

# The Influence Of The Physical Environment On Loyalty During A Service Meeting: Application To The Case Of The Hotel Industry<sup>1</sup>

Mohammed BENBOUZIANZE, School of Management – ESM, Algeria, benbouzianmohamed@yahoo.fr

Tarik SAIDI, School of Management- ESM, Algeria, saidi\_t5@yahoo.fr

Djazia CHIB, University of Abou Bekr Belkaïd, Algeria, cherifbemoussadjazia@gmail.com

*Abstract: In the context of hedonic services, the role of the environment is very important. It is at the same time the support of the offer, the referent of identity and the differentiating element of the service company. Different approaches have emerged from this perspective to identify the nature of the consumer / physical environment relationship (explanatory approaches, behavioral approach and environmental psychology approach). The purpose of this article is to show the impact of the components of the physical environment on the behavioral fidelity of hotel services customers. The purpose of this article is to show the impact of the components of the physical environment on the behavioral fidelity of hotel services customers. A survey was conducted on a sample of 270 clients from different cities of Algeria. We shall try to show the role of the physical variables and social interactions through the evaluation of quality, satisfaction and customer loyalty behavioral grounding, using structural equations modeling on the set of variables included in the research model. Our results show positive effects of satisfaction, quality and customer loyalty behavioral grounding in forming customer behavioral loyalty.*

*Therefore, we believe that this study should make a significant contribution to the literature on the role of Global environment of the service on customer behavioral loyalty of Hotel services.*

*Keywords: Servicescape, Satisfaction, The Relationship Consumer, Physical Environment, Quality, Satisfaction Customer Loyalty Behavior*

## 1. Introduction

Nowadays, the economy focuses on service activities which are developed at an accelerating place and where it is becoming more difficult to capture market share. The maturity of this sector makes fidelity and refocuses on current customers for a profitable strategy. In this context, both of practitioners and researchers look for the viability of traditional approaches and the application of concepts developed in the tangible goods market. According to the description and shaping of (Lovelock and Wright 2002), service is a system consisting of back stage or invisible operation and front stage or visible delivery system. This composition is formed from two important visible elements which are personal contact and physical environment. The intangible nature of the service leads the consumer to refer to the tangible elements of the service, in which he can have direct contact, mainly the physical environment of the service unit and the staff in contact (Nguyen and Leblanc, 2002). Thus, the environment where the service delivery and the staff in contact take place constitute the most strategic elements of the service meeting. Unlike interaction with other clients, these two factors represent components easily controllable by the service organization. Growing attention has been paid to the effect of physical environment on human psychology and behavior in diverse academic fields, such as architecture, environment psychology, retailing and marketing (Donovane & Rossiter, 1982) and (Turley & Milliman, 2000).

According to modern scholars, the integration of cognitions seems to be a major contribution to the understanding of loyalty to service (Oliver, 1999), (Caruana & Malta, 2002), (Ting Pong, Tang Pui Yee, 2001) and (Butcher Sparks & O'Callaghan, 2001). The influence of the environment on behavior has long been acknowledged by retailers, architects and interior designers (Baker et al., 1992); (Tai and Fung, 1997) and (Gilboa & Rafaeli, 2003). The influence of the environment on a multitude of behavioral responses has been recognized by environmental psychologists for four and a half decades (Mintz, 1956) and (Maslow & Mintz, 1956). according to the research of (Wall et Berry, 2007) the elements of the meeting of service (sensory and social) are as important as the result of the service itself and contribute to the formation of an impression about the quality of the services expected (a pre-judgment of the service offer).

In the current state of the literature, service fidelity measures generally incorporate the three dimensions used to conceptualize this phenomenon, the behavioral, attitudinal and cognitive dimensions. In services and in the tourism

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sector in particular, this dimension has an important aspect for the consumer both at the psychological level (comfort), emotional (emotions felt) and cognitive (perception of quality and image).

(Bitner 1992) defined the term "services cape" as "the man-made , physical surrounding as opposed to the natural or social environment 'so it's the physical environment in which the service is assembled. The scholar attempted to explain three services cape dimensions (ambient conditions, spatial layout and functionality, signs/symbols and artifacts) and their interactions with customers and service providers.

The scholar attempted to explain three services cape dimensions (ambient conditions, spatial layout and functionality, signs/symbols artifacts) and their interactions with customers and service providers (*Jieun Ha , Hyo-Jin Kang and Gyu Hyun Kwon ,2017*).

The ability of the physical environment to influence behaviors and to create an image is particularly apparent for service businesses such as hotels, restaurants, professional offices, banks, retail stores, and hospitals (*Baker 1987; Bitner 1986; Booms and Bitner 1982; Kotler 1973; Shostack 1977; Upah and Fulton 1985; Zeithaml, Parasuraman, and Berry 1985*).

Several research and examples show that the development of fidelity consumers is important in the service sector and especially in the hotel services.

(*Pullman and Gross,2003*) survey a hospitality organization and consider two different contextual elements, physical and relational, which moderate loyalty.

The personal contact is made up of all the employees posted at the border of the organization who have direct contact with the consumer. The personal contact constitutes for consumers an important dimension of the service and the image of the company (*Nguyen & Leblanc, 2002*). The demand and consumption of a service is different from that of a tangible product. If for the purchase of a good, the consumer seldom interacts with the producer, in services, he is actively involved in the process of seduction. This interaction between the consumer and the service provider is called a service meeting. It refers to "the period of time during which the consumer interacts directly with the service" (*Shostack, 1985*).

The influence of the environment on a multitude of behavioral responses has been recognized by environmental psychologists for four and a half decades. Although there is substantial amount of research about the impact of the physical environment on human psychology and behavior , previous research has been confined to one or few particular physical environmental elements (*e.g., lighting and music*) (*Kisang & Soocheong ,2007*).

In other words, studies about the combined effect of multiple elements that make up the physical environment have been scarce. Unfortunately, in Algerian, theoretical or empirical studies on the subject of «*The influence of the physical environment and social interactions on fidelity of a service meeting* " are nonexistent.

On the other hand, several Western academic studies on the influence of the physical environment with different compositions, music, color, architecture, smell, temperature... etc, on the behavior of individuals in service environment. But there is little research that links the influence of the physical environment with its amortizable factors (tangible and intangible factors) and the social factor (the contacting person) on the behavior of consumer loyalty in a social environment services.

Thought the effect of Services cape elements on customers is widely-recognized, there remains à surprising lack of empirical findings addressing its role in consumption settings (*Chebat et al., 2001*) and (*Babin & al., 2003*). There is a multitude of studies that have investigated the influence of at least one variable component of the physical environment on the behavior of the fidelity or decision of repurchasing for a consumer. Variable music (*Milliman, 1982-1986*) and (*Yalch & Spangenberg 1988-1990*), (*Areni &Kim 1993*), (*Herrington & Capella 1994*), (*Gulas & Schewe 1994*),(*Rieunier, 2000*), colors (*Bellizi & al., 1983*), signaling (*Chevalier 1975*),(*Woodside & Waddle 1975*), (*Wilkinson, Mason & Paksoy 1982*), colors (*Bellizzi, Crowley & Hasty 1983*), (*Bellizzi & Hite 1992*), (*Crowley 1993*), displays (*Edwards & Shackley 1992*) and smells (*Hirsch 1995, Lemoine & al. Bonnin, 1998*) can have an effect directly on the customer's purchasing behavior (*cited in Turley and Chebat 2002*). The design of space (*Kotzan &Evanson 1969*), (*Cox 1970*), (*Curhan 1972- 1974*), (*Wilkinson, Mason & Paksoy 1982*) and (*Gagnonet Osterhaus 1985*), the physical environment offers a 'visual metaphor of the total supply of an organization 'by the proposal of the potential usage and quality of service '(*Bitner, 1992*).

These studies have shown that the physical environment where a service is delivered and experienced by the customer plays an important part in formation of the perception of the customer and their future expectations about services of that nature (*Bitner, 1992 & al., 2002*)and (*Grewal &al., 2003*). This is because of the proximity and interaction of service workers and customers.

Although relationships between service employees and customers are generally encouraged, the development of strong relationships between customers and one service employee is not (Bendapudi & Leone, 2001).

Many researchers have suggested that customer relationships with service workers are influential in the development of true customer loyalty to a service organization, particularly in situations of ongoing service where there is a high level of interaction required by the participants (Barnes, 1995); (Beatty & al., 1996); (Biong, 1994); (Crosby & al., 1990); (Goodwin & Gremler, 1996); (Gremler & Gwinner, 1998) and (Gwinner & al., 1998). Researchers have suggested and shown that customer relationships with personal service are influential in the development of customer loyalty to a service firm (Barnes, 1995), (Beatty, Mayer, Coleman, Reynolds, & Lee, 1996); (Biong, 1994); (Crosby, Evans, & Cowles, 1990); (File & Prince, 1993); (Goodwin & Gremler, 1996); (Gremler & Brown, 1996-1997); (Gwinner, Gremler, & Bitner, 1998). However, there is a lack of empirical evidence to support this and little attention has been given as to the mechanism by which this is achieved. According to (Barnes, 1997) a strong relationship with the staff in contact leads to increasing the intention of reaction and recommendation of the service.

**2.2. What Is The Influence Of Social Interaction (Physical Environment and Personal Service) on Fidelity in Hotel Services?**

Consumers do not have the same attitudes toward a product as they do against a service, the intangibility of the service makes its purchase process complex which implies the appearance of a pre-purchase phase, and this one is composed of two partes: a service meeting phase and a post-purchase phase.

Consumer assessments and future intentions are directly influenced by these dimensions of the encounter (service environment and staff contact), this led us to establish the figure below which describes the influence of its factors on loyalty behavior in the environment of hotel services.



Figure 1. Causal Relationship Between Latent Variables  
Source: Developed by the authors using the Software SPSS 21.0

**2. Theoretical Framework**

Early definitions of services highlighted intangibility (Regan, 1963) as well as the absence of transfer of ownership (Judd, 1964). The contrast here is with transactions involving goods which are tangible and often involve transfer of title. Services are characterized by process, consumption and the lack of pre-produced products (Kotler & al., 2002); (Lovelock & Wirtz, 2004) and (Vargo & Lusch, 2004). The service is a dream whose result is a value or a blessing. This means that the services are characterized by the process, the consumption and the absence of pre-products (Kotler & al., 2002), (Lovelock & Wirtz, 2004) and ( Vargo & Lusch, 2004).

(*Sasser & al. 1978*) were the first to cite all four characteristics of services: intangibility, heterogeneity (or non standardization), inseparability of production and consumption (or simultaneity) and perishability or inability to inventory.

Being intangible, services are performed rather than owned and cannot be seen, tasted, felt, heard or smelled before they are bought. Since services thus cannot be measured or tested prior to delivery or consumption, it is difficult for the customer to evaluate quality before a purchase (*Silvia Hodges, 2009*)

The key for a good service is seen in the interaction between customer and service provider as each experience creates an impression about the service, known as 'moment of truth'. A service provider must therefore properly manage each moment of truth to provide a consistent message about the quality of service (*Kotler & al., 2002*). The physical environment that constitutes the material envelope of the service has necessarily appeared as a means of "tangibilizing" the provider's offer.

The role of the physical environment as a material symbol is to facilitate the assessment of services and to reduce consumer uncertainty about the quality of supply. Clients attempt to reduce uncertainty by looking for 'insurance signals' or 'indicators' of service quality and judge quality by reputation, past experience or some tangible aspect of the service (*Muir & Douglas, 2001*). They draw conclusions from the physical evidence, equipment used, people involved, or communication they have been exposed to (*Kotler & al., 2002*). The "ambivalence" of the physical medium (*Eiglier, 2002*) means that it operates both functionally and aesthetically. Several researches have studied the effect of different components of places of service on the emotional or cognitive behavior of the individual. the effect of colors (*Babin & al., 2003*); (*Bellizzi, Crowley, &Hasty, 1983*); (*Bellizi & Hite, 1992*); (*Damhorst & Reed, 1986*); (*Valdez & Mehrabian,1994*)and (*Robson 1999*) found that certain elements of hotel restaurant design, such as lighting, color, and scents enhance guest satisfaction with the dining experience. Absence or presence of background music (*Guéguen, Jacob & Legohérel, 2002*), (*Rieunier, 2000*), (*Yalch and Spangenberg, 1993*)and (*Milliman 1988*) lists seventeen key atmospheric elements that can enhance a hotel's success. Some of these encompass physical evidence such as the appearance of the exterior and interior of the building, lighting, carpeting, wall decor and color scheme, room arrangements, the appearance of the bar, the separation of smoking and non-smoking areas and table settings.

(*Baker, 1986*) proposes to divide the environment of a point of sale into three types of factors: the environmental factors and the design factors correspond to physical environment, social factors and social environment. (*Bitner,1992*) proposes more detailed breakdown of the service environment, which consists of three elements: ambient conditions (sensory stimuli) (*Kotler 1973*)and ( *Mehrabian &Russell 1974*), separate planning, designs, symbols and artifacts.

(*Turley &Milliman 2000*), add the human and social dimension to the other dimensions, which gives the point of sale or service environment a multidimensional aspect. It is recognized in the hotel industry that guest satisfaction is essential to sustaining revenues as loyal customers are the principle drivers of profits, and providing high level of comfort reduces the price sensitivity of business customers (*Barsky & Nash, 2003*).

Quality of service and customer satisfaction are critical factors for success of any business (*Gronoos, 1990*)and (*Parasuraman & al., 1988*). In high touch service industries such as entertainment services where the service is inseparable from the person providing it, the interaction between customers and service workers provides a potential means by which a company can achieve real loyalty to the service: customer base. The quality of the interaction with the Staff in touch is a great asset to the success of the business especially when it comes to a service that requires strong customer involvement. Strong or quality relationships with service providers/firms are equated to customer loyalty to a service organization (*Ellis & al., 1993*); (*Palmer & Bejou, 1994*)and (*Gwinner & al., 1998*) and relationship stability (*Beatty &al., 1996*) and ( *Hennig-Thurau & Klee, 1997*).

(*Liljander & Ross 2002*) distinguish two types of interactions:

- Personal relationship with a single service employee
- Pseudo-relation with different employees from one interaction to another.

This type of relationship is affected by the intensity of the contact between the customer and the service worker (*Evans 1963*), indicated that in general more frequent, the interaction between people, the stronger their affection or liking for one another provided, the relationship was mutually rewarding (*Bove, 2000*). This was supported by (*Barnes,1997*) According to (*Berry, 2002*) The true relationship between the consumer and the people in contact is based on social benefits as opposed to financial and structural benefits. Trust requires familiarity and mutual understanding, depends to a certain extent on formation habit (*Nooteboom &al., 1997*).Social bonding supports trust and helps to maintain commitment to relationships (*Wilson & Jantrania, 1994*); (*Soni & al., 1996*)and (*Bendapudi & Berry, 1997*).

When the service offer becomes an opportunity for interaction between the participants, the consumer tends to identify the service to the staff who delivers it. (*Crosby & al 1990*) showed that the frequency in which seller people

and customers communicated for business or social reasons was a key determinant of relationship maintenance (commitment) in hotel services also which makes the frequency of contact increases, the level of commitment interaction becomes a potential mechanism for developing loyalty of consumer.

### 3. Methodology

With regard to the methodology followed in this work, we decide to present the method of data collection, the measurement instruments, the sampling method and the appropriate analytical techniques used in this research paper. Thus, our methodological approach is to respond with accuracy to the following objective: To know the approach adopted by customers in their decision making for the choice of hotel services (cognitive and / or emotional). Most consumers in the service environment perceive the physical environment in its overall state; however, in our work we try to determine the impact of the physical environment with all its components and the social interaction on consumer judgment and the loyalty to service.

The data used as the basis for this study were collected by means of a survey with a convenience sample of 270 residents present at the time of the survey in the same place of the tourist experience (the same hotel). In order to measure the sustainable involvement of a consumer, Statistical measurement scale SPSS 21.0, which consists of six items was adopted and then was administered in the form of a *LIKERT scale* with five positions (strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree). This scale was chosen due to its good internal coherence in most empirical studies, with a CRONBACH'S ALPHA which exceeds 0.8. The data collected were then subjected to the statistical processing, and was carried out with the data analysis and visualization Software SPSS 21.0

### 4. Results and discussion

In this section, we will present the relationship between the two key concepts of this research, mainly the physical environment and the personal contact, which are presented to check the validity of the constructions.

From the results obtained in (Table 1), the Factorial Correspondence Analysis (FCA) performed on the sustainable involvement scale indicates correlations with low error scores. The analysis of the internal consistency of scales for the influence of variables that make the consumer loyal for hotel services environment. (Table 5) allows us to note that the conditions required to ensure the validity of the four reflexive constructs are guaranteed. Thus, the homogeneity of the scales is sufficient with CRONBACH'S ALPHA > 0.8, and KMO > 0.7

Table 1. Internal coherence of measurement scales for influence of the variables that make up the hotel service environment on consumer loyalty behavior

Variables	Number of items selected	KMO	Cronbach's $\alpha$	ANOVA		Bartlett Spherit	AVGE	COV	Total Variance
				F	Sig				
PHYS	8	0.730	0.827	20.566	0.0		2.412	1.1147	75.425
PERC	6	0.766	0.916	55.621			2.356	1.2145	72.516
QUAL	5	0.810	0.855	88.474			2.101	1.1321	62.547
SAT	5	0.833	0.864	44.568			2.695	1.1712	63.952
LOYL	5	0.812	0.877	24.284			2.741	1.1887	64.214
Total	29	-----	-----	-----	-----	-----	-----	-----	-----

Source: Developed by the authors using the Software SPSS 21.0

The results of factors analysis (CFA) for the influence of variables that make the consumer loyal for hotel service environment.

Table 2. Fit indices of a structural model for the influence of the variables that make the consumer loyal for hotel service environment

<i>Absolute fit indices</i>	<i>Values</i>
<i>Chi_2</i>	1754.55
<i>Degree of freedom DF</i>	244
<i>Level P</i>	0000
<i>RMS Standardized</i>	0.158
<i>(GFI). Joreskog</i>	0.533
<i>(AGFI). Joreskog</i>	0.511
<i>Population Noncentrality Parameter</i>	16.125
<i>McDonald Noncentrality</i>	0000
<i>Steiger-Lind RMSEA Index</i>	0.287
<i>Population Gamma Index</i>	0.455
<i>Adjusted Population Gamma index</i>	0.362
<i>Incremental Fit Indices</i>	
<i>Bentler-Bonett Normed Fit Index</i>	0.644
<i>Bentler-Bonett Non-Normed Fit Index</i>	0.640
<i>Bentler Comparative Fit Index</i>	0.662
<i>Bollen's Rho</i>	0.600
<i>Bollen's Delta</i>	0.677
<i>Parsimony Fit Indices</i>	
<i>James-Mulaik-Brett Parsimonious Fit Index</i>	0.565
<i>Ch2 /DF</i>	8.213

Source: Developed by the authors using the Software SPSS 21.0

The global model includes the measurement model and the structural model, so it is difficult to determine the cause of a possible mismatch of the mass model, is it caused by the measurement or the structural model? But what concerns us is to what extent the theoretical model corresponds to the global model.

The RMSEA Lind et Steiger (1980) It expresses the average difference through the degree of freedom. Value is below the critical thresholds and close to the recommended value of 0.05 confirms that the model reproduces the collected data in an acceptable manner And are good as Raufaste (2007). However, other indices of absolute adjustments including the SRMR, the G1 and G2 are below the recommended thresholds. The incremental indices are on the other hand relatively satisfactory, thus translating that the model obtained is superior to the null model. The value of the normed  $\chi^2$  indicates that the model is relatively parsimonious.

The different Absolute Fit Indices are summarized in (Table 6). These measurements evaluate the analysis model by linking the quality of its fitting to the number of estimated parameters.

Table 3. Equation of the measurement model for the variable influence of the physical environment

<i>Manifest variables</i>	<i>Equation Phys <math>i = \lambda_i \cdot PHYS + E_i</math></i>	<i>T</i> <i>&gt;1.96</i>	<i>P</i> < <i>0.05</i>
<i>(PHYS)--&gt;[ Phys1]</i>	<i>Phys1 = 0.825PHYS + 0. 298</i>	44.20	0.000
<i>(PHYS)--&gt;[ Phys2]</i>	<i>Phys2 = 0.836 PHYS + 0. 120</i>	45.52	0.000
<i>(PHYS)--&gt;[ Phys3]</i>	<i>Phys3 = 0.812 PHYS + 0. 841</i>	36.32	0.000
<i>(PHYS)--&gt;[ Phys4]</i>	<i>Phys4 = 0.777 PHYS + 0. 178</i>	58.40	0.000
<i>(PHYS)--&gt;[ Phys5]</i>	<i>Phys5 = 0.614PHYS + 0. 214</i>	33.84	0.000
<i>(PHYS)--&gt;[ Phys6]</i>	<i>Phys6 = 0.796 PHYS + 0. 514</i>	34.35	0.000
<i>(PHYS)--&gt;[ Phys7]</i>	<i>Phys6 = 0.624 PHYS + 0. 354</i>	34.35	0.000
<i>(PHYS)--&gt;[ Phys8]</i>	<i>Phys6 = 0.766 PHYS + 0. 458</i>	34.35	0.000

Source: Developed by the authors using the Software SPSS 21.0

Table 4: Equation of the measurement model for the variable relational factors

<i>Manifest variables</i>	<i>Equation per <math>i = \lambda_i \cdot PER + E_i</math></i>	<i>T &gt;1.96</i>	<i>P &lt; 0.05</i>
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(PERC)-->[ Perc1]	$Perc1 = 0.752 PER + 0.205$	22.564	0.000
(PERC)-->[ Perc1]	$Perc2 = 0.684 PER + 0.365$	12.255	0.000
(PERC)-->[ Perc1]	$Perc3 = 0.832 PER + 0.804$	62.237	0.000
(PERC)-->[ Perc1]	$Perc4 = 0.688 PER + 0.388$	42.216	0.000
(PERC)-->[ Perc1]	$Perc5 = 0.791 PER + 0.241$	18.252	0.000
(PERC)-->[ Perc1]	$Perc6 = 0.622 PER + 0.825$	31.233	0.000

Source: Developed by the authors using the Software SPSS 21.0

Table 5. Equation of the measurement model for the variable Quality

Manifest variables	Equation qual $i = \lambda_i \cdot QUAL + E_i$	$T > 1.96$	$P < 0.05$
(QUAL)-->[ Qual1]	$Qual1 = 0.925 QUAL + 0.641$	54.234	0.000
(QUAL)-->[ Qual2]	$Qual2 = 0.892 QUAL + 0.812$	39.232	0.000
(QUAL)-->[ Qual3]	$Qual3 = 0.960 QUAL + 0.882$	25.321	0.000
(QUAL)-->[ Qual4]	$Qual4 = 0.721 QUAL + 0.750$	14.245	0.000
(QUAL)-->[ Qual5]	$Qual5 = 0.776 QUAL + 0.752$	47.21	0.000

Source: Developed by the authors using the Software SPSS 21.0

Table 6. Equation of the measurement model for the variable Satisfaction

Manifest variables	Equation sat $i = \lambda_i \cdot SAT + E_i$	$T > 1.96$	$P < 0.05$
(SAT)-->[ Sat1]	$Sat1 = 954 SAT + 0.751$	16.513	0.000
(SAT)-->[ Sat2]	$Sat2 = 0.852 SAT + 0.147$	32.214	0.000
(SAT)-->[ Sat3]	$Sat3 = 0.785 SAT + 0.235$	41.213	0.000
(SAT)-->[ Sat4]	$Sat4 = 0.651 SAT + 0.925$	21.213	0.000
(SAT)-->[ Sat5]	$Sat5 = 0.847 SAT + 0.621$	18.120	0.000

Source: Developed by the authors using the Software SPSS 21.0

Table 7. Equation of the measurement model for the variable loyalty

Manifest variables	Equation loyl $i = \lambda_i \cdot LOYL + E_i$	$T > 1.96$	$P < 0.05$
(LOYL)-->[ Loyl1]	$Loyl1 = 0.845 LOYL + 0.178$	23.254	0.000
(LOYL)-->[ Loyl2]	$Loyl2 = 0.952 LOYL + 0.230$	41.210	0.000
(LOYL)-->[ Loyl3]	$Loyl3 = 0.751 LOYL + 0.621$	35.471	0.000
(LOYL)-->[ Loyl4]	$Loyl4 = 0.733 LOYL + 0.398$	25.196	0.000
(LOYL)-->[ Loyl5]	$Loyl5 = 0.814 LOYL + 0.510$	66.321	0.000

Source: Developed by the authors using the Software SPSS 21.0

All of the factors analyzed performed (Tables 3, 4, 5, 6 and 7), to estimate the correlations of the behavioral model of measurement in the user of the hotel services, show positive and above average correlations.

The estimation errors are acceptable. This enables us to verify that the indicators specified in the model which gives an acceptable representation of the constructs.

The main objective of the equations structural model is the identification of that causal link between the independent variable and the dependent variable. As part of our study, independent variables lie in the physical environment of the hotel service, with its colors and design, lighting... etc and relationship with the staff in contact what makes them affect either positively or negatively on other dependent variables is the perceived quality, satisfaction, loyalty.

The general model of measurement takes the following form:

$V_i$ : The observed variable (clear indicator).

$F_a$  : Latent variable A

$$V_i = \lambda_i F_a + E_i$$

$\lambda_i$ : A compromise contribution for I on the latent variable A that is enclosed between 0 and 1.  $\xi_i$  : Error measuring I variables.

The previous model is based on the demonstration of the influence of the independent variables on the dependent variables, which are estimated by the coefficient ( $\beta$ ). It measures the strength of the relationship between them; the measurement error is estimated with the  $\xi$  coefficient.

The values ( $\beta$ ) shown in the structured relationships model, in fact, show the strength and direction of the linear relationship that exists between the independent and dependent variables, modeling the structured equations of the variables: (physical environment variables / perceived quality) (the relationship with the staff in contact / perceived quality), (perceived quality / satisfaction) (Satisfaction/loyalty), it allowed us to insure the extent of the independent variable's effect on the dependent variable and also from the set of hypotheses and causal relationships in forming the behavior of loyalty.

Correlations of the structural model of the influence capacity of the physical environment variables and of the relationship with the staff in contact and their direct influence on the evaluations of the supply of service and the fidelity in the field of the hotel services. The factorial correlations between latent variables of the structural model show satisfaction scores, which mean the direct link between the components of the service environment, the present and future behavioral response of the consumer.

Table 8. Equations of the structural model: the influence of the environment of the hotel on consumer loyalty behavior.

Relationship	Coding and equation of variables	$\beta_i$	$E_i$	$T > 1.96$	$P < 0.05$
(PERC)--> (PHYSE)	$PERSC = \beta_i \cdot PHYSE + E_i$	0.702	0.552	7.236	0.000
(QUAL)--> (PHYSE)	$QUAL = \beta_i \cdot PHYSE + E_i$	0.814	0.452	6.236	0.000
(QUAL)--> (PERC)	$QUAL = \beta_i \cdot PER + E_i$	0.654	0.385	5.217	0.000
(SAT)--> (QUAL)	$SAT = \beta_i \cdot QUAL + E_i$	0.871	0.477	6.653	0.000
(LOYL)--> (SAT)	$LOYL = \beta_i \cdot SAT + E_i$	0.769	0.321	6.149	0.000

Source: Developed by the authors using the Software SPSS 21.0 (N = 270 residents)

The results obtained from the factor analysis confirm the impact of the two main components of hotel services offer on consumer loyalty behavior. The structural equation model provided expected results ( $\beta = 0.814$   $T = 6.236$ ) relating to the link between the components of the physical environment and the overall quality perceived by the consumer.

The results displayed validate the positive relationship between the attitude of the staff in contact and the perceived overall quality of service ( $\beta = 0.654$   $T = 5.217$ ).

The consumer perceives positively the staff in contact, and his judgment of the quality of service will be positive.

These same results indicate that the perceived perception of service is influenced by the area of the physical environment with all its components (light, comfort of the room, perceived interior decoration, technology used) have an importance for customers which can spend time with the staff in contact in the hotel and these services depend much more on the physical environment. In addition, the results of the study confirm the impact of the two independent variables on the customer's loyalty behavior and on their intention to live it in the future.

Principal Component Analysis (PCA) revealed a good internal consistency of the scales used in the study, which gives good reliability to the structural model. The theoretical model can therefore be accepted. The use of the PCA has made it possible to purge the behavior scales proposed in the measurement model, and thus eliminate unreliable elements.

Regarding to the structural model which includes dimensions of the physical environment: relational factors as independent variables and fidelity as a dependent variable, gives us another view of consumer behavior in the hostel services environment. The loyalty behavior depends on two main dimensions constituting the supply of the hotel services, although the relation between them are two dimensions moderated by mediating variables which indirectly influence the loyalty behavior .

## 5. Conclusion

The current study explored the relationship between physical environment, consumer's loyalty, and behavioral intention based on environmental psychology. The current study examined the impact of customer's perceptions of physical environment, relationship factors on quality, satisfaction and the effect of mediating variables on loyalty behavior. Based on the model of Bitner (1992), which is an extension of the S-O-R model by the introduction of cognitive processes according to Mehrabian and Russel, (1974), Bitner (1992) the study of behaviors gives two opposite poles: behavior approach vs. behavior avoidance, our study proposed a theoretical model and tested it in an upscale hotel.



The most important contribution of this study is in its empirical demonstration: how consumers perceive the two dimensions (physical environment and social interaction) for developing a loyalty behavior.

Indeed, based on the analysis of the data obtained from a sample of clients who have at least effected two experiences of tourist consumption in the same hotel, the results of the current study indicated some insurance and a well-determined image of the expected quality, this physical environment is a very significant factor for a customer seeking a hedonic service, this type of customers seek in the first place "an affective gratification" (*Kempf, 1999*) which passes through the pleasure conveyed by the aesthetics of the place and the social exchange.

In the service area, the staff in contact represents for the consumer an important dimension of the service and the image of the firm; it is the first point of contact between the company and the customer. It is also the insurance of quality and seduction to satisfy him. But in the hotel services, social interactions are multiple and the attachment to one person (dyadic interaction) does not exist, which explains the absence of friendship. That makes the mission of the team very delicate, the consumer is served by several people which do not require a very homogeneous work of the staff in touch.

The service environment of the hotel (the physical environment and the social interactions) is one of the most important features of the services and utility, especially for clients interested by entertainment and experience that will create a positive judgment and will result in satisfaction also commitment to future return to the same hotel service. The customer no longer looks for the service, but rather the excitement, fun and satisfaction generated by it, creating some value through the experience given by the institution. (*2006 Wang & Chiu, Tsaur*).

The hospitality of service establishment makes it ready to maintain its customers and ensure their future return, especially if these leisure services are involved, they should focus more on the components of the service perimeter. It must be more exciting and appealing as the first driver of the emotional experience and the resulting attitudes (perceived quality, satisfaction) and return arrangements. The results show that these two variables are thus two powerful factors in hotel services and that can be used together to positively influence the future behaviors (satisfaction, loyalty) of consumers.

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