

Impact of service Environment and Service Quality on Customer Satisfaction and Behavioral Intentions in Hotels

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Abstract

The purpose of this study is to propose an integrated model that examines the impact of service environment (servicescape) and service quality on customer satisfaction and behavioral intentions in hotels. Data was collected from guests of three upscale hotels in the region of Virginia, USA via self-administered survey. Anderson and Gerbing's two-step approach was used to assess the measurement and structural models. Structural equation modeling revealed that servicescape affects customer satisfaction, service quality and customer behavioral intentions positively; it was also found that, quality of services offered in luxury hotels leads to customer satisfaction and interestingly, results showed that service quality does not influence customers' behavioral intentions. Furthermore, Customer satisfaction was found to positively affect customers' behavioral intentions in hotels. On the other hand, the findings confirm that service quality, customer satisfaction had a mediating effect on the relationship between servicescape and behavioral intentions. The study findings will significantly help researchers and practitioners understand the complex relationships among service environment, service quality, customer satisfaction and behavioral intentions in the hotel industry.

Keywords: Service Environment, Service Quality, Customer satisfaction, behavioral Intentions.

Introduction

As service providers find it increasingly difficult to create a differential advantage in service delivery, the service environment itself becomes a fertile opportunity for market differentiation (Lee, 2011). In this context of increasing competition, service firms must be certain that their service environments appeal to customers Mattila and Enz (2002). As services are produced and consumed simultaneously, customer affective responses to various cues within service environments have a strong impact on perceptions and behavior (Chang, 2000; Baker *et al.*, 2002; Tsai and Huang, 2002). Pleasure derived from the service environment influences in-store behaviors such as amount of time spent in the store, spending levels and willingness to revisit (Donovan and Rossiter, 1982; Donovan *et al.*, 1994; Yoo *et al.*, 1998). Therefore, service organizations have a strategic stake in understanding how service environments reinforce customers' satisfaction and behavioral intentions (Sherman *et al.*, 1997).

The main purpose of the study is to examine the relationship between servicescape, service quality, customer satisfaction and behavioral intentions within the framework of hotel business.

Most studies that have examined servicescape perceptions of customers have been done on restaurants (Kim and Moon, 2009; Han and Ryu, 2009; Liu and Jang, 2009; Jang and Namkung, 2009; Lin and Mattila, 2010; Heung and Gu, 2012; Voon *et al.*, 2013; Wang and Mattila, 2013; Hyun and Kang, 2014). However, it can be argued that as hotel businesses play a central role in the tourism sector (Pike and Ryan, 2004) and where customers spend quite a lot of time (Wakefield and Blodgett, 1999), not sufficiently investigating the aforementioned relationships in terms of hotel businesses points to a deficiency in the research. Thus, investigating servicescape, service quality, customer satisfaction and behavioral intentions within the framework of hotel businesses contributes to the literature, would be of value to the field and bridge this gap. In addition, this study hopes to create an awareness of the importance of servicescape in the hotel sector.

Customers in the hotel industry are mostly in contact with the physical environment rather than personnel services (Kim and Moon, 2009). In fact, customers interact with the physical elements before experiencing the service. Lin (2004) stated that the moment a tourist first enters a hotel, their initial contact is with the physical environment rather than with personnel. He added that considering all these factors it can be said that servicescape is very effective in the general evaluation of a service organization. Moreover, considering that customers spend more time in hotels compared to other service organizations, it can be said that their interaction with servicescape lasts for a long period of time. The servicescape of the hotel should be arranged in a way that makes a customer feel that the expense and time expended on the trip was worth it. Therefore, hotel businesses should pay attention to each detail rather than ignore servicescape arrangement (e.g. running air conditioners too hot or too cold, inappropriate furnishings, signs that are not sufficiently informative) and only focus on short-term benefits. When a tourist arrives after a long journey and enters a hot lobby, hotel personnel's high performance and friendly manner is not sufficient.

While dense researches have been carried out on servicescape in restaurants (Liu and Jang, 2009, Kim and Moon, 2009, Jang and Namkung, 2009, Han and Ryu, 2009, Lin and Mattila, 2010, Heung and Gu, 2012). More theoretical and empirical studies are needed in this field (Mari and Poggese, 2013). Moreover, very few studies conducted on servicescape in the context of hotels (Dedeoğlu *et al.*, 2015). Therefore, this study bridges this gap by emphasizing the impact of servicescape and service quality on customer satisfaction and behavioral intentions in hotels.

Literature Review

Servicescape

Servicescape is defined as a combination of several dimensions that influence customers' holistic perceptions of the service and it describes the manmade physical surroundings (as opposed to the natural or social environment) that affect customer perceptions of service and may lead to (or away from) customer satisfaction (Bitner, 1992).

It is largely described as the effect of atmospherics, décor, facility design, and layout on a customer's perception of quality, that customer's current and future buying behaviors, and his or her perceptions of the firm. The dimensions of servicescape generally described in the literature are ambient conditions, spatial layout and functionality, and signs/symbols and artifacts. Research suggests it has particular relevance in the service industry due to the intangible and relatively short-term nature of services (Parasuraman *et al.*, 1988; Bitner *et al.*, 1990; Bitner, 1992; Zeithaml *et al.*, 1993).

Unlike manufactured goods, services are generally produced and consumed simultaneously, most often while the customer is present in the service delivery system. Customer perceptions about servicescape have been shown to stimulate emotional responses about firm image and purpose, and these perceptions have also been shown as significant influences on the accomplishment of organizational goals and marketing objectives (Bitner *et al.*, 1990). As a result, servicescape is an important for service firms.

Dimensions of Servicescape

Physical environment has been classified differently in previous studies. Bitner (1992) classified servicescape as ambient conditions, spatial layout and functionality, and signs, symbols, and artefacts. Han and Ryu (2009) focused on décor and artifacts, spatial layout, and ambient conditions in order to examine the factors of physical environment within a restaurant context. Wakefield and Blodgett (1996), whose study was conducted within the leisure services, stated that built environment can be controlled, therefore they focused on layout accessibility, facility aesthetics, seating comfort, electronic equipment/displays, and facility cleanliness, and did not focus on ambient conditions.

Heung and Gu (2012) in their study of influence of atmospherics on patron satisfaction and behavioral intentions in restaurants focused on ambient conditions, facility aesthetics and spatial layout and employee. Nguyen and Leblanc (2002) divided physical environment into five items: ambient conditions, exterior layout, interior layout, décor, and location within an insurance services and hotel services context. Shashikala and Suresh (2013) examined the effect of servicescape in shopping centers on customer loyalty and indicated that servicescape is composed of seven components: ambient factor; aesthetic factor; layout; variety; cleanliness; signs, symbols, and artifacts; and social factors.

Hooper *et al.* (2013) stated that servicescape is composed of equipment, design, space, ambience, and hygiene, and considered it to be one of the antecedent components of service quality. Additionally, in different studies, servicescape has been examined in the context of the physical factor, which is one of the components of service quality (Reimer and Kuehn, 2005; Sureshchandar *et al.*, 2002; Sureshchandar *et al.*, 2001).

According to Kim and Moon (2009) and Namasivayam and Lin (2008), the elements of servicescape have to be examined according to their different

contexts. In this research, servicescape in hotel management is explained in the context of ambience, layout, décor, and signs, which, as Dong and Siu (2013) point out, are explained as substantive staging of servicescape. It must be emphasized that in this study the research focused on functional and mechanical elements; the communicative staging of servicescape (its human clues) was not included. The study was also limited to the interior environment of a hotel. As customers spend much more time in hotels than in restaurants. Therefore, the effect of servicescape on the perception of hotel customers may be more significant (Wakefield and Blodgett, 1999). Although the effect of servicescape components can be examined separately (Harris and Ezeh, 2008), servicescape, as Bitner (1992) stated, includes a number of components, such as ambience, spatial layout, signs, and so on. Consequently, in this paper studying a number of components as a whole was found to be more useful than examining the effects of servicescape components separately. Authors undertaking similar studies have also found this to be the case (Kim and Moon, 2009; Hooper *et al.*, 2013).

The concept of ambience, which forms the physical environment, includes music, smells, lighting, and heating (Han and Ryu, 2009; Heung and Gu, 2012; Lucas, 2003). Layout is a concept related to the positioning of the furniture and various equipment in areas used by customers in ways that enable comfortable movement in general usage areas. It also takes into account how general usage areas can be reached (Han & Ryu, 2009; Heung and Gu, 2012; Turley and Milliman, 2000). The concept of decor is related to the color of the floors and walls, and the quality of the materials (Han and Ryu, 2009). Finally, signs are used as both explanatory directives (name of the organization), for example, pointing to the location of the restaurant, and as informative elements (as in “no smoking” signs) (Bitner, 1992; Kim and Moon, 2009). The importance of the signs is better understood when considering that any number of people are present in the hotel simultaneously.

Servicescape and behavioral intentions

Over the past three decades, numerous studies have been carried out to investigate the influence of atmospherics on customers’ behavioral intentions in the service context including retail and food service settings. Tai and Fung (1997) distinguished two mainstreams of literature on atmospherics in service settings, and recent studies generally fall into one of these two streams. On the one hand are studies that take a comprehensive approach, focusing on the combined effects of various elements of the atmosphere on consumer behavior (Chang, 2000; Donovan and Rossiter, 1982; Liu and Jang, 2009; Ryu and Han, 2010; Ryu and Jang, 2007; Wakefield and Blodgett, 1996). On the other hand are studies that focused on specific atmospheric elements, including crowding (Yildirim and Akalin-Baskaya, 2007), store window type (Yildirim *et al.*, 2007), lighting (Areni and Kim, 1994; Summers and Hebert, 2001), aroma (Gueguen and Petr, 2006; Gulas and Bloch, 1995), and music (Caldwell and Hibbert, 1999; Jacob, 2006; Milliman, 1986; North and Hargreaves, 1996; Wilson, 2003), or paired elements (e.g., scent and music) (Mattila and Wirtz,

2001; Morrison *et al.*, 2011). In the present study, a comprehensive approach was adopted to measure the combined effects of hotel's atmospherics on customers' behavior.

Of those studies that treat atmospherics as a holistic concept, the majority have found customer behavior to be influenced by atmospherics in an indirect way, i.e., it is usually claimed that the effects are mediated by other variables. For instance, Liu and Jang (2009) advanced the notion that the influence of restaurant atmospherics on behavioral intentions is mediated by emotions and perceived value. Chang (2000) and Wakefield and Blodgett (1996) found the physical environment to have no significant direct effect on return intentions; rather, its effect was found to be mediated through customer satisfaction. East (1997), however, proposed that the service environment's effects on consumer behavior are not necessarily mediated by emotional states or satisfaction level. Dube, *et al.* (1994) and Soriano (2002) suggested that atmosphere/ambience has a significant impact on return patronage. It may be that the service atmosphere directly stimulates behavior. Ibrahim (2009), also found in his study of servicescape in coffee shops a positive strong effect of servicescape elements on customers' behavioral intentions. This debate leads us to this study's first hypothesis, which is as follows:

H1: Hotel Servicescape has a positive influence on customers' behavioral intentions

Servicescape and customer satisfaction

Bitner (1992) and Wakefield and Blodgett (1994, 1996, 1999) suggested that the servicescape has a significant effect on customer satisfaction in the leisure context. In particular, Wakefield and Blodgett (1994) argued that the longer the time that customers need to spend inside a business facility when the service provided is a leisure service, the more important the role of the environment in affecting customer satisfaction. Francoeur (1992) suggested that cleanliness, interior décor, and overall lighting levels are important attributes of a desirable physical environment. Lucas (2003) argued that in the casino context, ambient factors, layout navigation, cleanliness, interior décor, and seating comfort are the major components determining satisfaction with the servicescape.

Lam, *et al.* (2011), in their study of servicescape, customer satisfaction, intention to revisit and desire to stay in Casinos, found that servicescape in casinos significantly affects customer satisfaction. Ladhrari *et al.* (2008) added that customer satisfaction with restaurant service is determined by the quality of the food (the functional outcome), the cost/value of the meal, and the manner in which service is delivered. Atmospherics belongs to the third category. Moreover, Ryu and Han (2010), stated that atmospherics may, to a large extent, determine the overall degree of such satisfaction in the restaurant industry, taking into account the intangible nature of service processes.

Unconsciously perceived background music, color schemes, and the light could become the prime determinants of post-consumption satisfaction in a situation with no disconfirmation (the discrepancy between expectation and

performance), which is the usual consumption experience (Wirtz and Bateson, 1999). Research also supports the link between atmospherics and customer satisfaction. For instance, Wakefield and Blodgett (1996) examined the effects of layout accessibility, facility aesthetics, electronic equipment, seating comfort, and cleanliness on the perceived quality of the servicescape, and found that the perceived quality of the physical environment significantly affects customer satisfaction in the leisure service setting. Moreover, Chang (2000), in an investigation of the impacts of the physical environment on customer satisfaction in college sports arenas, confirmed the direct and positive relationship between the two. Jana and Chatterjee (2014) studies the effects of servicescape on youth dining experience in restaurants and found that there is positive relation between layout and ambience on customer satisfaction, Therefore, we hypothesize the following:

H2: Hotel servicescape has a positive influence on customer satisfaction.

Servicescape and service quality

Although numerous articles emphasize the importance of the servicescape, the effect of the servicescape on quality perception has been inadequately captured by previous empirical research. Reimer and Kuehn (2005) studied the effect of servicescape on service quality in retail banking, for utilitarian reasons and in restaurants as well, for hedonic reasons and interestingly they found that servicescape has higher significance on service quality than was supposed in most previous studies in both utilitarian and hedonic settings. Moreover, Hightower *et al.*, (2002), found a strong positive relationship between servicescape and service quality in hedonic service consumption. Reimer and Kuehn (2005) agreed with previous authors that servicescape has a direct influence on service quality. Hence, we hypothesize the following:

H3: Servicescape affects service quality positively.

Influence of service quality on satisfaction.

There have been mixed findings about the causal direction between service quality and customer satisfaction. The most common explanation for the difference is that perceived service quality is described as a form of attitude, a long-run overall evaluation of a product or service, whereas satisfaction is a transaction-specific evaluation (Bitner,1990; Cronin and Taylor, 1992; Oliver, 1981; Parasuraman *et al.*,1988). Based on these conceptualizations, incidents of satisfaction over time lead to perceptions of service quality. For instance, Bitner (1990) developed a model of service encounter evaluation and empirically showed that satisfaction was an antecedent of service quality.

In contrast, many other researchers empirically supported the influence of perceived service quality on customer satisfaction (Cronin and Taylor, 1992; Spreng and MacKoy, 1996; Ting, 2004).

For instance, Cronin and Taylor (1992) examined the conceptualization and measurement of service quality and the relationships among service quality, consumer satisfaction, and purchase intentions. The findings suggested that

service quality was an antecedent of consumer satisfaction whereas consumer satisfaction was not a significant predictor of service quality. Spreng and MacKoy (1996) also discussed the conceptual arguments behind the distinction, and investigated the relationship between service quality and satisfaction by testing a modified Oliver's (1993) satisfaction/service quality model. The results indicated that their modified model fit the data well when perceived service quality was an antecedent of satisfaction.

Moreover, Lee *et al.*, (2000) examined the direction of causality between service quality and satisfaction. The findings showed that perceived service quality was an antecedent of satisfaction, rather than vice versa. Consistent with these findings, Ting (2004) suggested that service quality better explains customer satisfaction, and the coefficient of the path from service quality to customer satisfaction is greater than the coefficient of the path from customer satisfaction to service quality in the service industry. With regard to the lack of consensus, Parasuraman *et al.* (1994) posited that "the conflicting perspectives could be owing to the global judgment focus in most service quality research in contrast to the transaction-specific focus in most satisfaction research" (p. 111). They suggested that perceived service quality and customer satisfaction could be investigated from both transaction-specific and global perspectives. Thus, we propose here that customers can evaluate (be satisfied/dissatisfied with) an object or service only after they perceive the object or service. More specifically, we propose that customers may perceive the service quality immediately after service experience as well as at a later time and compare their perceptions with their expectations. The perceived service quality, expectations, and disconfirmation lead to satisfaction/dissatisfaction, Oliver and Swan (1989). Therefore, it can be hypothesized that

H4: Quality of service has a positive influence on customer satisfaction.

Service quality and behavioral Intentions

The relevance of quality for the success of a hotel cannot be ignored, due to the relationship it has with satisfaction and repeated buyer behavior and positive word-of-mouth. Getty and Thompson (1995) demonstrated that recommendation intentions are more affected by the general quality provided by a service than by the expressed level of satisfaction. The specific dimensions of service quality that influence the intention to recommend are the external appearance of the hotel, the perceived value associated with the stay, the willingness of employees to listen to consumers and the safety environment of the property.

A Study conducted by Barsky and Labagh (1992) in the hospitality sector, found a positive relationship between some service qualities dimensions that lead to satisfaction and the intention of returning. Also in the tourism sector, Gonzales *et al.* (2007) demonstrated the influence of service quality on behavioral intentions.

Salazar *et al.* (2010) agreed with previous researchers, as they found a strong relationship between service quality and behavioral intentions like intention to recommend and intention to return to the hotel. A study in the electronic

shopping, confirmed with previous studies that there is a strong relation between service quality and behavioral intentions Gounaris *et al.* (2010). Amin and Nasharuddin (2013) in their study of hospital service quality, found that service quality in hospitals impact patient's behavioral intentions, like willingness to recommend the hospital to others, willingness to inform about the advantages of the hospital and considering the same hospital as a first choice in future medical treatment. Moreover, Jang and Namkung (2008) in their findings, they agreed with all previous authors that there is a strong positive relationship between service quality and behavioral intentions. based on all this work, we can hypothesize that:

H5: Service Quality has a positive impact on customers' behavioral Intentions in hotels.

Influence of customer satisfaction on behavioral intention.

Customer satisfaction is very important, as it can directly affect organizational profits, customer loyalty, complaint behavior, return patronage and word-of-mouth (WOM) behavior (Dube *et al.*, 1994; Ladhrari *et al.*, 2008; Soriano, 2002). Numerous researchers have verified the significant relationship between customer satisfaction and behavioral intention in business and hospitality fields. Getty and Thompson (1995) examined the roles of service quality and satisfaction in explaining behavioral intention. Their findings indicated that high level of satisfaction increases customers' intentions to repurchase and recommend the product. In their investigation of guest behaviors in the lodging industry, Han and Back (2008) explained the formation of revisit intention. The results of their study showed that guests' intention to revisit is a positive function of satisfaction. In an upscale restaurant setting, Han and Ryu (2007) found that improving customer satisfaction level is essential to increase revisit and recommendation intentions. Dissatisfied customers are likely to switch, complain, or spread negative word of mouth (Oliver, 1997). The obvious need for satisfying customers is to acquire repeat business and positive word of mouth, thereby improving profit Barsky and Richard (1992). Lucas (2003) and Kim and Moon (2009) found from studies conducted in a leisure context that customers tend to revisit when they are satisfied with the environment. However, when customers experience anger and dissatisfaction, negative behavioral responses such as switching to another service provider may occur.

Lam *et al.* (2011), in their study of servicescape, customer satisfaction, intention to revisit and desire to stay in Casinos, found that customers' level of satisfaction affects their intention to revisit the same casino. Studies have demonstrated the direct relationship between satisfaction and behavioral intentions to revisit and recommend to others (Chen and Chen, 2010), as well as willingness to pay more (Lee *et al.*, 2010).

Customer satisfaction can positively influence purchase volume and loyalty (Cronin *et al.*, 2000) and repurchase intentions (Rust and Williams, 1994). Lee *et al.* (2010) found that satisfaction with a hotel's overall image can contribute to more favorable behavioral intentions such as positive word of mouth,

willingness to pay a premium and intention to revisit. A happy customer is less likely to spread negative word-of-mouth (Szymanski and Henard, 2001) or to search for information on alternatives and resist close relationships with the service provider (Anderson and Srinivasan, 2003).

Han *et al.* (2009) investigated the relationship among consumption emotions, customer satisfaction, switching barriers, and the revisit intention in the restaurant business. Their findings indicate that guests' intention to revisit is a positive function of satisfaction. Oh (2000) also found satisfaction to be a powerful predictor of customer repurchase and referral intentions. However, some research has suggested that the link between customer satisfaction and future intentions is weak. For example, in comprehensive research on the determinants of dining satisfaction and return patronage, Kivela *et al.* (1999, 2000) concluded that satisfied customers are not necessarily loyal customers. Return patronage is instead the result of the interplay among several factors. Furthermore, a study carried out by Chow *et al.* (2007) reported a non-significant link between satisfaction and repeat patronage. These heterogeneous arguments prompted the development of the fifth and final hypothesis of this study.

H6: Customer satisfaction has a significant direct effect on behavioral intention.

Conceptual Background

Numerous studies have investigated the influence of atmospherics on customers' behavioral intentions in the service context including retail and food service settings. The majority have found customer behavior to be influenced by atmospherics in an indirect way, i.e., it is usually claimed that the effects are mediated by other variables. For instance, Chang (2000) and Wakefield and Blodgett (1996) found the physical environment to have no significant direct effect on return intentions; rather, its effect was found to be mediated through customer satisfaction. East (1997) and Hooper, Coughlan and Mullen (2013), however, proposed that the service environment's effects on consumer behavioral intentions are not necessarily mediated by emotional states or satisfaction level. Dube, *et al.* (1994) and Soriano (2002) suggested that atmosphere/ambience has a significant impact on return patronage. It may be that the service atmosphere directly stimulates behavior. Ibrahim (2009), also found in his study of servicescape in coffee shops a strong positive effect of servicescape elements on customers' behavioral intentions.

Hooper *et al.* (2013) asserted that servicescape is a separate construct which precedes service quality, Hightower *et al.* (2002), found a strong positive relationship between servicescape and service quality in hedonic service consumption.

Reimer and Kuehn (2005) agreed with previous authors that servicescape has a direct influence on service quality. Service quality was mediated between servicescape customer satisfaction and behavioral intentions in multiple researches (Hooper *et al.* 2013; Lee, 2014; Change, 2016).

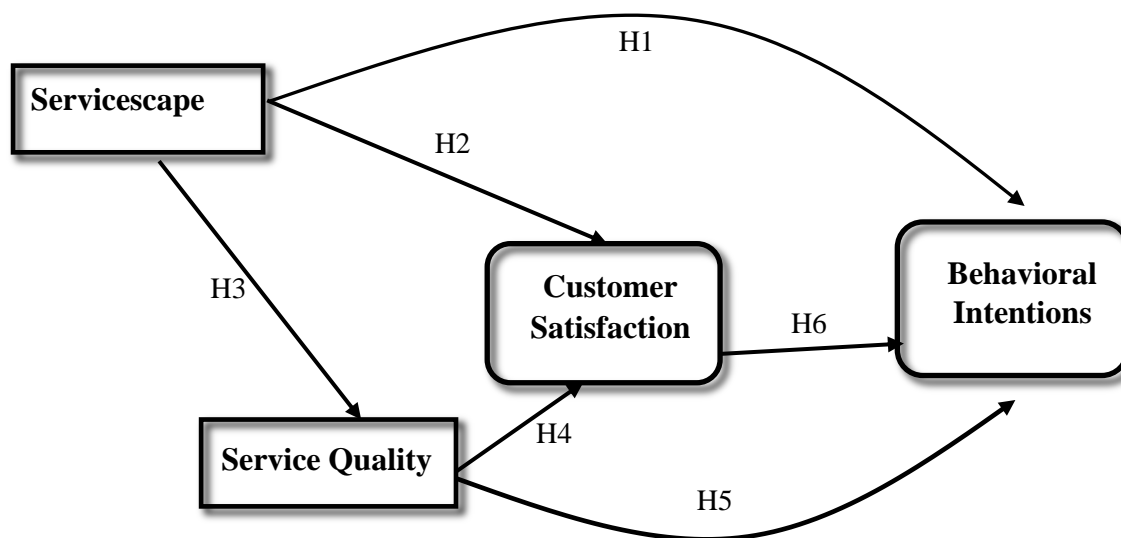


Figure1: Research conceptual framework; servicescape, service quality, customer satisfaction and behavioral intentions

Research Methodology

Sample and Data Collection

The participants in this study were upscale hotels' guests, 420 survey forms were handed to hotel guests face to face in the region of Virginia, USA (Residence Inn Arlington Capital view, Ritz Carlton Tysons Corner and Sheraton Pentagon City), it took six weeks to finish the distribution and 396 forms were valid. Among the sample %49.3 were males, %50.7 were females, the majority of respondents were single %35.5, and most of them were between the age of 26 to 35 (%33). About %38.9 of respondents had college or University degree, followed by high school or below degree (% 31.5) and about % 29.6 had a post graduate degree.

Research Instrument

The Questionnaire used in the research consisted of five parts. The first part included questions about the service environment and was divided into two sub-sections asked customers about their room service environment and about hotel public spaces service environment. The second part included questions about quality of service provided to guests in the hotel in general. The third part measured customer satisfaction with their experience in the hotel.

The fourth part, asked hotel guests about their behavioral intentions towards the hotel they visited and finally the last part addressed some demographic variables, information was gathered on customers' characteristics like gender, marital status, age and highest level of education.

Service environment or physical environment was measured using eighteen items –that include ambient conditions and facility aesthetics- adopted from (Wu & Liang, 2009; Kim & Moon, 2009; Hooper *et al.*, 2013). Service quality was measured using twenty four-item scale measuring tangibles, responsiveness, reliability, assurance and empathy adopted from Parasuraman *et al.* (1985, 1988, 1991) SERVQUAL model. Customer satisfaction was measured using eight-item scale adopted from (Oliver, 1997; Lee *et al.*, 2000; Ryu *et al.*, 2008). Behavioral intention, on the other hand, was measured using ten-item scale adopted from relevant studies (Bitner, 1992; Zeithaml *et al.* 1996; Park *et al.* 2005; Jani & Han 2011). All scales were measured through 7-point Likert type scale.

Results

Data collected mirror that the total mean score of Servicescape is a high mean score of 5.272 (SD, 1.196) led to better customer behavioral intentions 4.920 (SD, 1.573). As shown in Table (1), the mean score for the scales have high mean scores more than the midpoint of the scale (4).

First, a confirmatory factor analysis was conducted by using the covariance matrix to evaluate each construct’s measures. The results showed that all items loaded highly on their respective factor. All critical ratio values exceeded the minimum guideline of 1.96, with all values significant at the 0.001 levels.

The second-order factor model of Servicescape, which contains the sub constructs of room service environment (RSE) and public space environment (PSSE) was compared with a first-order factor model in which the eighteen items were reflective of one latent variable, the CFA results showed that the first-order model provided a better fit to the data than the second-order model. Moreover, the standard errors for the items ranged from 0.115 to 0.178 and all the item loadings were more than twice their standard error. Factor loadings for the constructs were significant (*t* values ranged from 3.77 to 16.78), indicating excellent convergent validity of the items to each factor. Construct reliability was high, as indicated by composite alpha (ranged from 0.618 to 0.971), composite reliability values were all greater than the recommended value of more than 0.60 (Bagozzi & YI, 1988).

Moreover, the results indicate that all Cronbach’s alpha values for all the constructs ranged from 0.845 to 0.974 demonstrating that the instrument is reliable. Goodness of fit for the measurement model was found to be good. In sum, the measurement model is supported, where all the resulting measurement model statistics suggested a good fit to the data (see Table 1).

Table 1 Constructs Means, Standard Deviations, and Confirmatory Factor Analysis Results

Construct	Mean	SD	C.R.	AVE	Cronbach’s Alpha
RSE	5.353	1.200	0.929	0.504	0.929
PSSE	5.190	1.308	0.934	0.525	0.940

Servicescape	5.272	1.196	0.965	0.514	0.961
Service Quality	5.408	1.118	0.618	0.596	0.845
Customer Satisfaction	4.957	1.416	0.951	0.643	0.963
Behavioral Intentions	4.920	1.573	0.971	0.773	0.974

Table 2 compares the Inter-Construct Correlations and the Square Root of AVE for all constructs. The average variance extracted (AVE) values were well above the suggested .50 threshold (Fornell & Larcker, 1981). To assess divergent validity, the square root of the AVE of each construct was compared with the correlation estimates between constructs, the square root of the AVE for each construct was higher than the correlation estimate between that construct and all other constructs (Hair *et al.*, 2010), and this criterion is met for all possible construct pairs. Consequently, all the research constructs in this study are considered reliable (see Table 2).

Table 2 Inter-Construct Correlations and the Square Root of AVE

Variables	1	2	3	4
1.Servicescape	.717			
2.Service Quality	.507	.772		
3.Customer Satisfaction	.503	.738	.801	
4. Behavioral Intentions	.459	.764	.621	.879

*** Correlation is statistically significant with $p < 0.01$. Diagonal entries (in bold) are the square root of AVE; sub-diagonal entries are the latent construct inter-correlations.*

Structural Model

The purpose of this part is to empirically examine and test the hypotheses of relationships between the study variables using structural equation modeling (SEM). In the current study, the proposed structural model is composed of four major latent constructs, of which one is exogenous (servicescape) and three are endogenous (service quality, customer satisfaction and behavior intention). Figure 2 presents the structural model and the proposed relationships among the constructs. The study tested the proposed model by estimating the standardized path coefficients for the hypothesized relationships. The results indicated that the modified structural model yielded a good fit to the data: (GFI = .995, CFI = .998, TLI = .991, RMSEA = 0.078, $\chi^2/df = 2.223$).

The fit indices indicated that the modified structural model fit the data well, supporting to a large extent the basic theoretical model of the study. Thus, it could be argued that the servicescape dimensions have both direct and indirect effects on service quality, customer satisfaction and customer behavioral intentions (see Figure 2).

The analysis followed Anderson and Gerbing’s (1988) two-step modeling approach to establish the measurement model, and then proceeded to the structural equation model (McDonald & Ringo, 2002). The primary findings supported the basic theoretical model of the study to a large extent, where the basic model has been modified. The results suggested that the path between

service quality and behavior intention should be deleted. After deleting that insignificant path, the fit of the modified model was compared with the fit of the basic theoretical model which included the path between service quality and behavior intention. The chi-square difference test ($\Delta\chi^2$), with degrees of freedom equal to the difference in degrees of freedom between the models, is used to evaluate alternative nested models (Kline, 2005). The χ^2 difference test showed that the basic structural model had not a significant good fit to the data in comparison with the modified model. After testing the structural equation, it was observed that the research basic model does not have a desirable fitness with data. The value of RMSEA fit index indicated bad fitness of the hypothesized structural model, and nearly all the fit indices did not fully meet the acceptance criteria for the proposed model and finally the proposed model was rejected and modified by deleting the path between service quality and behavior intention.

A new model named as "modified model" was designed to omit the insignificant path and the weak relationship between (SQ) and (BI) from the initial model (see Figure 2). Falk and Miller (1992) suggested that the R^2 values above 0.10 are substantial. The R^2 values for all dependent constructs are above the recommended levels. According to Kline (2005), it is necessary to re-specify the model and evaluate the fit of the revised model to the same data. Therefore, a revised submodel was submitted, in which the researcher tested the fit of a model created by eliminating the weak significant path from the initial model, the path linking the service quality and behavior intention was not significant ($p = 0.135$), therefore, this path was omitted from the model; after this omission, all of the model's fitness indicators were improved. Structural analysis of the "modified model" revealed that the alternative revised model provided a significant good fit to the data better than the hypothesized structural model (see Figure 2).

According to AVE values, this criteria was fully satisfied because the AVE values separately found more than the shared variance values. So in summary, the Modified Model was found internally reliable, constructs were reliable and had convergent validity and discriminant validity, moreover all fit indices for modified model also confirmed the Fitness of this model.

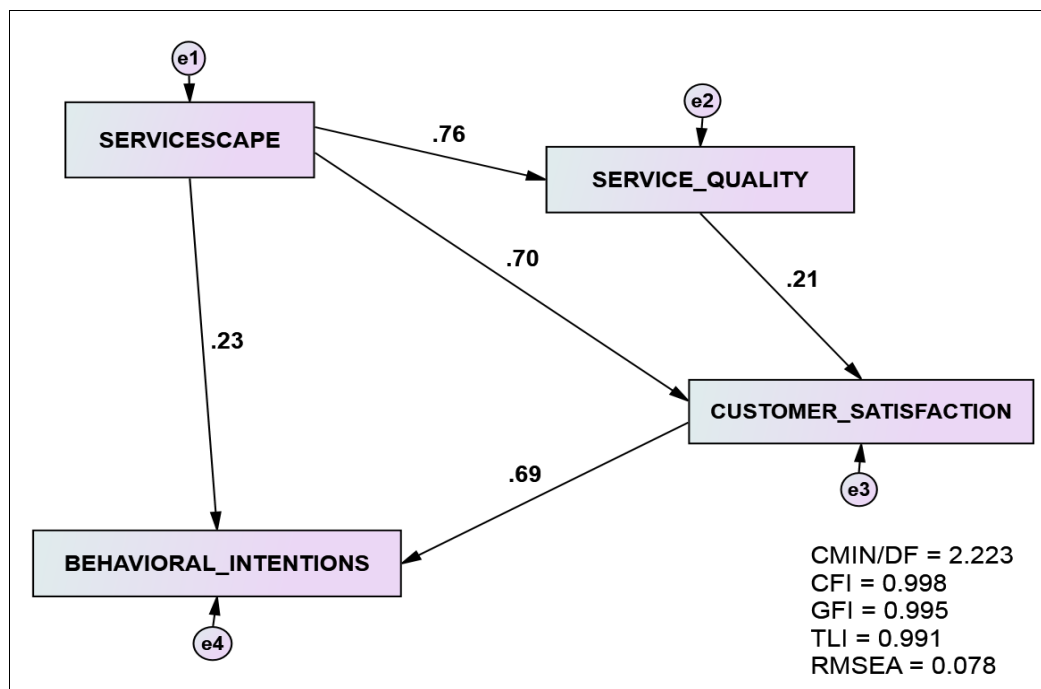


Figure 2: Servicescape, service quality, customer satisfaction and behavioral intentions

Based on the above discussion, it can be summarized that the proposed model fits the data well and also as a result, it is capable to explain the hypotheses. Two sets of relationships will be examined: direct and mediating relationships. The results of testing the hypothesized direct relationships are presented first.

Hypotheses Testing Direct Relationships

Table 3 presents the results of testing the hypothesized direct relationships. It also includes the standardized path coefficients, *t*-values, and the corresponding significance levels. To test specific construct relationships, the study examined standardized parameter estimates for all construct pairs. The results revealed that the hypothesized relationship between service quality and customer behavioral intentions was not statistically significant. The study expected servicescape to have direct effect on customer behavioral intentions.

The study proposed that servicescape and service quality affects customer satisfaction and customer behavioral intentions; that is, positive customer satisfaction is considered as a mediator between servicescape, service quality and behavioral Intentions. In support of this construal, results identify these links and, in sum, all hypothesized relationships were statistically significant ($\beta = .261$ to $\beta = .824$). The study found all the paths are significant paths except the path between service quality and customer behavioral intentions ($\beta = .074$, $t = 1.495$, $p=0.135$). Hence, hypotheses are supported, except hypothesis 5 was not supported and rejected (see Table 3).

Table 3: Hypotheses Test Results for the Proposed Structural Model

Hypotheses	Hypothesized Relationship	Standardized Coefficient	t-value	Result
H1	Servicescape → Behavioral Intentions	0.308	3.916***	Supported
H2	Servicescape → Customer Satisfaction	0.824	12.705***	Supported
H3	Servicescape → Service Quality	0.713	16.781***	Supported
H4	Service Quality → Customer Satisfaction	0.261	3.766***	Supported
H5	Service Quality → Behavioral Intentions	0.074	1.495	Not Supported
H6	Customer Satisfaction → Behavioral Intentions	0.765	11.525***	Supported

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, *m.s.* $p < 0.1$

To test for mediation, the Sobel test with boot-strapped standard errors based on 1000 resampling was conducted. The results of Sobel test are presented in Table 4. The results were consistent with the results of the basic hypotheses. The study predicted significant positive relationships between servicescape, and behavioral intentions mediated by service quality and customer satisfaction. The mediating effects based on the effectiveness of servicescape requirements were found to be significant and assure higher levels of customer satisfaction, that higher customers' satisfaction is due to their perception of service quality and the fulfillment of servicescape requirements leads to better behavioral intentions. (See Table 4).

Table 4: Sobel Test Results

<i>Indirect Effects</i>	<i>Sobel Test</i>	<i>Standard Error</i>	<i>Mediating Effect</i>
SCAPE → SQ → CS	3.692	0.050***	Partial
SCAPE → CS → BI	8.554	0.073***	Partial
SQ → CS → BI	3.559	0.055***	Partial

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, *m.s.* $p < 0.1$

As shown in Table 4, the results confirm that service quality had a mediating effect on the relationship between servicescape and customer satisfaction (Sobel test = 3.692, $p < 0.001$). The results also confirm that customer satisfaction had a mediating effect on the relationship between servicescape and behavioral intentions (Sobel test = 8.554, $p < 0.001$). Furthermore, the findings in Table 4 confirm that customer satisfaction had a mediating effect on the relationship between service quality and behavioral intentions (Sobel test = 3.559, $p < 0.001$).

Discussion, Conclusions and limitations

As revealed in the results section, the empirical study found that the hypothesized positive relationship between servicescape and behavioral intentions is supported, which confirms with previous researches findings (Donovan and Rossiter, 1982; Wakefield and Blodgett, 1996; Chang, 2000; Ryu and Jang, 2007; Liu and Jang, 2009; Ibrahim 2009; Ryu and Han, 2010; Change 2016). The second hypothesized relationship between servicescape and customer satisfaction was found to be also supported, this finding agrees with previous researches findings (Bitner 1992; Wakefield and Blodgett (1994, 1996, 1999); Lucas 2003; Ryu and Han 2010; Lam, *et al.* 2011; Jana and Chatterjee 2014). The results also showed that the third hypothesized positive relation between servicescape and service quality is found to be supported, which confirms with the results of (Hightower *et al.*, 2002; Reimer and Kuehn 2005 and Hooper and Coughlan 2013). Moreover, as suggested, service quality was found to influence customer satisfaction positively, this finding confirms with the work of plenty of researchers (Bitner, 1990; Cronin and Taylor, 1992; Oliver, 1981; Parasuraman *et al.* 1988; Ting 2004; Markovic and Jankovic. 2013; subashini 2016).

Interestingly, It was found that the fifth hypothesized relation between service quality and behavioral intentions was not supported, that is Quality of service offered to customers in luxury hotels does not influence their behavioral intentions, which contradicts with previous researchers finding (Barksy and Labagh 1992; Gonzales *et al.* 2007; Jang and Namkung 2008; Salazar *et al.* 2010; Gounaris, *et al.* 2010; Amin and Nasharuddin 2013). Finally, The last hypothesized relationship between customer satisfaction and behavioral intentions is found to be supported, which coincide with the work of (Rust and Williams, 1994; Getty and Thompson 1995; Oh 2000; Lucas 2003; Han and Ryu 2007; Han and Back 2008; Han *et al.* 2009; Lee *et al.* 2010; Chen and Chen, 2010; Lam *et al.* 2011; Jani and Han 2013).

The study has a number of limitations. The selected sample is a convenience sample, and in spite of the advantages of selecting such sampling technique, this can cause some measurement problems. The study was limited to only three luxury hotels in one region. Future research should include different types and brands of hotels.

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تأثير بيئة وجودة الخدمة على رضا العملاء ونواياهم السلوكية في الفنادق

الملخص العربي

الهدف من هذه الدراسة هو اقتراح نموذج متكامل لإختبار تأثير بيئة وجودة الخدمة على رضا العملاء ونواياهم السلوكية في الفنادق. تم إستخدام إستمارة إستبيان لجمع بيانات هذه الدراسة من عينة من عملاء ثلاثة من الفنادق الفاخرة بولاية فيرجينيا بالولايات المتحدة الأمريكية. تم تحليل البيانات باستخدام البرنامج الإحصائي أموس (AMOS). وقد أوضحت نتائج الدراسة أن بيئة الخدمة تؤثر بشكل إيجابي على رضا العملاء وجودة الخدمة وكذلك النوايا السلوكية للعملاء؛ وقد وجد أيضا أن جودة الخدمات المقدمة في الفنادق الفاخرة تؤدي إلى رضا العملاء. ومن المثير للإهتمام ، أن نتائج الدراسة أظهرت أن جودة الخدمة لا تؤثر على النوايا السلوكية للعملاء. علاوة على ذلك، وجد أن رضا العملاء يؤثر إيجابا على نواياهم السلوكية. من ناحية أخرى، أكدت نتائج الدراسة أن جودة الخدمة ورضا العملاء يعملان كمتغير وسيط بين بيئة الخدمة والنوايا السلوكية للعملاء. سوف تساعد نتائج الدراسة بشكل كبير الباحثين ومديرين الفنادق على فهم العلاقات المعقدة بين بيئة الخدمة وجودة الخدمة ورضا العملاء ونواياهم السلوكية في صناعة الفنادق.

الكلمات المفتاحية: بيئة الخدمة ، جودة الخدمة ، رضا العملاء ، النوايا السلوكية.