Yoo, 2004). Yang and Yoo (2004) demonstrated that when both the cognitive and affective dimensions of attitude are considered, more than twice as much of the variance in individuals' behaviours is explained than when attitude is treated as a one-dimensional construct. In addition, their results support the positive influence of cognitive attitude on affective attitude. Moon et al. (2017) took a cognitive-affective attitude approach in predicting consumers' purchase intentions. Their results found that both cognitive attitudes and affective attitudes increased individuals' buying intentions, but that cognitive judgement played a more salient role than emotional judgement. Based on these findings, the following hypotheses were posited:

H6a Before the COVID-19, & **H6b** During the COVID-19, cognitive attitudes (have) significantly promoted affective attitudes.

H7a Before the COVID-19, & **H7b** During the COVID-19, cognitive attitudes (have) significantly promoted brand loyalty.

H8a Before the COVID-19, & **H8b** During the COVID-19, affective attitudes (have) significantly promoted brand loyalty.

2.6. Moderating effect of the outbreak of COVID-19

A high degree of distress has been reported as an adverse effect of COVID-19 (O'Connor et al., 2020; Sibley et al., 2020). This is primarily due to the environment induced by the pandemic, which involves new rules such as lockdowns and physical distancing. As early studies demonstrate that social connections are crucial to individual well-being and dealing with tough situations (Holt-Lunstad et al., 2015), self-isolation is likely to increase individuals' loneliness and dissatisfaction. Similar phenomena were found during the MERS and SARS outbreaks (De Brier et al., 2020), which had significant influences on individual behaviour. Likewise, well-being has become a pivotal concern for many individuals in the COVID-19 environment, and the enhancement of well-being in a safe and sanitary environment is described as a top priority of many hotels.

The existing literature suggests the moderating role of individual risk perception regarding disease in the consumer behaviour. For instance, Tavitiyaman and Qu (2013) identified the moderating role of perceived risk related to SARS among tourists when forming their behavioural intentions. In a similar vein, there are studies that attempt to determine the impact of risk perceptions of the COVID-19 outbreak on the development of consumer behaviour in the context of hospitality (Foroudi et al., 2021; Yu et al., 2021). For example, Henkel et al. (2020) demonstrated how robotic services cater to an improved degree of well-being among vulnerable consumers who are suffering from social isolation due to the COVID-19 pandemic. Similarly, Kim et al. (2020) focused on individuals' preferences for contactless services after the onset of COVID-19, and they confirmed that the COVID-19 outbreak moderates the effect of attitude on individuals' behavioural intentions towards drone-based food delivery service. Tuzovic and Kabadayi (2020) examined the impact of various physical distancing measures implemented due to COVID-19 on well-being from the perspective of service employees. They drew on macroeconomic data and industry reports to explicate how social distancing influences employees' mental well-being, physical well-being, social well-being, and financial well-being. In addition, concern regarding well-being is greater than ever due to the prolonged nature of COVID-19; therefore, the role of well-being perceptions in the context of attitude and brand loyalty is expected to increase in significance. Based on the theory of perceived risk, Foroudi et al. (2021) explained how the COVID-19 outbreak influences consumers' beliefs, which affect their emotions and consequently their future desire to visit restaurants. Accordingly, the following hypotheses were proposed (see Fig. 1):

H9a. The COVID-19 outbreak significantly moderates the link between well-being perceptions and cognitive attitudes.

H9b. The COVID-19 outbreak significantly moderates the link between well-being perceptions and affective attitudes.

H9c. The COVID-19 outbreak significantly moderates the link between well-being perceptions and brand loyalty.

H9d. The COVID-19 outbreak significantly moderates the link between cognitive attitudes and affective attitudes.

H9e. The COVID-19 outbreak significantly moderates the link between cognitive attitudes and brand loyalty.

H9f. The COVID-19 outbreak significantly moderates the link between affective attitudes and brand loyalty.

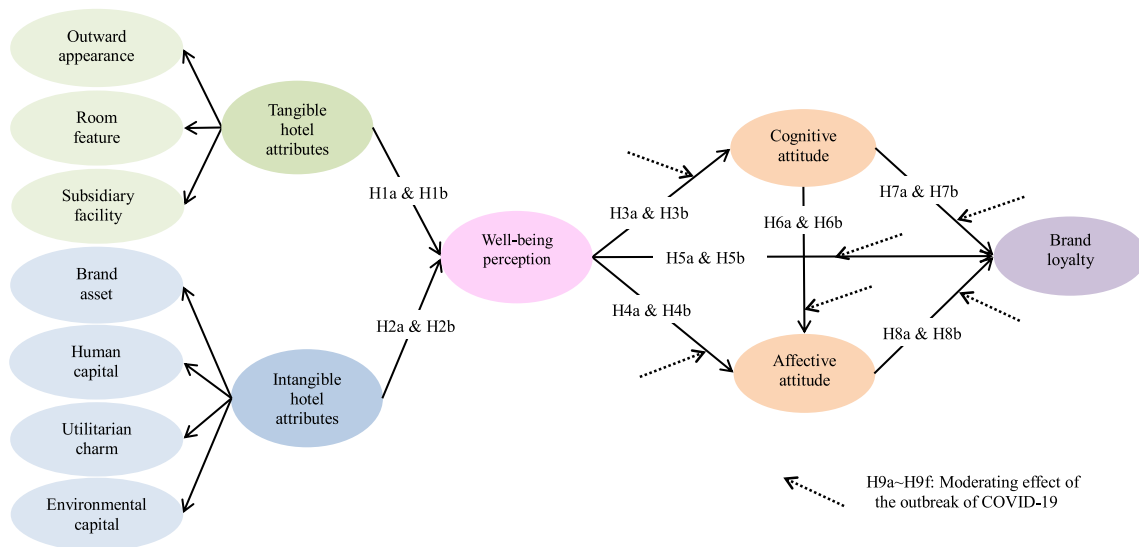


Fig. 1. Proposed model.

3. Methodology

3.1. Measurement development

The measurement items of each study variable were borrowed from previous research to ensure their reliability and validity in the context of the hotel industry. The examined tangible and intangible hotel attributes were adopted from the works of Jang et al. (2018), Kim et al. (2019b), and Marić et al. (2016). The statements “Attribute A in the hotel that I have stayed in is adequate for my needs” and “The performance of attribute A in the hotel that I have stayed in is good” were used to measure the performance of a total of twenty-five hotel attributes. Well-being perceptions were assessed with three items that were validated in the studies of Han et al. (2019) and Hwang and Lee (2019). Cognitive attitudes and affective attitudes were measured with three items that were adapted from the works of Yang and Yoo (2004) and Moon et al. (2017). Finally, brand loyalty was evaluated with three items that were borrowed from Yoon and Park (2018) and Trang et al. (2019). All of the items were measured using a seven-point Likert scale.

3.2. Survey development and data collection

The purpose of the survey was first stated, and then the questionnaire was designed with three subsections. The first section included a performance evaluation of the examined hotel attributes, and the second section was composed of questionnaires for the measurement of the other study variables: well-being perceptions, cognitive attitudes, affective attitudes, and brand loyalty. In these two sections, the participants were asked to rate their degree of agreement and/or disagreement with each item based on their hotel experiences both before and during the COVID-19. The last section contained questionnaires used to assess the demographic characteristics of the participants and their hotel stay experiences. The survey was pre-tested by six experts in academia and the hospitality industry, and then the questionnaires were fine-tuned.

The surveys were distributed online to panels of a research company in South Korea during September 2020. There were some hotels which have temporarily closed their door due to the COVID-19 cases within the property or the low level of customer demand during the initial phase of COVID-19, however, hotels are relatively under the control since the local government introduced mandatory measures (The Korea Herald, 2020). Furthermore, thanks to increasing demand for staycation at a hotel during the COVID-19, hotels in Korea have been launching various room package promotions and they have successfully attracted local

guests staying at hotels (The Korea Bizwire, 2020). Screening questions were used to gather responses from individuals who had stayed at the same four- or five-star rated brand-name hotels before and during the COVID-19. As such, the participants of our survey are likely to have a better understanding of the changes of hotel’ operations before and during the COVID-19. Prior to answering the questionnaires, the participants were required to state the name of the hotel brand, the number of companions that had stayed with them, and length of their stay to refresh their memories. Over the period of a week, a total of 400 responses were collected. Among the responses, ten multivariate outliers were detected using a Mahalanobis distance test; thus, 390 surveys were retained for data analysis using SPSS and AMOS software. The survey participants comprised 196 females and 194 males. The average age of the participants was 44.28 years old. More specifically, 22.1% (86) were in their fifties, 20.3% (79) were in their forties, and 20.0% (78) were in their thirties. With respect to academic careers, the majority of the respondents (68.2%, 266) held a degree from a four-year university. Regarding their monthly average earnings, 22.1% (86) of the participants earned less than \$3000 monthly, 19.5% (76) earned between \$3000 and \$3,999, and 11.8% (46) earned between \$5000 and \$5999.

Additionally, the respondents were asked to provide details on their stay experience at the examined hotels. Regarding their frequency of staying at hotels before the outbreak of COVID-19, 40.8% (159) of the participants stated that they stayed at hotels three to four times per year, 21.5% (84) stayed at hotels once or twice per year and 20.3% (79) stayed at hotels five to six times per year. When the participants were asked to indicate the month in which they stayed at the hotels after the onset of the COVID-19 pandemic, 27.2% (106) indicated that their stay was in August 2020, 17.7% (69) responded that it was in July 2020, and 14.9% (58) stated that it was in May 2020. Most of them, namely, 82.8% (323), stayed at hotels for leisure purposes, 42.8% (167) stayed for one night, and 41.3% (161) stayed for two nights. Regarding their travel companions, 37.7% (147) and 35.4% (138) travelled with his/her partner/spouse and with his/her family, respectively.

4. Results

4.1. Measurement model

A confirmatory factor analysis (CFA) was performed to assess the study’s measurement model (see Table 1). The results of the CFA based on the data from before the COVID-19 outbreak indicate that the measurement model satisfactorily fit the data ($\chi^2 = 1230.210$, $df = 574$, $p <$

Table 1
Results of the confirmatory factor analysis: Items and loadings.

Category	Construct and scale item	Standardized loading ^a		
		Before the outbreak of COVID-19	After the outbreak of COVID-19	
Tangible attributes	Outward appearance			
	Well maintained facility/furniture	.793	.766	
	Interior design	.792	.754	
	Room features			
	Bed	.808	.825	
	Bathroom	.805	.855	
	In-room amenities	.749	.732	
	Layout	.712	.680	
	Size	.656	.622	
	Subsidiary facilities			
	Sauna	.852	.926	
	Fitness center	.727	.810	
	Pool	.756	.808	
	Intangible attributes	Brand assets		
		Reputation	.879	.835
Class		.820	.810	
Brand		.815	.791	
Loyalty program		.668	.650	
Human capital				
Responsiveness of employees		.912	.916	
Professionalism of employees		.846	.880	
Friendless of employees		.876	.879	
Appearance of employees		.816	.829	
Utilitarian charm				
Accessibility		.831	.696	
Convenient check-in/out		.827	.832	
Value for money		.678	.752	
Environmental capital				
Hygiene	.872	.901		
Cleanliness	.867	.883		
Safety	.711	.690		
Security	.731	.679		
Well-being perception	This hotel brand meets my overall well-being needs.	.835	.880	
	This hotel brand plays an important role in my well-being.	.870	.893	
	This hotel brand plays a critical role in enhancing my quality of life.	.823	.838	
Cognitive attitude	It is wise to visit this hotel brand.	.888	.893	
	It is worth it to visit this hotel brand.	.887	.916	
	It is ideal to visit this hotel brand.	.873	.902	
Affective attitude	I like visiting this hotel brand.	.864	.895	
	I enjoy visiting this hotel brand.	.894	.903	
	It is pleasant to visit this hotel brand.	.860	.895	
Brand loyalty	I would like to visit this hotel brand in the future.	.906	.905	
	I am willing to visit this hotel brand again.	.888	.906	
	I would recommend this hotel brand to others.	.810	.837	

Goodness-of-fit statistics (before the outbreak of COVID-19): $\chi^2 = 1230.210$, $df = 574$, $\chi^2/df = 2.143$, $p < .001$, NFI = 0.901, IFI = 0.944, CFI = 0.944, TLI = 0.935, and RMSEA = 0.054.

Goodness-of-fit statistics (after the outbreak of COVID-19): $\chi^2 = 1244.998$, $df = 574$, $\chi^2/df = 2.169$, $p < .001$, NFI = 0.905, IFI = 0.946, CFI = 0.946, TLI = 0.937, and RMSEA = 0.055.

Notes 1. ^a All the factors loadings are significant at $p < .001$.

Notes 2. NFI = normed fit index, IFI = incremental fit index, CFI = comparative fit index, TLI = Tucker-Lewis index, and RMSEA = root mean square error of approximation.

.001, $\chi^2/df = 2.143$, RMSEA = 0.054, CFI = 0.944, IFI = 0.944, NFI = 0.901, and TLI = 0.935). The results of the CFA based on the data from during the COVID-19 show that the measurement model satisfactorily fit the data ($\chi^2 = 1244.998$, $df = 574$, $p < .001$, $\chi^2/df = 2.169$, RMSEA = 0.055, CFI = 0.946, IFI = 0.946, NFI = 0.905, and TLI = 0.937). All the factor loadings for the indicators of each construct using data from both before and during the COVID-19 pandemic were significant at $p < .001$.

As Table 2 displays, the values of the average variance extracted (AVE) of each construct generally exceeded 0.50, which is the cut-off value proposed by Fornell and Larcker (1981). Composite reliability was calculated using the factor loadings and measurement errors of the indicators of each variable, and it ranged from 0.733 to 0.912 for the data from before the outbreak of COVID-19 and from 0.702 to 0.907 for the data from after the outbreak of COVID-19; all of them were greater than 0.70 (Hair et al., 2006). Thus, all the constructs employed in this study were found to have acceptable convergent validity and a satisfactory level of internal consistency. Furthermore, the AVE of each construct overall exceeded the squared correlations between the constructs, which indicated a proper degree of discriminant validity (Bagozzi and Yi, 1988).

4.2. Structural equation model and hypotheses testing

This study performed a structural equation model analysis to test the hypotheses corresponding to the periods before and during the COVID-19 pandemic. The overall evaluation of the proposed model fit confirmed a satisfactory fit (before the onset of COVID-19: $\chi^2 = 1783.561$, $df = 608$, $\chi^2/df = 2.933$, $p < .001$, NFI = 0.852, IFI = 0.898, CFI = 0.897, TLI = 0.887, and RMSEA = 0.071; after the onset of COVID-19: $\chi^2 = 1752.266$, $df = 608$, $\chi^2/df = 2.882$, $p < .001$, NFI = 0.866, IFI = 0.908, CFI = 0.908, TLI = 0.899, and RMSEA = 0.070). Six of the hypotheses, namely, Hypothesis 1 to Hypothesis 6, were verified at $p < .05$ using the data from before the COVID-19 pandemic, and all eight hypotheses were verified at $p < .05$ using the data from after the onset of the COVID-19 pandemic (see Tables 3a and 3b).

4.3. Moderating effect of the outbreak of COVID-19

Multiple-group analyses were employed to examine the moderating role of the outbreak of COVID-19, and Table 4 contains the summary of the analysis results. The outbreak of COVID-19 moderated the relationship between well-being perceptions and affective attitudes (Hypothesis 9b: $\Delta\chi^2 [1] = 5.995$, and $p < .05$) and the association between cognitive attitudes and affective attitudes (Hypothesis 9d: $\Delta\chi^2 [1] = 5.420$, and $p < .05$). More concretely, the path coefficient between well-being perceptions and affective attitudes was lower after the initial onset of COVID-19 ($\beta = 0.290$ and $t = 2.986^*$) than it was before ($\beta = 0.658$ and $t = 4.759^{**}$). However, the path coefficient between cognitive attitudes and affective attitudes was greater after the outbreak of COVID-19 ($\beta = 0.657$ and $t = 6.669^{**}$) than it was before ($\beta = 0.289$ and $t = 2.234^*$).

5. Discussion and implications

5.1. Discussion

The results of this study support discussion regarding the significant influence of hotel attributes on customers' sense of well-being. This is consistent with the results of Han et al. (2020) and Lin and Chang (2020), and more importantly, this study identified the changes related to this issue that occurred due to the COVID-19 outbreak. Concretely, tangible attributes appeared to be more powerful in terms of enriching individuals' well-being perceptions before the outbreak of COVID-19 than after it. Of the 390 responses collected, the majority, namely, 82.8%, stayed at hotels for leisure purposes, which might explain why the physical environment of a hotel matters a great deal for customers'

Table 2
Results of the measurement model: Correlations, AVE, CR, mean, and SD.

Constructs	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	CR (AVE)	Mean (SD)
(1) OA	1.000	.737 ^a	.466	.647	.640	.689	.662	.584	.580	.556	.582	.758 (.610)	5.4538 (.9379)
(2) RF	.543	1.000	.524	.686	.773	.705	.750	.583	.619	.607	.646	.854 (.540)	5.4892 (.8404)
(3) SF	.217	.566 ^b	1.000	.479	.482	.417	.475	.427	.458	.478	.460	.733 (.479)	5.0248 (1.1145)
(4) BA	.419	.044	.275	1.000	.235	.131	.179	.136	.280	.208	.241	.581 (.578)	5.4009 (1.4284)
(5) HC	.410	.429	.462	.229	1.000	.566	.534	.516	.544	.567	.572	.844 (.578)	5.3244 (.9350)
(6) UC	.475	.432	.573	.017	.388	1.000	.666	.769	.509	.577	.583	.912 (.721)	5.7782 (.9576)
(7) EC	.438	.486	.531	.032	.325	.471	1.000	.664	.664	.577	.569	.784 (.550)	5.5615 (.9626)
(8) WP	.341	.309	.364	.078	.333	.319	.277	1.000	.334	.300	.804	.856 (.664)	5.7034 (.9893)
(9) CA	.336	.281	.383	.210	.321	.333	.356	.640	1.000	.827	.794	.905 (.760)	5.5248 (.9755)
(10) AA	.309	.296	.368	.228	.327	.340	.324	.328	.646	1.000	.808	.898 (.747)	5.5265 (1.1092)
(11) BL	.339	.249	.471	.212	.338	.349	.352	.379	.596	.630	1.000	.883 (.715)	5.5880 (1.0684)
												.871 (.692)	5.5419 (1.1477)

Note 1. OA = Outward appearance; RF = Room feature; SF = Subsidiary facility; BA = Brand asset; HC = Human capital; UC = Utilitarian charm; EC = Environmental capital; WP = Well-being perception; CA = Cognitive attitude; AA = Affective attitude; BL = Brand loyalty.

Note 2. The unmarked values correspond to the period before the outbreak of COVID-19; the Values in boldface type are after the outbreak of COVID-19.

Note 3. ^a Correlations are above the diagonal, ^b Squared correlations are below the diagonal.

Table 3a
Results of the structural model evaluation and hypotheses testing: Before the COVID-19 outbreak.

	Independent variable	Dependent variable	β	t-value	Status
H1a	Tangible attributes	→ Well-being perception	.473	7.260**	Supported
H2a	Intangible attributes	→ Well-being perception	.504	9.294**	Supported
H3a	Well-being perception	→ Cognitive attitude	.909	15.467**	Supported
H4a	Well-being perception	→ Affective attitude	.648	4.026**	Supported
H5a	Well-being perception	→ Brand loyalty	.660	3.067*	Supported
H6a	Cognitive attitude	→ Affective attitude	.292	1.982*	Supported
H7a	Cognitive attitude	→ Brand loyalty	.104	.722	Not supported
H8a	Affective attitude	→ Brand loyalty	.198	1.252	Not supported

Goodness-of-fit statistics: $\chi^2 = 1783.561$, $df = 608$, $\chi^2/df = 2.933$, $p < .001$, NFI = 0.852, IFI = 0.898, CFI = 0.897, TLI = 0.887, and RMSEA = 0.071.

Total variance explained (R²): R² for well-being perception = .478; R² for cognitive attitude = 0.827; R² for affective attitude = 0.849; R² for brand loyalty = 0.885.

Note. * $p < .05$, ** $p < .001$.

well-being. That is, this study indicates that individuals who stay at hotels to refresh, relax, and enjoy leisure activities appreciate the outward appearance, room features, and subsidiary facilities of hotels in terms of helping them achieve an improvement in their well-being.

On the other hand, intangible attributes were found to be more essential in terms of increasing customers' well-being after the outbreak of COVID-19. It seems that this result is attributed to environmental capital, which induces people to generally place increased importance on cleanliness and hygiene due to the nature of COVID-19 and the constant recommendations from officials (CDC, 2020). This means that people have become particularly sensitive to measures related to cleanliness and hygiene in the wake of the COVID-19 pandemic, and

Table 3b
Results of the structural model evaluation and hypotheses testing: After the COVID-19 outbreak.

	Independent variable	Dependent variable	β	t-value	Status
H1b	Tangible attributes	→ Well-being perception	.415	4.144**	Supported
H2b	Intangible attributes	→ Well-being perception	.523	10.097**	Supported
H3b	Well-being perception	→ Cognitive attitude	.881	17.575**	Supported
H4b	Well-being perception	→ Affective attitude	.371	4.190**	Supported
H5b	Well-being perception	→ Brand loyalty	.321	3.058*	Supported
H6b	Cognitive attitude	→ Affective attitude	.548	6.245**	Supported
H7b	Cognitive attitude	→ Brand loyalty	.211	1.985*	Supported
H8b	Affective attitude	→ Brand loyalty	.419	4.601**	Supported

Goodness-of-fit statistics: $\chi^2 = 1752.266$, $df = 608$, $\chi^2/df = 2.882$, $p < .001$, NFI = 0.866, IFI = 0.908, CFI = 0.908, TLI = 0.899, and RMSEA = 0.070.

Total variance explained (R²): R² for well-being perception = .477; R² for cognitive attitude = 0.772; R² for affective attitude = 0.796; R² for brand loyalty = 0.828.

Note. * $p < .05$, ** $p < .001$.

therefore intangible attributes have had a potent influence on well-being perceptions since the outbreak of COVID-19. This finding can also be explained by the theory of leisure well-being. This theory explains that the effect of leisure activities is amplified when the benefits resulting from a leisure activity match the corresponding individual's characteristics, such as hedonism, escapism, health consciousness, and safety consciousness (Sirgy et al., 2017, 2018). Intangible attributes involve environmental capital, which involves cleanliness, hygiene, safety, and security. In other words, the theory of leisure well-being supports the assumption that the outbreak of COVID-19 strengthened the association between hotel attributes related to customers' current needs for enhanced environmental capital and well-being perceptions.

Table 4
Results of moderating effect of the COVID-19 outbreak.

Linkages	Before the outbreak of COVID-19		After the outbreak of COVID-19		Baseline model (freely estimated)	Nested model (equally constrained)	
	β	t-values	β	t-values			
	H9a	Well-being perception → Cognitive attitude	.901	15.133**			.887
H9b	Well-being perception → Affective attitude	.658	4.756**	.290	2.986*	$\chi^2(1222) = 3780.464$	$\chi^2(1223) = 3876.460^b$
H9c	Well-being perception → Brand loyalty	.549	2.794*	.203	1.894	$\chi^2(1222) = 3780.464$	$\chi^2(1223) = 3873.463^c$
H9d	Cognitive attitude → Affective attitude	.289	2.234*	.657	6.669**	$\chi^2(1222) = 3780.464$	$\chi^2(1223) = 3875.884^d$
H9e	Cognitive attitude → Brand loyalty	.068	.547	.062	.456	$\chi^2(1222) = 3780.464$	$\chi^2(1223) = 3870.465^e$
H9f	Affective attitude → Brand loyalty	.284	1.835	.637	4.760**	$\chi^2(1222) = 3780.464$	$\chi^2(1223) = 3870.433^f$

Chi-square difference test: a $\Delta\chi^2(1) = 1.510, p > .05$ (H9a: Not supported)

b $\Delta\chi^2(1) = 5.995, p < .05$ (H9b: Supported).

c $\Delta\chi^2(1) = 2.998, p > .05$ (H9c: Not supported).

d $\Delta\chi^2(1) = 5.420, p < .05$ (H9d: Supported).

e $\Delta\chi^2(1) = 0.001, p > .05$ (H9e: Not supported).

f $\Delta\chi^2(1) = 2.968, p > .05$ (H9f: Not supported).

Goodness-of-fit statistics for the baseline model: $\chi^2 = 3870.464, df = 1222, p < .001, \chi^2/df = 3.167, RMSEA = 0.053, CFI = 0.890, IFI = 0.891, and TLI = 0.880.$

Note. * $p < .05, **p < .001.$

Second, this study validated the significant role of well-being perceptions in building positive consumer behaviour, which is consistent with the conclusions of previous studies (e.g., Baloglu et al., 2019; Hwang and Lee, 2019) and suggests the positive impact of well-being on attitude and brand loyalty. Well-being perceptions were a more influential force on cognitive attitudes than affective attitudes, and the same phenomenon applied both before and during the COVID-19. In addition, since well-being has been meaningful for quite some time now, the results revealed that well-being perceptions yielded brand loyalty both before and after the onset of COVID-19.

Third, the relationship between attitude and brand loyalty was statistically supported. In particular, the effect of affective attitudes on brand loyalty was greater than the impact of cognitive attitudes. Numerous studies identify the higher explanatory power of the affective aspects of individuals' attitudes in terms of their consumption behaviours (Hosany and Prayag, 2013; Kiatkawsin and Han, 2017), and this study echoed these previous findings. Nonetheless, the significance of this association existed only after the onset of COVID-19. This study did not explain why different results are obtained before and during the COVID-19, but it might be worthwhile to explore the reasons why the role of attitude in building consumer behaviour is negligible in normal circumstances.

Finally, the moderating effect of COVID-19 was identified in the link between well-being perceptions and affective attitudes and in the association between cognitive attitudes and affective attitudes. The significance of the effect of well-being perceptions on affective attitudes was stronger before the onset of COVID-19 than it was afterwards. Hotels have implemented various precautionary measures and new protocols to mitigate the spread of COVID-19 (Filimonau et al., 2020; Jiang and Wen, 2020). This probably causes a certain degree of disturbance and inconvenience when staying at hotels and consequently provokes a negative emotional state in customers. This implies that customers' well-being perceptions while staying at hotels have resulted in a less affective attitude since the outbreak of COVID-19. Additionally, the significant association between cognitive attitudes and affective attitudes was strengthened after the onset of COVID-19. That is, the results of the data analysis of this study provide evidence that customers' emotional states are highly inclined toward cognitive attitudes in the COVID-19 environment.

5.2. Theoretical implications

Hotels are vulnerable to threats caused by various environmental factors, and epidemics are catastrophes that negatively affect the hotel sector (Gursoy and Chi, 2020; Jiang and Wen, 2020). As such, recent studies have begun to document how the perceived risk of COVID-19

induces a change in consumers' behaviour (Foroudi et al., 2021; Yu et al., 2021). In this regard, the present study contributes theoretically since its empirical investigation of the impact of COVID-19 was successfully made while taking risk perception theory into consideration. Moreover, the theoretical propositions of the theory of leisure well-being have yet to be empirically examined (Sirgy, 2019). The present research adds theoretical value, as it provides empirical evidence of this theory and addresses an important strategy related to individuals' demand for well-being perceptions that can be used to overcome the current downturn in hotel performance. Additionally, this study categorizes hotel attributes into tangible and intangible attributes, and the relative importance of individuals' well-being over the pandemic period are observed for the first time. Specifically, the findings suggest that tangible hotel attributes were perceived to be more important in terms of promoting individuals' well-being before the COVID-19 outbreak, whereas intangible hotel attributes have been regarded as more important in terms of enhancing well-being since the COVID-19 outbreak.

This study uses attitudes to differentiate between cognitive and affective aspects, and it identifies their different roles in the development of consumer behaviour. Thus, it supports the assertion made in the studies of Triandis (1979) and Yang and Yoo (2004), who suggested the considerable predictive power of consumer behaviour after separating the cognitive and affective components of attitude. Furthermore, the study revealed how the effects of cognitive attitudes and affective attitudes differ under the circumstances influenced by the epidemic. Indeed, this study is among the first attempts to identify the moderating role of the outbreak of COVID-19 in the formation of brand loyalty in the hotel context. Therefore, this paper is valuable and will also be useful for future studies that aim to explore behavioural changes in crisis situations beyond COVID-19.

5.3. Managerial implications

First, this research provides insights into which hotel attributes matter for customers in the COVID-19 era. Indeed, hotel professionals should pay extra attention to intangible attributes. The results, which indicated that intangible attributes have a greater impact than tangible ones on well-being perceptions after the outbreak of COVID-19, imply that the current precautionary measures implemented in hotels are appropriate to some extent. Nonetheless, this study uses empirical evidence to emphasize that environmental capital should be enhanced during the COVID-19 pandemic, so it is suggested that hoteliers assess the areas where these attributes (i.e., cleanliness, hygiene, safety, and security) are insufficiently implemented and make necessary improvements. Broadly speaking, hotel practitioners should promptly respond to

changes in customers' interests and adjust the allocation of their resources accordingly. In the context of COVID-19, hotels should shift their centre of gravity from tangible attributes to intangible attributes to wisely elevate their customers' well-being perceptions.

In addition, this study observed the essential role of well-being perceptions in the formation of brand loyalty. Hence, it is recommended that hotels initiate a variety of offers to enhance individuals' well-being during their stays. In particular, more such efforts are required in the COVID-19 environment since strict guidance about individual movement is inevitable even at hotels, which easily decreases individuals' sense of well-being. Therefore, the implementation of healthy eating options can be considered to help improve individuals' immune systems, and various programmes, such as meditation and yoga, can be proposed to enhance their mental health. Additionally, hotels may hire additional personnel with skills related to offering basic medical assistance or consultation. These endeavours to aid physical health and mitigate mental distress could effectively help customers perceive an improvement in their overall wellness during their stays at hotels, which in turn would increase their positive behaviour towards hotel companies.

6. Limitations and future research

This study was performed using a quantitative approach based on a survey that relied on individuals' self-administered responses. Since the survey simultaneously gathered data from before and after the beginning of COVID-19, the first case of which was detected in December 2019, the participants' responses might have been influenced by memory bias. Thus, in future research, it may be important to conduct a study using a longitudinal method to validate our findings regarding the superior explanatory power of brand loyalty. Second, this paper failed to capture individuals' well-being before staying at hotels. Understanding the preliminary psychological state of an examined individual is important in terms of evaluating the actual contribution of certain hotel attributes to promoting his/her well-being perception, and this should be considered an avenue for future research. Third, this study treated attitudes as a two-component model that comprised cognitive and affective attitudes. However, there is a substantial amount of work that includes a behavioural component of attitude in predictions of individuals' behaviour. Future studies may also explore behavioural attitudes to determine if they improve the predictive power of brand loyalty. In addition, customer segments are widely accepted as a key moderating variable in assessing important or preferred hotel attributes (Kim et al., 2019b). Future studies should offer improved insights according to different customer and market segments. Last, adopting control variables such as attitudes towards risk or sensitivity to hygiene is recommended to assess whether the COVID-19 pandemic is the overall deciding factor in terms of consumers' behavioural changes.

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