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ABSTRACT

The purpose of this study is to test the relationships between physical environment, price perceptions, consumption emotions, and customer satisfaction in Chinese resort hotels. Five hundred self-administered questionnaires were distributed, and 340 were returned. Findings from this study reveal that the physical environment is a significant predictor of consumption emotions and price perceptions, which in turn affect customer satisfaction. Moreover, consumption emotions and price perceptions significantly mediate the relationship between physical environment and customer satisfaction. The management of resort hotels needs to consider that an attractive physical environment can be used for developing positive consumption emotions and price perceptions among customers, which may then increase their satisfaction.

KEYWORDS

Consumption emotions; customer satisfaction; physical environment; price perceptions; resort hotels

Introduction

Resort hotels are one of the fastest growing segments of tourism attractions and are rapidly growing in diversity and popularity since the economic boom of the 1960s (Yang & Chan, 2010). Today large numbers of people travel to resort hotels situated in exotic and beautiful destinations in order to enjoy themselves and escape from their daily routine (Ali et al., 2013). In this context Gee (2000, p. 22) states that, “The core principle of the resort concept is the creation of an environment that will promote and enhance a feeling of well-being and enjoyment.” Gee further identified two characteristics of a resort hotel i.e., 1) sufficient indoor amenities including quality services, pleasant physical surroundings, convenient entertainment and other facilities, and 2) unique location in terms of climate, scenery, and recreational attractions. This definition of resort hotels in also supported by other scholars and practitioners (Ali et al., 2013). Nowadays, resort hotels have become one of the dominant segments of the accommodation industry (Inkabaran et al., 2013).
and their focus is centred primarily on the satisfaction of their customers—considering benefits such as increased retention, decreased costs and increased profits, and positive word-of-mouth (Ali & Zhou, 2013; Han & Ryu, 2009; Ladhari, 2009; Varki & Colgate, 2001). Consequently, service providers are now focusing on identifying factors that can develop and enhance customer satisfaction (Hu, Kandampully, & Juwaheer, 2009; Lee, Back, & Kim, 2009; Ryu & Han, 2010; Wong & Dioko, 2013). A large of scholars have discussed various antecedents of customer satisfaction. For example, physical surroundings have been studied as being a strong antecedent of customer satisfaction, particularly in hedonic consumption settings such as resort hotels (Han & Ryu, 2009; Jang, Liu, & Namkung, 2011; Lee, Jin, & Lee, 2014; Ryu & Han, 2010; Ryu & Jang, 2007; Walsh, Shiu, Hassan, Michaelidou, & Beatty, 2011; Wu & Ko, 2013). Similarly, the literature has also discussed other antecedents of customer satisfaction, including price perceptions (Han & Ryu, 2009; Nguyen & Leblanc, 2002; Oh, 2000; Varki & Colgate, 2001; Wu, 2013), and customer emotions (Han & Back, 2007; Han & Jeong, 2013; Hou, Wu, & Hu, 2013; Lee et al., 2009; Lin & Liang, 2011; Martin, O’Neill, Hubbard, & Palmer, 2008; Walsh et al., 2011; Wu & Liang, 2009).

It has also been established that due to the characteristics of the service industry, customers have a limited of indicators for evaluating the services as compared with products (Amin, Yahya, Ismayatim, Nasharuddin, & Kassim, 2013; Nguyen & Leblanc, 2002). Specifically in the hospitality industry where physical environment and the perceived price are major tangible cues available to assess service quality and develop customer satisfaction (Bitner, 1992; Han & Ryu, 2009); the role of emotions has also gained attention as a central element (Lin & Liang, 2011). In this regard, Martin and colleagues (2008) stated that emotions experienced within a service environment can effect customer’s perceptions and their satisfaction judgments. Thus, from the service provider’s viewpoint, physical environment can improve price perceptions and can elicit customer emotions that ultimately increase customer satisfaction (Han & Back, 2007; Hou et al., 2013; Lin & Liang, 2011; Martin et al., 2008; Oh, 2000; Varki & Colgate, 2001; Walsh et al., 2011; Wu & Liang, 2009). Regardless of the importance of physical environment, price perceptions and consumption emotions in developing customer satisfaction, it is very surprising that very limited research in hospitality literature has focused on these antecedents of customer satisfaction. Contextually, Ali and Amin (2013) stated that the role of price perception in eliciting consumption emotions and developing customer satisfaction still remains unclear both empirically and theoretically. A few studies have considered price perception and customer consumption emotions as a mediator between physical environments and customer satisfaction separately, but none of previous studies have used both of these mediators simultaneously in a conceptual model. Consequently, the collective impact of physical environment, price perceptions and consumption emotions to develop customer satisfaction in the resort hotel industry needs to be tested empirically.
Additionally, this study was conducted in a group of Chinese resort hotels. The *Global Hotels & Resort Market Research Report (2013)* stated that the global resorts industry has rebounded from a recession-induced decline and experienced positive growth in each of the past 4 years. This growth was also seen in Chinese hotels and in the resort industry. Statistics published by World Travel and Tourism Council (2011) reveal that China is one of the most popular tourist destinations in Asia for both domestic and international tourists. The of domestic tourist visits was 1.61 billion and generated a total income of 777.1 billion Chinese Yuan and the of overseas tourists was 55.7 million in 2010, which is an all-time high that exceeded past fures and resulted in a total foreign direct s expenditure of US$ 72.6 billion in 2011 (UNWTO Tourism Highlights, 2012). According to the United Nations World Tourism Organization (2012), in 2030, China will become the largest tourist destination, a finding which points to the growth of Chinese tourism industry in the coming years (Travel China Guide, 2014). However, It is very surprising that despite of having one of the fastest growing tourism indus-tries (Ali et al., 2013), the Chinese hospitality industry, in general, and Chinese resort hotels specifically, are often overlooked by the researchers (Ali & Amin, 2013). Although the United Nations World Tourism Organization states that the importance of resort hotels in tourism and hospitality has been consistently growing (UNWTO, 2012), it has not gained much attention in research. In this context, Line and Runyan (2012) reviewed 274 articles published in four top hospitality journals published from 2008 to 2010. In their review paper, they state that resort hotels are the least studied, comprising only .7% of the total industry studied. However, the presence of research targeting this industry in top hospita-ality journals suggests its relevance to the field (Line & Runyan, 2012).

Considering the arguments discussed, this study aims to investigate the relationships between physical environment, price perception, consumption emotions, and customer satisfaction in Chinese resort hotels. Additionally, for better understanding of the relationships between variables in the framework, we also intended to examine the mediating role of both consumption emotions and price perception in the relationship between physical environment and customer satisfaction in chinese resort hotels. The study adopts the stimulus–organism–response (S–O–R) model presented by Mehrabian and Russell (1974) as a theoretical background.

**Literature review**

**The S–O–R paradigm**

The S–O–R framework assumes that the environment contains stimuli (S) that cause changes to people’s internal states known as organism (O), which in turn cause approach or avoidance responses (R) (Jang & Namkung, 2009; Mehrabian & Russell, 1974). In this framework, the stimuli consist of various elements of physical
atmosphere, and organism refers to internal processes and structures intervening between stimuli and the final actions or responses of an individual (Jang & Namkung, 2009; Novak, Lopa, & Novak, 2010). This implies that an individual’s behavior responses (i.e., approach or avoidance) in an environmental setting are directly affected by environmental stimulus and the individual’s initial emotional states (i.e., pleasure, arousal, dominance) (Lin & Liang, 2011; Rose, Clark, Samouel, & Hair, 2012). Approach behavior includes all positive behaviors that might be staying within an environment, whereas avoidance behavior is exemplified by a desire to leave an environment (Lee & Jeong, 2012; Novak et al., 2010). Marketing researchers have adopted the Mehrabian–Russell model in various contexts to analyse how the physical environments in different service contexts influence customers’ emotions and behaviors (Lin & Liang, 2011). For instance, Baker, Grewal, and Levy (1992) studied the effect of store environment on the emotional states of pleasure and arousal. Wakefield and Baker (1998) also suggested that the overall architectural design and décor of a mall are the key environmental elements in generating excitement amongst the customers. Additionally, Jang and Namkung (2009) studied this framework in restaurant industry and found that atmospherics and services provided act as stimuli that enhance positive consumption emotions shaping customers’ future behavioral intentions. Results from almost all the studies confirm that stimuli such as ambience, pleasing and relaxing music, comfortable temperature, and enticing aroma are primary explanatory variables in predicting pleasing and arousing emotional states to develop satisfaction and positive behavioral intentions amongst the customers.

**Physical environment**

Physical environment refers to the physical surroundings in which the delivery of service products takes place (Nguyen & Leblanc, 2002). Han and Ryu (2009), identified overall décor and artifacts, spatial layout and ambient conditions as the primary dimensions of the physical environment within the context of restaurants in hospitality industry. In this context, Ruiz, Castro, and Diaz (2012) found that environment is an important part of consumer evaluation and satisfaction with the services provided by the service providers. More specifically, Mehrabian and Russell’s (1974) S–O–R framework presented the strong influence of physical environment on human behavior (Han & Ryu, 2009). Therefore, the importance of creating a distinctive and attractive atmosphere has gained growing attention among scholars and hospitality managers, since it is considered as one of key factors in attracting and satisfying customers (Han & Ryu, 2009; Pareigis, Edvardsson, & Enquist, 2011).

Various studies have focused on how customers’ perceptions of environment influence their levels of satisfaction in service settings where they spend a significant period of time (Han and Ryu, 2009; Ryu, Lee, & Kim, 2012; Slatten,
Krogh, & Connolley, 2011; Wakefield & Blodgett, 1996). Positive perceptions of the environment can result in customers’ satisfaction with the service provider followed by positive behaviors, such as likelihood to recommend the service provider to others (Cornelius, Heerden, Botha, & Durieux, 2009; Ryu et al., 2012). Besides influencing the satisfaction levels of customers, physical environment also plays a critical role in differentiating service firms (Pareigis et al., 2011) and influencing the nature of overall customer experiences (Bitner, 1992). Being an outward appearance of the service provider, physical environment can be critical in establishing customer expectations (Simpeh, Simpeh, Nasiru, & Tawiah, 2011) by providing evidence towards the ‘quality’ of the service intangibility through various factors such as layout, decoration and the ambience of physical environment (Berry & Parasuraman, 1991).

**Price perception**

Different marketing studies suggest that variability in service performance increases customers’ uncertainty, so they often rely on price as a major cue in their expectations of the service performance (Mattila & O’Neill, 2003). According to Zeithaml (1988), price is what has been given/sacrificed by the customer to acquire a product or a service, whereas Chen, Gupta, and Rom (1994) stated that perceived price is “the customer’s judgment about a service’s average price in comparison to its competitors” (p. 25), proposing to use price perception when examining customers’ behaviors during service consumption. Perceived price includes both the monetary (objective) and non-monetary (perceived price) attributes (Han & Ryu, 2009; Zeithaml, 1988). The former indicates the actual price tagged for the product or service, while the latter refers to the price that is encoded by the customer in a comparative and subjective manner (Jani & Han, 2011). Zeithaml (1988) mentioned that the use of perceived price is more encompassing than the use of objective price. Han and Kim (2009) also supported this notion and argued that customers do not know or remember the actual price of a specific product/service, but they encode the price in ways that are meaningful to them. In a complex pricing environment, utilizing price perception to investigate its role is more adequate than using the objective price (Han & Ryu, 2009). This concludes that role of perceived price in influencing customer behaviors would be more salient to the resort hotel industry because customer experiences in resort hotels are not identical because of high human involvement during the service delivery. This variability in resort hotel services may foster the use of perceived price as a cue of evaluation and decision-making.

**Customer consumption emotions**

Emotion has been defined by various researchers (Hwang & Hyun, 2013; Hyun, Kim, & Lee, 2011). Damasio (1994) defined emotion as a state of
human body, whereas Gardner (1985) defined emotion as a feeling associated with a particular behavior. Similarly, Lee and colleagues (2009) stated that emotions are a person’s positive (e.g., pleased and relaxed) and negative (e.g., nervous and annoyed) feelings. Additionally, a of researchers have defined emotions based on its characteristics. For instance, Burns and Neisner (2006) viewed emotions to be intentional and based on specific objects or referents. Furthermore, Martin and colleagues (2008) argued that emotions are not merely reactions to appraisals, but also include tendencies to action. Similarly, Clore and colleagues (1987) presented emotion as a valenced affective reaction to perceptions of situations. However, Han and Back (2007) stated that there is little consistency that can be found among various definitions of emotion, thus a clear definition of emotion is lacking.

Another notion was presented by Richins (1997), who grouped various feelings, moods or emotions experienced during the consumption of a product or a service and named them as consumption emotions. Dubé and Menon (2000) stated, “consumption emotions are the affective responses to one’s perceptions of the series of attributes that compose a product or service performance” (p. 288). However, differences between consumption emotions and normal emotions should also be considered (Han & Back, 2007). For example, Han and Back (2007) argued that consumption emotions are less intense than emotions and the range of consumption emotions is narrower and more specific than the range of all possible emotional responses. Consumption emotion can be described by independent emotions such as anger, joy, or fear, etc. They can also be described in different emotional dimensions such as pleasant and unpleasant emotions and calm and excited emotions (Pareigis et al., 2011). Besides, consumption emotions are usually intentional since they often require more intensity, motivational potency, situational specificity, and psychological urgency (Lee et al., 2009). However, there is still some similarity between consumption emotions and normal emotions in terms of experiencing (positive and negative emotions) by the individuals simultaneously (Han & Back, 2007). To summarize, consumption emotions are the affective responses generated during product usage or consumption experiences.

This study also adopts the operationalization of emotions as presented by Richins (1997), because this study emphasizes emotional aspects of customers’ consumption experiences to broaden the understanding of emotions during their service evaluation process. The main reason for incorporating consumption emotions into consumer behavior models is that customers evaluate products/services in different ways. There is growing empirical evidence that emotion, based on consumption, impacts a consumer’s satisfaction judgment and repeat patronage (Ruiz et al., 2012).
Customer satisfaction

Satisfying customers’ needs and desires is a fundamental concept in marketing (Jani & Han, 2011; Lee et al., 2009; Ryu et al., 2012). During the last decade, numerous researchers have developed measures of satisfaction and examined antecedents and consequences of the construct because of the benefits of satisfaction to consumers and firms (Amin et al., 2013; Han & Ryu, 2009; Ryu & Han, 2010; Slatten et al., 2011; Wu & Liang, 2009). This resulted in various definitions and conceptualizations of customer satisfaction in the marketing literature. Oliver (1997, p.13) defined satisfaction as “a judgment that a product, or service feature, or the product or service itself, provides a pleasurable level of consumption-related fulfilment, including levels of under or over fulfilment.” Howard and Sheth (1969) defined customer satisfaction as “the buyer’s cognitive state of being adequately or inadequately rewarded for the sacrifices he has undergone” (p. 18). Another definition was given by Day (1984), describing satisfaction as “a post-choice evaluative judgment concerning a specific purchase selection” (p. 497). The conceptualization that appears to have received the greatest support is the disconfirmation theory presented by Oliver (1997). It suggests that customers become satisfied when they perceive the service as being equal to or greater than what was expected (Oliver, 1997). However, Churchill and Surprenant (1982) stated that customer satisfaction is more complex than could be explained by the cognitive evaluative process. Nowadays most researchers support the value of understanding customer satisfaction concepts from a broader perspective to capture the interplay between cognition and emotion (Teixeira et al., 2012).

Another debate in marketing literature is about the measurement of customer satisfaction (Lee et al., 2009). Some researchers favour measurement of customer satisfaction using a single item (Cronin & Taylor, 1992) while some researchers suggest using multiple items (Lee et al., 2009). However, a general agreement can be found on usage of multiple scale items to measure customer satisfaction due to its complex nature as a construct and to get an empirically stable scale reliability (Lee et al., 2009). Numerous researchers have studied customer satisfaction across hospitality industry (Ali et al., 2013; Amin et al., 2013; Han & Ryu, 2009; Lin & Liang, 2011; Ryu et al., 2012). For instance, Poon and Low (2005) discussed satisfaction as transaction specific and pointed out that customer satisfaction is based on hospitality, accommodation, food and beverage, recreation and entertainment, supplementary services, security and safety, innovation and value-added services, transportation, location, and appearance, as well as on the more basic concerns of pricing and payment. In the same notion, Amin and colleagues (2013) pointed out that customer satisfaction is based on four factors (i.e., reception, food and beverage, housekeeping, and price). All these attributes are called as satisfiers and guests will give compliments for an extraordinary good performance of these
satisfiers and vice versa (Amin et al., 2013). On the other hand, Westbrook and Oliver (1991) used four emotions-laden items to study customer satisfaction. Sample items for this emotion-laden scale include “I am satisfied with my decision to visit this hotel/resort” and “My choice to stay at this hotel/resort was a wise one.” These four items are also widely used by scholars across various facets of hospitality industry. For instance Ali and Amin (2013) used these four emotion-laden items to assess customer satisfaction in Chinese resort hotels whereas Olorunniwo, Hsu, and Udo (2006) used these to assess satisfaction of American hotel guests. Similarly, in another study conducted on various service contexts, Delcourt, Gremler, van Riel, and van Birgelen (2013) also used Westbrook and Oliver’s (1991) four emotion-laden items to assess customer satisfaction. Considering its applicability in hospitality and tourism industry, this study also adopts these four emotion-laden items to measure customer satisfaction.

**Hypotheses development**

**Influence of physical environment on price perceptions**

A significant influence of perceived price in pre- and post-purchase behavior has been agreed by many researchers, but surprisingly little empirical research has been conducted to investigate the physical environment and price perception within the service sector (Han & Ryu, 2009). It has been stated by the environmental psychology literature that various cues within the physical environment of a service setting may affect customers’ cognitions (Bitner, 1992). These cues can also influence the customers’ perceptions about reliability of the service provider, the fairness of the price being charged, and the quality of the services (Bitner, 1992; Nguyen & Leblanc, 2002; Raajpoot, 2002). The logic underlying the relationship between the physical environment and perceived value also supports the link between physical environment and price perception (Han & Ryu, 2009). Furthermore, Chen and colleagues (1994) stated that perceived quality influences value perception and the perception of good value for the money that ultimately effects the perception of a reasonable price. Similarly, Han and Ryu (2009), in their study in the context of restaurants, also observed that various dimensions of physical environment significantly influence price perception. Therefore, it is hypothesized that physical environment is positively associated with price perception of customers.

**H1:** Physical environment is positively related to customers’ price perceptions.
Influence of physical environment on customer consumption emotions

Prior research have studied and agreed that physical environment influences customers—both cognitively and emotionally (Burns and Niesner, 2006; Kim, Kim, & Lennon, 2009). Various scholars have empirically proven that physical environments can elicit consumption emotions of customers (Bitner, 1992; Ladhari, 2009; Lin and Liang, 2011; Pareigis et al., 2011). Sharma and Stafford (2000) provided additional evidence that the physical environment may assist service providers in attracting and retaining customers by enticing their consumption emotions. Moreover, Walsh et al. (2011) stated that an individual’s evaluation of environmental cues within a service setting gives rise to felt emotions. In this context, literature also shows that customer’s consumption emotions are influenced by both the design and the ambient factors of physical environment that generates excitement among the customers (Harris & Ezeh, 2008). A well-designed and pleasant physical environment reduces pressure and evokes positive consumption emotions and vice versa (Lin & Liang, 2011; Wong, 2004). A recent study by Ali and Amin (2013) in the context of resort hotels also supported a significant impact of physical environment on guests’ consumption emotions. Therefore, we hypothesized:

H2: Physical environment is positively related to customer consumption emotions.

Influence of physical environment on customer satisfaction

Besides its influence on price perceptions and consumption emotions, the service marketing literature also supports the influence of physical environment on customer satisfaction in a service setting (Han & Ryu, 2009; Ruiz et al., 2012; Wakefield & Blodgett, 1996). Physical surroundings can influence the avoid/approach behavior of customers, their patronage level and their spending (Bitner, 1992). Aesthetic design of a physical environment often attracts customers and directly affects their satisfaction levels. Similarly, the ambience and atmosphere of a service setting also influences customer satisfaction (Han & Ryu, 2009). Numerous studies in hospitality industry have examined the effect of physical environment such as ambient condition, spatial layout and signage over customer satisfaction and behavior (Han & Ryu, 2009; Lin & Mattila, 2010). Similarly, Bitner (1992) and Lee and colleagues (2009) also asserted the link between physical surroundings and customer satisfaction. It is therefore hypothesized:

H3: Physical environment is positively related to customer satisfaction.
Influence of price perceptions on customer satisfaction

The link between price perception and customer satisfaction has been studied in marketing literature by a very limited number of studies (Han & Ryu, 2009) and even fewer studies have been conducted to observe this link specifically within the hotel industry. Keaveney’s (1995) research revealed that more than half of his sample respondents switched their service providers because of bad price perceptions for poor services provided, which suggests that price perceptions influence consumer behavior and intentions. A study conducted by Varki and Colgate (2001) also tested the relationship between perceived price and customer’s behavioral intentions. They found that perceived price was significantly related to customer satisfaction, likelihood of doing more business, and recommending the service provider to others. In another study, conducted within the context of entertainment and cellular services industries, Bolton and Lemon (1999) showed that customer perceptions of price fairness/unfairness influenced customer satisfaction and behavioral intentions significantly. In addition, Cheng and colleagues (2011) also supported the significant effect of price perceptions on customer satisfaction in the fast food industry. It is therefore hypothesized:

H4: Customer’s price perception is positively related to customer satisfaction.

Influence of customer consumption emotions on customer satisfaction

Oliver (1997) stated that a strong theoretical support for the link between emotions and customer satisfaction is evident. While assessing a service experience, customers basically draw on their emotional state and any change in this emotional state influences their satisfaction levels (Lin & Liang, 2011). A growing body of literature in marketing suggests that consumption emotions associated with the service encounter influences the satisfaction levels of customers (Martin et al., 2008; Oliver, 1997). The psychology literature has also demonstrated that consumption emotions effect evaluative processes such as satisfaction judgements (Mehrabian & Russell, 1974). It is very obvious that role of emotions provoked during service consumption is being studied by researchers while assessing customer satisfaction (Andreu, Bigné, Chumpitaz, & Swaen, 2006; Westbrook & Oliver, 1991; Wong, 2004). In another study conducted within hospitality industry, Jang and Namkung (2009) narrated that after experiencing positive emotions in a service encounter, customers will express higher levels of satisfaction, which will lead them to stay with the same service provider and spread positive word of mouth. It is therefore hypothesized:
**H5:** Customer consumption emotions are positively related to customer satisfaction.

**Influence of price perceptions on customer consumption emotions**

Support for the relationship between price perception and consumer behavior can be found in the marketing literature (Han & Ryu, 2009); however, the empirical support for the relationship between price perception and consumer consumption emotions is very scant in the hospitality industry (Varki & Colgate, 2001). Xia, Monroe, and Cox (2004) postulated a link between price perceptions and consumption emotions in their conceptual framework on price fairness. Individuals’ perceptions of prices as of overall good (bad) value will trigger arousal and pleasure (negative emotions) (Xia et al., 2004). The significant impact of price perceptions on customer’s consumption emotions was also tested and confirmed by Walsh and colleagues (2011). Hence, we hypothesized:

**H6:** Customer’s price perception is positively related to customer consumption emotions.

**Research methods**

**Research instrument**

To ensure the validity, all the measurement items were taken from previous studies; however, minor modifications to the statements were made to make them adequate for the present study. Physical environment was measured using five items adapted from Wu and Liang (2009). Four items adopted from Lin and Liang (2011) were used to measure customer consumption emotions, while customer satisfaction was operationalized using the four emotion-laden items proposed by Westbrook and Oliver (1991). Three items for price perceptions were adopted from Han and Kim (2009). All of these measurement items are shown in Table 1. We used a 5-point Likert-type where 1 = strongly disagree and 5 = strongly agree. The questionnaire was sent to two hospitality academics for review and some grammatical and structural changes were made in the statements for easy understanding and credibility. The questionnaire was translated from English to Chinese and then retranslated to English by experts from Beifang University of Nationalities, China in order to ensure item equivalence (Lin & Mattila, 2010). For data collection purposes, a Chinese version of the questionnaire was used.
The survey was conducted through face-to-face interaction with the guests at various locations at selected resort hotels in five major cities of China including Beijing, Xian, Dalian, Hohhot, and Yinchuan with the help of School of Management, Beifang University of Nationalities, Yinchuan, China. All the selected resort hotels were domestic resorts having four-star quality ratings. A self-administered survey was used to collect the data. A convenience sample was drawn for the survey. Sampling was conducted by distributing questionnaires to guests at different times of the day, over an 8-week period. In order to increase participation, the purpose of our research was explained to the guests, and questionnaires were only given to those who showed willingness to participate in the survey. A total of 500 questionnaires were distributed, and after exclusion of incomplete responses, 340 questionnaires were deemed sufficiently complete, representing a response rate of 68%. Out of these 340 respondents, 54% were male and 46% were female. Sixty percent of the respondents were below 30 years of age, 11% were between the ages of 31 and 40 years and 19% were older than 41 years. Fifty percent of the total respondents had a Bachelor degree whereas 28% had a Master degree. Among the 340 respondents, 72% were Chinese, and 28% were foreigners. It was surprising to observe that a major group of respondents were younger than 30 years of age. This distribution of age groups is supported by the research of the Thayer Lodging Group (2011), who stated that consumers in 18–34 age group have demonstrated higher interest in leisure travelling when compared with other age groups (Thayer Lodging Group, 2014). This research also found that China has a large proportion of young and wealthy consumers (80%) as compared with

### Table 1. Validity and Reliability for Constructs

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor loadings</th>
<th>AVE</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Environment (PE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The resort’s temperature is comfortable</td>
<td>.600</td>
<td>.505</td>
<td>.793</td>
</tr>
<tr>
<td>The resort’s environment is clean</td>
<td>.734</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The resort’s architecture is impressive</td>
<td>.725</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The colors within the resort are complementary and coordinating</td>
<td>.733</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Consumption Emotions (EM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After visiting this resort, I feel Elated</td>
<td>.674</td>
<td>.592</td>
<td>.812</td>
</tr>
<tr>
<td>After visiting this resort, I feel relaxed.</td>
<td>.790</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After visiting this resort, I feel happy.</td>
<td>.835</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price Perceptions (PP)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The prices charged by this resort are reasonable.</td>
<td>.832</td>
<td>.581</td>
<td>.804</td>
</tr>
<tr>
<td>The prices charged by this resort are fair.</td>
<td>.629</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The prices charged by this resort are appropriate.</td>
<td>.809</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction (SAT)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with my decision to use this resort as service provider</td>
<td>.792</td>
<td>.640</td>
<td>.842</td>
</tr>
<tr>
<td>My choice to choose this resort as a service provider was a wise one</td>
<td>.777</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I think I did the right thing when I chose to stay at this resort</td>
<td>.830</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. $x^2 = 106.307$, CMIN/df = 1.802, GFI = .934, CFI = .961, RMSEA = .061, $p = 0$. 

### Sample design and data collection

The survey was conducted through face-to-face interaction with the guests at various locations at selected resort hotels in five major cities of China including Beijing, Xian, Dalian, Hohhot, and Yinchuan with the help of School of Management, Beifang University of Nationalities, Yinchuan, China. All the selected resort hotels were domestic resorts having four-star quality ratings. A self-administered survey was used to collect the data. A convenience sample was drawn for the survey. Sampling was conducted by distributing questionnaires to guests at different times of the day, over an 8-week period. In order to increase participation, the purpose of our research was explained to the guests, and questionnaires were only given to those who showed willingness to participate in the survey. A total of 500 questionnaires were distributed, and after exclusion of incomplete responses, 340 questionnaires were deemed sufficiently complete, representing a response rate of 68%. Out of these 340 respondents, 54% were male and 46% were female. Sixty percent of the respondents were below 30 years of age, 11% were between the ages of 31 and 40 years and 19% were older than 41 years. Fifty percent of the total respondents had a Bachelor degree whereas 28% had a Master degree. Among the 340 respondents, 72% were Chinese, and 28% were foreigners. It was surprising to observe that a major group of respondents were younger than 30 years of age. This distribution of age groups is supported by the research of the Thayer Lodging Group (2011), who stated that consumers in 18–34 age group have demonstrated higher interest in leisure travelling when compared with other age groups (Thayer Lodging Group, 2014). This research also found that China has a large proportion of young and wealthy consumers (80%) as compared with
their counterparts in the United States (30%). Moreover, a report from Lodging Magazine (2014) reveals that the 18–34 age group (Generation Y and Millennials) are spending extensively on business and leisure tourism and will soon surpass Baby Boomers.

**Data analysis**

The study first applied SPSS version 21.0 to process the descriptive statistics and reliability analysis on the collected data and assess the demographic profile of the sample and the internal consistency of the constructs. As suggested by Anderson and Gerbing (1988), this study assessed the properties of measurement scales for convergent validity and discriminant validity, and constructed composite reliability by confirmatory factor analysis (CFA), followed by application of structural equation modelling (SEM) to verify the path relationships of physical environment, customer emotions, price perceptions, and customer satisfaction. The software used for CFA and SEM was AMOS.

**Results**

**Measurement model**

Table 1 reports that the chi-square value ($\chi^2 = 106.307$) is significant ($p = 0$); and the ratio of the value to degrees of freedom ($\chi^2/df = 1.802$) is less than the cutoff point of 3, as suggested by Bagozzi and Yi (1988). Furthermore, the goodness-of-fit index (GFI = .934) and comparative-fit index (CFI = .961) are greater than the recommended value of 0.9. The root-mean-square error of approximation (RMSEA) is .061, which is less than .08 (Hair, Black, Babin, Anderson, & Tatham, 2006). Therefore, the model fits the data reasonably well overall. In addition, convergent validity refers to the agreement among indicators of a scale. The results showed that all indicators had relatively high standardized factor loadings on their constructs (values ranged from .6 to .83), and were all significant at the level of $p < .05$ (see Table 1), suggesting that the specified indicators were sufficient in their representation of the constructs. Furthermore, construct reliability estimates ranged from .79 to .84, satisfying the threshold value for acceptable reliability of .7, as suggested by Hair and colleagues (2006). The average variance extracted (AVE) from all constructs (ranging from .50 to .64) exceeded the minimum criterion of .50, indicating that the majority of the variance was explained by the constructs (Hair et al., 2006). Compared to the cutoff value of .5 for the convergent validity, all constructs were generally satisfactory. These results indicated that the measurement items had moderate to high reliability and validity.

Discriminant validity of the constructs was also checked. The bold values in Table 2 shows the AVE Values of each construct, whereas the other values are
the squared correlation coefficients between constructs. The results in Table 2 show that the AVE values were greater than the squared correlation coefficients between each pair of constructs. Overall, these results showed the strong evidence for the discriminant validity of the measures (Amin et al., 2013; Hair et al., 2006).

**Structural model**

A structural model was estimated to test H1 through H6. The goodness-of-fit statistics of the proposed model were first estimated. Chi-square value of the model ($\chi^2 = 106.370$, $df = 59$, $\chi^2/df = 1.802$, $p = 0$) and other goodness of fit indices (RMSEA = .061; CFI = .961; GFI = .934) revealed that the model fit the data reasonably well. Therefore, this model was kept for further analysis.

**Common method bias test**

The common method bias implies that the covariance among measured items is driven by the fact that some or all of the responses are collected with the same type of scale (Hair et al., 2006). To determine the presence of common method variance bias among the study variables, a Harman’s (1967) one-factor test was performed following the approach outlined by Podsakoff, MacKenzie, Lee, and Podsakoff (2003). All the items of this study were entered into a principal component analysis with Varimax rotation to see if a single factor emerges from the factor analysis or one general factor accounts for more than 50% of the covariation. The results extracted four dimensions from 15 items and the accumulated variation explained was 31.42%, and thus this study did not have a serious problem with common method variance.

**Empirical testing of hypothesized model**

Figure 1 shows the relationships between hypotheses proposed in this study. Figure 2 shows the final estimated structural model, whereas Table 3 presents standardized path coefficients resulting from testing the proposed structural model. As a result, all structural path estimates were significant ($p < .05$;
except for the path estimate between physical environment and customer satisfaction ($p > .05$).

The hypothesized relationship between the perception of physical environment and customers’ price perceptions was supported by the corresponding estimate of .400 ($p < .01$). These results indicated that customers who have higher perceptions of the physical environment are more likely to have higher
perceived price, which supports H1. The hypothesized relationship between the perception of physical environment and consumption emotions was supported by the corresponding estimate of .633 ($p < .01$). These results indicated that customers who have higher perceptions of the physical environment are more likely to have their emotions influenced, which supports H2. The path coefficient of the relationship between the perception of physical environment and customer satisfaction was 0.063 ($p > .05$) indicating that the perception of physical environment was not a significant predictor for customers’ satisfaction. This result did not support H3. The hypothesized relationship between the price perceptions and customer satisfaction was supported by the corresponding estimate of .328 ($p < .01$). These results indicated that customers who have positive price perceptions are more likely to show satisfaction with the services provided, which supports H4. Similarly, the path coefficient of the relationship between customers’ consumption emotions and customer satisfaction was .439 ($p < .01$) indicating that positive consumption emotions of customers are more likely to satisfy them. This result supports H5. The hypothesized relationship between the price perceptions and customers’ consumption emotions was supported by the corresponding estimate of .230 ($p < .05$). These results indicated that customers who have higher perceptions of the price are more likely to have their consumption emotions influenced, which supports H6. The overall results of this study confirmed previous studies verifying that the perception of physical environment positively influences customers’ internal responses including price perceptions and consumption emotions and these internal responses ultimately influence customer satisfaction.

**Mediation analysis**

As recommended by Preacher and Hayes (2008), a bootstrap procedure was used to test the indirect effects of physical environment on customer satisfaction via price perceptions and consumption emotions. Table 4 presents results

**Table 3. Results of the Structural Model**

<table>
<thead>
<tr>
<th>Hypothesized path</th>
<th>Standardized coefficients</th>
<th>t-value</th>
<th>$p$-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Physical Environment → Price Perceptions</td>
<td>.400</td>
<td>4.14**</td>
<td>.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H2 Physical Environment → Customer Consumption Emotions</td>
<td>.633</td>
<td>6.766**</td>
<td>.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H3 Physical Environment → Customer Satisfaction</td>
<td>.063</td>
<td>0.692</td>
<td>.489</td>
<td>Not</td>
</tr>
<tr>
<td>H4 Price Perceptions → Customer Satisfaction</td>
<td>.328</td>
<td>5.245**</td>
<td>.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H5 Customer Consumption Emotions → Customer Satisfaction</td>
<td>.439</td>
<td>4.672**</td>
<td>.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H6 Price Perceptions → Customer Consumption Emotions</td>
<td>.230</td>
<td>3.244*</td>
<td>.001</td>
<td>Supported</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01.
of two models: 1) the regression coefficients of the mediator effect of price perceptions in the relationships between physical environment and customer satisfaction (Model 1), and 2) the regression coefficients of the mediator effect of consumption emotions in the relationships between physical environment and customer satisfaction (Model 2). For Model 1, it can be seen in Table 4 that physical environment was positively and significantly linked to customer satisfaction ($\beta = .44, p < .01$); also the latter, price perception had a positive and significant impact on customer satisfaction ($\beta = .357, p < .01$). Sobel’s test of the significance of the indirect effect of physical environment on a customer satisfaction was satisfactory ($z = 3.889; p < .01$). The bootstrap confidence interval [0.046; 0.178] did not contain zero, thus it corresponds to the criterion of significance of the mediator effect of price perceptions between physical environment and customer satisfaction (Preacher & Hayes, 2008). Similarly,

<table>
<thead>
<tr>
<th>Table 4. Mediation Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct and total effects</td>
</tr>
<tr>
<td><strong>Model 1 (Mediation of Price Perceptions)</strong></td>
</tr>
<tr>
<td>Effect of Physical Environment on Price Perceptions (a)</td>
</tr>
<tr>
<td>Effect of Price Perceptions on customer satisfaction controlling for Physical Environment (b)</td>
</tr>
<tr>
<td>Effect of Physical Environment on customer satisfaction (c)</td>
</tr>
<tr>
<td>Effect of Physical Environment on customer satisfaction, controlling for price perceptions (c')</td>
</tr>
<tr>
<td><strong>Model 2 (Mediation of Consumption Emotions)</strong></td>
</tr>
<tr>
<td>Effect of Physical Environment on Consumption emotions (a)</td>
</tr>
<tr>
<td>Effect of Consumption emotions on customer satisfaction controlling for Physical Environment (b)</td>
</tr>
<tr>
<td>Effect of Physical Environment on customer satisfaction (c)</td>
</tr>
<tr>
<td>Effect of Physical Environment on customer satisfaction, controlling for Consumption (c')</td>
</tr>
</tbody>
</table>

**Indirect Effects Normal Distribution**

<table>
<thead>
<tr>
<th>Value</th>
<th>Z</th>
<th>LL 95% CI</th>
<th>UL 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1 (Mediation of Price perceptions)</td>
<td>.1313</td>
<td>3.889**</td>
<td>.651</td>
</tr>
<tr>
<td>Model 2 (Mediation of Consumption Emotions)</td>
<td>.2772</td>
<td>5.968**</td>
<td>.1862</td>
</tr>
</tbody>
</table>

**Bootstrapping Results for Indirect Effects**

<table>
<thead>
<tr>
<th>M</th>
<th>SE</th>
<th>LL 99% CI</th>
<th>UL 99% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1 (Mediation of Price perceptions)</td>
<td>.105</td>
<td>.342</td>
<td>.046</td>
</tr>
<tr>
<td>Model 2 (Mediation of Consumption Emotions)</td>
<td>.216</td>
<td>.0531</td>
<td>.121</td>
</tr>
</tbody>
</table>

**Result of Mediation Effect**

<table>
<thead>
<tr>
<th>VAF % (a<em>b/ a</em>b + c')</th>
<th>Type of Mediation based on Hair et al., (2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1 (Physical environment → Price Perceptions → Customer Satisfaction)</td>
<td>46.4%</td>
</tr>
<tr>
<td>Model 2 (Physical environment → Consumption Emotions → Customer Satisfaction)</td>
<td>64.2%</td>
</tr>
</tbody>
</table>

Note. N = 340. The regression coefficients are non-standardized. The size of the bootstrap sample = 2000; LL = lower limit; UL = upper limit; CI = confidence interval. M = mean; SE = standard error. * $p < .05$; **$p < .01$. 
for Model 2, as shown in Table 4 physical environment was positively and significantly linked to customer satisfaction ($\beta = .44$, $p < .01$); the proposed mediator, consumption emotions, also had a positive and significant impact on customer satisfaction ($\beta = .368$, $p < .01$). Additionally, Sobel’s test of the significance of the indirect effect of physical environment on a customer satisfaction was satisfactory ($z = 5.968; p < .01$). The bootstrap confidence interval $[.121; .328]$ did not contain zero, thus it corresponds to the criterion of significance of the mediator effect of consumption emotions between physical environment and customer satisfaction (Preacher & Hayes, 2008).

In order to estimate the size of the indirect effects of mediators, VAF % (Variance Accounted For) was calculated as shown in Table 4. VAF % represents the ratio of the indirect effect to the total effect. For Model 1, the VAF value is 46.4% indicating that 46.4% of the total effect of physical environment on customer satisfaction is explained by indirect effect (price perceptions). Similarly, for Model 2, the VAF value is 64.2% indicating that 64.2 % of the total effect of physical environment on customer satisfaction is explained by indirect effect through consumption emotions. Comparatively, the mediation effect of consumption emotions is stronger than that of price perception from physical environment to customer satisfaction.

**Discussion and conclusion**

This study has provided empirical evidence toward the development of customer satisfaction in Chinese resort hotels through the physical environment, consumption emotions, and price perceptions. Structural equation modelling was used to test the six hypotheses developed for this study. Of these six, five hypotheses were supported (H1, H2, H4, H5, and H6). In particular, physical environment had a significant effect on both price perceptions and consumption emotions. These findings were consistent with previous studies identifying the role of atmospherics on customer emotions (Harris & Ezeh, 2008; Kim et al., 2009; Lin & Liang, 2011) and price perceptions (Han & Ryu, 2009). Consumption emotions and price perceptions also had significant relationships with customer satisfaction, proving that these two variables are important predictors of customer satisfaction. These findings are also consistent with the previous literature (Burns & Neisner, 2006; Han & Ryu, 2009; Jang & Namkung, 2009; Lee et al., 2009; Lin & Liang, 2011; Martin et al., 2008).

This study found that the effect of the physical environment on customer satisfaction was not significant, which is contradictory to previous studies (Bitner, 1992; Jang et al., 2011; Ruiz et al., 2012). The non-significant path could be attributed to the role of mediators (price perceptions and consumption emotions) in this study. This study found that both price perceptions and consumption emotions played as mediators. That is, the physical environment only indirectly influences customer satisfaction through price perceptions and/
or consumption emotions. The physical environment (e.g., temperature, cleanliness, architecture, and colors) at Chinese resort hotels may not play as a strong predictor that can directly induce customers’ satisfaction. They can be satisfied only when they perceive the room rate is reasonable and when they feel pleased or excited in the context of the accommodations.

The influence of the physical environment on consumer behavior has received significant attention from researchers (Andreu et al., 2006) and has also gained a wide acceptance from academicians and practitioners (Turley & Milliman, 2000). Although a few studies have focused on the role of consumption emotions or customer perceptions while determining the effect of the physical environment on the behavioral responses of the customers (Han & Ryu, 2009; Lin & Liang, 2011), consumer research has neither verified the physical environment—emotions—price perception relationship nor explored the possible influence of such relationships on subsequent consumer behaviors. The findings emphasize the importance of the physical environment, price perception, and consumption emotions in understanding how customer satisfaction develops. For researchers, the demonstrated relationships between such variables offer insights into how customers in resort hotels can be satisfied. It is important to note that satisfied customers of a resort hotel might develop increased loyalty, furthering their intentions to revisit, to recommend the property to others, and to extend their stays. Thus, researchers in the resort hotels should incorporate such constructs into satisfaction studies (e.g., satisfaction theory building).

Furthermore, this study also examined the effects of mediating variables using bootstrapping methods, following the steps suggested by Preacher and Hayes (2008). A few studies have considered price perception and consumption emotions as mediators separately, but none of them have used both of these mediators simultaneously. The results of the bootstrapping method for mediation analysis corresponded to the criterion of significance of the mediator effect of price perceptions and consumption emotions between the physical environment and customer satisfaction. These findings are in line with previous studies where a limited verification can be seen for the mediating effect of price perceptions between physical environment and customer satisfaction (Han & Ryu, 2009). Moreover, support can be also seen for the mediating effect of customer consumption emotions between physical environment and customer satisfaction. Although a few researchers have attempted to verify these mediating influences separately, an unresolved issue in consumer behavior research is whether both perceptions and consumption emotions can mediate the influence of the physical environment over outcome variables. Da Silva and Alwi (2006) in this context, argued that understanding both the internal elements (cognitive and affective) are important in consumer studies. Similarly, Bitner (1992) in her conceptual framework states that customers in a specific service firm cognitively, emotionally, and physiologically respond to their physical surroundings. That is, the perceived quality of
the physical surroundings may indirectly cause customers to behave in certain ways because of their internal responses. Consistent with Bitner’s (1992) theoretical framework, the results of this study also reveal that the physical environment may indirectly influence customer satisfaction through customer cognitive (price perception) and emotional response. Thus, in this study, the indirect effect of the physical environment on customer satisfaction was evident in a resort hotel setting. This result goes beyond the previous research that has mainly focused on the direct influence of the physical environment on customer satisfaction.

With the dramatically increasing of resort hotels in China, resort hotel management must aim to accommodate increasingly demanding and sophisticated consumers. The findings from this study have implications for the managers of resort hotels. The findings of this study reveal that customer satisfaction may be influenced by price perceptions. Therefore, resort hotels must ensure the customers perceive the prices to be both reasonable and fair. An appropriate quality of physical environment should be provided to customers in an effort to ensure that customers develop positive price perceptions. At the same time, resort hotels should develop attractive and smart pricing strategies to control customers’ perceptions of price. Consumer perception of price reasonableness in a resort hotel primarily depends on lodging and services charges. Customers are not willing to revisit any service provider when they believe that the prices for the services provided are unreasonably high. Therefore, to improve the price perceptions of customers, providing innovative and pleasant atmosphere, in addition to high quality of service is crucial (Han & Ryu, 2009).

The results of this study may help resort hotel managers understand that the physical environment is critical in eliciting favourable and positive emotional responses, which may positively influence customer satisfaction. For instance, for resort hotels, key touch points where consumption emotions are created include the physical setting that a guest observes in every part of a resort hotel. These touch-points present opportunities to make guests feel valued and cared for and can create a high degree of positive emotions. Also, managers might need to recognize the importance of comfortable temperature in order to encourage a refreshing and relaxing atmosphere, which is an important determinant of emotions, and not irritate customers and discourage re-patronage. Moreover, resort hotel operators might make a careful effort to monitor and improve presentation and cleanliness of living areas as well as the recreational areas and go above customers’ standards to outpace competitors. Likewise, resort hotel managers must also consider how and where they might be creating negative emotions for guests that will influence their experience, such as surly staff, or “petty” rules around the swimming pool, spa, or recreational areas.

Finally, as previously discussed, both price perception and consumption emotions were important mediating variables in the conceptual model, and both price perception and consumption emotions highly mediated the effect of physical
environment on customer satisfaction judgment. This finding indicates that the physical environment can improve customers' satisfaction levels if they perceive the price paid for services to be appropriate or if they feel emotionally affected (e.g., excited, pleased, and relaxed) by the physical environment. Little research has been done on the verification of the mediating role of price perception and consumption emotions on customer satisfaction simultaneously. This finding suggests that price perception and consumption emotions could be useful concepts to both researchers and resort hotel marketers whose primary strategies focus on creating pleasant or exciting physical surroundings and thus increasing customer satisfaction. An important consideration for resort hotel managers is that in order to enhance customer loyalty, management must ensure that the physical environment at a resort hotel conveys a positive price perception and touches customers emotionally to enhance their satisfaction levels.

Limitations and future study

It should be noted that although the results of the current study shed light on several important issues, some limitations need to be considered in future research. A convenience sampling approach was used to collect data from resort hotel. Thus, the generalization of the results needs to be cautiously conducted. For instance, the findings should be interpreted with caution when applied to different types of hotels or different industries. Future research should examine the proposed relationships in other types of hotels and industries. Also, this study employed a unidimensional construct of physical environment. Thus, it may be advisable to use a multi-component construct of the physical environment in future studies.

ORCID

Faizan Ali http://orcid.org/0000-0003-4528-3764

References


