

FULDEN ŞAHİNER

DESIGN FACTORS: THE IMPACT OF FACILITY AESTHETICS AND LAYOUT ACCESSIBILITY
ON CUSTOMERS' EMOTIONS AND BEHAVIORAL INTENTIONS IN HOTEL LOBBIES

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A Master's Thesis

by

FULDEN ŞAHİNER

Department of
Interior Architecture and Environmental Design
İhsan Doğramacı Bilkent University
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INTERIOR ARCHITECTURE AND ENVIRONMENTAL DESIGN
İHSAN DOĐRAMACI BİLKENT UNIVERSITY
ANKARA

June 2016

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Fine Arts in Interior Architecture and Environmental Design.



Assoc. Prof. Dr. Nilgün Olguntürk
Supervisor



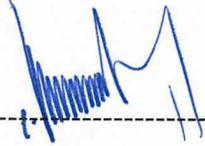
Dr. Burçak Altay
Co-Supervisor

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Fine Arts in Interior Architecture and Environmental Design.



Assist. Prof. Dr. Yasemin Afacan
Examining Committee Member

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Fine Arts in Interior Architecture and Environmental Design.



Assist. Prof. Dr. Elif Güneş
Examining Committee Member

Approval of the Graduate School of Economics and Social Sciences



Prof. Dr. Halime Demirkan
Director

ABSTRACT

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Şahiner, Fulden

MFA, Department of Interior Architecture and Environmental Design

Supervisor: Assoc. Prof. Dr. Nilgün Olguntürk

Co-supervisor: Dr. Burçak Altay

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The aim of the study is to emphasize the effect of physical environment of interior space on customer's emotions and behavioral intentions at hotel lobbies. Relevant literature in environmental psychology and marketing was reviewed, and conceptual scheme was proposed. Facility aesthetics and layout accessibility were based on servicescape dimensions and categorical dimension approach was used for analyzing customers' emotions, and behavioral intentions were highlighted for this study. A field study approach was used in this study and a survey was conducted with 78 customers of Eyüboğlu Hotel, located in Ankara. Multiple regression analyses were used, and the findings indicated that there is a positive relationship between facility aesthetics and layout accessibility with positive emotions. Moreover, results proved that positive emotions and facility aesthetics have positive relationship with behavioral intentions.

**Keywords: Behavioral Intentions, Emotions, Facility Aesthetics, Hotel Lobbies,
Layout Accessibility**

ÖZET

TASARIM ÖĞELERİ: OTEL LOBİLERİNDEKİ MEKAN ESTETİĞİNİN VE YERLEŞİM ERİŞEBİLİRLİĞİNİN MÜŞTERİLERİN DUYGU VE DAVRANIŞ EĞİLİMLERİ ÜZERİNDEKİ ETKİSİ

Şahiner, Fulden

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İkinci Tez Yöneticisi: Dr. Burçak Altay

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Bu çalışma iç mimarideki fiziksel çevre unsurlarının otel müşterilerinin duygu ve davranış eğilimleri üzerindeki etkilerini vurgulamaktadır. Çevre psikolojisi ve pazarlama ile ilgili araştırmalar sonucunda kavramsal şema oluşturulmuştur. Bu çalışmada servis mekanlarında kullanılan tasarım unsurlarında mekan estetiği ve yerleşim erişilebilirliği esas alınıp, kategorize edilmiş duygu ölçüm metodu kullanılarak müşterilerin duygu ve davranış eğilimleri üzerindeki etkileri vurgulanmıştır. Alan araştırması Ankara da yer alan Eyüboğlu Hotel'de 78 müşterinin katılımıyla yapılmıştır. Çoklu regresyon testleri uygulanmış, mekan estetiğinin ve yerleşim erişilebilirliğinin olumlu duyguların artmasında olumlu yönde etkili olduğu bulunmuştur. Ayrıca olumlu duyguların ve mekan estetiğinin davranış eğilimleriyle de olumlu yönde etkili olduğu kanıtlanmıştır.

Anahtar Kelimeler: Davranış Eğilimleri, Duygular, Mekan Estetiği, Otel Lobileri, Yerleşim Erişilebilirliği

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CHAPTER I

INTRODUCTION

"The main entrance... should be regarded as of great importance, as it is the heart of the building from which all life springs and to which it returns".

Henry Janeway Hardenberg (Berens, 1997: 8)

Lobbies amaze, welcome, and disperse arrivals. Most entries that may be named as anterooms to the major event beyond, are used solely to be passed through. Lobbies express something about the building and direct people to their intended destination. For instance, an office building lobby can be designed with rich materials, and become an active space, however they remain to be used for transition. Even the apartment building lobby, although providing usual living room seating, is a space that people do not spend time. The hotel lobby is different.

1.1. Problem Statement

Among the many public areas, the hotel lobby has the only greatest impact on guests and visitors (Rutes, Penner, & Adams, 2001). Hotel lobbies are public living rooms where guests can attend friends or business acquaintance for a drink or for an

evening's activity (Berens, 1997). Therefore, understanding the influence of the physical environment, in case of the lobby, is very significant hence, little attention should be given to exploring how physical environment of interior space affects customers' opinions toward hotel as a whole, their emotional states and their behavioral intentions. Although numerous studies have been carried in restaurants, museums, or shopping malls based on environmental psychology and marketing disciplines, less number of studies are conducted on the hotel lobby environments.

1.2. Aim of the Study

The main purpose of this study is to emphasize the effect of the interior design of hotel lobbies on customers' emotions in case of hotel lobbies. Accordingly, behavioral intentions that occur by the consequences of emotional states are also analyzed. The findings of this study may be beneficial for interior designers, hotel owners, and those who are interested in emotions and behavioral intentions in service environments.

1.3. Structure of the Thesis

This study has six chapters. The Chapter I, "introduction" contains the problem, aim of the study and structure of the thesis. The Chapter II, "theoretical framework", begins with literature review of hotel lobby designs and their importance for customers. Afterwards, research on physical environments are discussed so as to understand definitions and attributes of physical environment in greater detail. By means of detailed analysis of the physical environment, the term "servicescape" and its dimensions are highlighted for this study. Within the servicescape dimensions, those that are related to the design factors are focused on in this study. These are

categorized as facility aesthetics and layout accessibility, studied in the case of hotel lobby environment. In order to analyze facility aesthetics and layout accessibility, their sub dimensions are given based on literature analysis. While interior design, artwork/furniture aesthetics/ interiorscaping, color and lighting are stated as sub dimensions of facility aesthetics; spatial layout and passageway, furniture layout and comfort are stated as sub dimension of layout accessibility in hotel lobbies. Chapter II contains literature on emotional responses of customers' that are affected by the physical surrounding. While analyzing emotional response, measurement methods of emotions are mentioned as well. In the light of literature, categorical dimension approach is preferred for this study. Accordingly, emotion classifications - positive and negative emotions- and behavioral intentions that are related with customer's feelings on physical environment are explained. The proposed scheme based on the literature survey is stated in last part of Chapter II.

Chapter III is called "research design" and it focuses on research questions and hypothesis in the first part. Methodology that includes participants, setting and instruments of the study is provided. Detailed information about selected hotel lobby and its environment such as architectural data, floor plan, colored photographs, etc, were given. Besides, information that related with survey and participants were mentioned. Chapter IV is named "results" and it reserves statistical analysis of the study. Multiple regression analyses were used to test hypothesis, and also additional analyses were conducted so as to better understand with detailed information. Besides, the chapter contains discussions of results with comparing results in related literature. Chapter V, is named "conclusion", it focalizes conclusions of the whole study. In addition, suggestions for further studies are offered.

CHAPTER II

THEORETICAL FRAMEWORK

2.1. The Importance of Hotel Lobby Design

Hotel design is a results of socio-cultural changes, technological advancements, economic and political circumstances, and environmental factors. Those elements generate the macro-environment of a hospitality business and powerfully pressure the customer's demands, wishes, and desires (Bowie & Buttle, 2004). Hotels include a wide range in price and luxuriousness that depend on hotels facilities and atmosphere.

The lobby space plays a essential role in branding and forming the hotel's desired atmosphere. The lobby is the primary space customers will encounter, and quite possibly the first impression visitors will form of the hotel, based on the physical surroundings (Braun, 2011). "A large amount of attention can be diverted by a lobby's uniqueness, making a lasting first impression if designed well" (Miller, 1995: 33). Teare (1993: 68) gives place an explanation of Paula Jo Boykin who is the president of Spectrum Design Services;

The lobby is your calling card. If the lobby is not fresh, innovative or special in some way, the guest will feel uneasy about the accommodations he or she doesn't see and may elect not to stay or return to your hotel.

Miller (1995) states that individuality of the lobby that draws the guests' attention, as well as unpredicted setting can be pleasurable for a newcomer and also constant guests. The hotel lobby presents the hub of hotel activities and acts as a passage way to public services or guestrooms, as a waiting area or social meeting place. The concept of "social space" would contain bars, lounges, retail shops, etc. in the lobby space and, thus, adds additional area, usage, and activity to the lobby (Rutes, Penner, & Adams, 2001: 80). Hence, Mundy (2008) defines a lobby as a "multi-purpose space", referring to a variety of services, which are presented in a lobby. As a focal area for the guest, the significant role of a lobby is to provide major circulation space, and direct guests to different parts of the hotel such as banqueting and conference facilities, sport centre (if it is open to the public), restaurants, bars or restrooms (Lawson, 1976). It also acts as a waiting and staging area. Hence, "sitting furniture, or even a lobby lounge can be often found in the entrance hall" (Lawson, 1976: 199). Moreover, Berens (1997) mentions that hotel lobbies offer customers a feeling of arrival to their destination and even calls a hotel lobby "a destination itself", suggesting that a hotel invites guests to another world that is entirely designed. Thus, Lawson, (1976); Berens, (1997); Curtis, (2001) explained that hotel lobbies are the centre of every hotel that reserves heartbeat of them. Moreover, Berens (1997: 17) defines: "Lobbies are where public and private worlds meet". Lobbies present a general areas for customers to relax and greet visitors (Collins, 2001). Lawson (1976: 213) explained importance of hotel lobby design;

Since the lobby is the main area for customers, it is crucial that designers should achieve a balance between aesthetic interior design and operational

needs to avoid too much human traffic, noise, and an inhabited flow of circulation.

It is clear that, having a balance between interior design and operational needs should take into considerations in an early stage of designing process, for not only functional efficiency of the lobby, but also the overall customer satisfaction, impression and perceptions toward hotel environment. In any retail environment, emotions have a significant role. Therefore, literature (e.g. Baker, Grewal, & Parasuraman, 1994; Bitner, 1992; Wakefield & Blodgett, 1994, 1996) gives awareness to the significance of the physical environment on customer's perceptions and emotional responses on retail environments. Especially service businesses such as hotels, restaurants, professional offices, banks, retail stores, and hospitals are analyzed (e.g. Baker, 1986; Bitner, 1986; Booms & Bitner, 1982; Kotler, 1973; Parasuraman, Zeithaml, & Berry, 1985; Shostack, 1977; Upah & Fulton, 1985) with regard to the capability of the physical environment that may impress behaviors and create images for customers. Baker, Grewal & Parasuman (1994: 121) state in their journal, the comment of Nancye Green regarding the retail environment;

There was a time not so long ago that retail environments had few standards to meet. A store should be clean and organized to maximize sales per square foot. It should also be pretty... Today, though, the retail environment must tie in directly to the brand, and, in fact, speak the brand's value proposition.

2.2. Research on Physical Environment of Interior Space: Servicescape

Due to significance of physical environment, research studies have focused on requirements of quality service environments, expectations of customers, and also, relationships between physical environment and customer's emotions. Kotler (1973) initiated the concepts correlated to "physical environments" (also named as "atmospherics" or "servicescape") more than four decades ago. The physical environment is rich in signals (Rapoport, 1982) and may be very significant in communicating the firm's image and principle to its customers (Bitner, 1992). Bitner (1992) supposed that perceived services of physical environment may lead to cognitive responses. These responses influence customer's beliefs about the space. First impressions of interior space are shaped using visual indicators. Thus, the environment is assumed as a form of nonverbal communication by means of available and visible environmental factors such as: lighting, color, layout, furniture and decoration. Firms are categorized by customers according to their perceptions towards physical surroundings and inferred quality of firms. Hence, consumers use physical surroundings to figure out their feelings and deduce quality and other features of the service. That is, first impression of a service firm are formed by evaluating the environmental cues. When consumers have little or no earlier information or experience with a service, tangible clues help to indicate the quality and nature of service (Baker, 1986; Booms & Bitner, 1982).

Servicescape is defined as "The artificial and psychological landscape in which a service experience is organized and delivered by service providers and experienced by consumers" (Namasivayam and Lin, 2008: 44). Moreover, it is explained as "the man-made, physical environment as opposed to natural or social surroundings"

(Bitner, 1992: 60). In addition, Wakefield & Blodgett (1996) explained that servicescape is a commonly used term to explain the physical environment of the service company. It refers to the exterior and interior design features, ambient conditions such as noise, music, air quality, etc. and also tangible part of the surroundings like communication materials. Bitner (1992) developed a framework so as to understand the relationship between an environment and the user of an environment in service organizations. The framework supposes that environmental dimensions are recognized by the customer. Therefore, Bitner (1992) classifies three main dimensions of the servicescape (See Table 1). First dimension is "ambient conditions" that includes weather, temperature, air quality of environment, noise, music and odors. Secondly, "spatial layout and functionality" refers to the equipment and furnishing arrangements, and how these features provide opportunity for customers' satisfaction. Lastly, "sign, symbols and artifacts" contains signage and decor that direct customers to their destination or develop a image of service.

There are various classifications of servicescape dimensions throughout earlier studies. Although Bitner (1992) classified the servicescape as three dimensions, it may vary across physical environments that include various service types (See Table 1). For instance, Wakefield and Blodgett (1996) investigated the sub dimensions of the servicescape in leisure service settings and separated into five dimensions that called "layout accessibility", "facility aesthetics", "seating comfort", "electric equipment and display" and "cleanness". Wakefield and Blodgett (1999), composed different servicescape dimensions for their another research that are named as a "building design and decor", "equipment", "ambience" even if surrounding of their research are named as leisure settings (See Table 1). That means, service settings

may be considered having different servicescape dimensions and attributes that are related with features of physical environment.

Table 1: Summary of servicescape dimensions (Source: Kim & Moon, 2009: 148)

Author	Servicescape dimensions	Attributes	Industry
Bitner (1992)	1. Ambient conditions	Temperature, air quality, noise, music, and odor	Service organization (conceptual study)
	2. Space and function	Layout, equipment, and furnishings	
	3. Signs, symbols and artifacts	Signage, personal artifacts, and style of décor	
Wakefield and Blodgett (1996)	1. Layout accessibility	Layout of exit and entry, furnishing and equipment layout	Leisure service settings (i.e., major league baseball stadiums)
	2. Facility aesthetics	Architectural design, color, and interior design	
	3. Seating comfort	Physical seat and space of seat	
	4. Electric equipment and displays	Signs, symbols, and artifacts for leisure experience (e.g., projection)	
	5. Cleanliness	Facility (e.g., restroom, concession) cleanliness	
Wakefield and Blodgett (1999)	1. Building design and décor	Outside appearance, interior design, layout, and seats	Leisure service settings (i.e., professional hockey games, a family recreation center, movie theater)
	2. Equipment	Electric equipment	
	3. Ambience	Cleanliness, temperature, and neatness of employees' appearance	
Lucas (2003)	1. Layout navigation	Architecture, interior design, and spatial layout	Casino
	2. Cleanliness	Clean slot floor	
	3. Seating comfort	Padding, backrests, and fabric/heat-dissipating seat, uncrowded seat	
	4. Interior décor	Lighting, color, and floor décor	
	5. Ambience	Internal climate, music, and visual graphic	
Ryu and Jang (2008)	1. Facility aesthetics	Architectural design, color, and interior design	Upscale restaurant
	2. Lighting	Type of lighting and illumination	
	3. Ambience	Music, temperature, and scent	
	4. Layout	Object (e.g., machinery, equipment, and furnishings) layout	
	5. Dining equipment	High-quality flatware, china, glassware, and linen	
Newman (2007)	1. Space	Spatial density	Service sectors (i.e., international airport)
	2. Way-findings	Legibility of internal design such as central passageways and meeting areas in airport, hospitals, and universities	

Additionally, while Lucas (2003) investigated "interior design" attributes with the title of "layout navigation", Ryu and Jang (2008) prefer to analyze it within "facility aesthetics". In the same manner, Bitner (1992) classified "furnishing" into dimension of "space and function", but Wakefield and Blodgett (1996) favored to put into "layout accessibility". From another perspective Lucas (2003) examined lighting as a part of interior decor. Whereas Ryu and Jang (2008) analyzed lighting as a main servicescape dimension.

In addition to mentioned research that were presented by Kim & Moon (2009) in Table 1; Dong and Siu (2013) divided physical environment into five dimensions: "ambient conditions", "exterior layout", "interior layout", "décor", and "location" within an insurance services and hotel services context. Shashikala and Suresh (2013) also studied the effect of servicescape in shopping centers on customer loyalty and specified that servicescape was occurred of seven dimensions: "ambient factors", "aesthetic factors", "layout", "variety", "cleanliness", "signs", "symbols", "artifacts" and "social factors". In addition, Hooper, Coughlan, and Mullen (2013) mentioned that servicescape was composed of "equipment", "design", "space", "ambience", and "hygiene". Dedeoğlu, Küçükergin and Balıkçioğlu (2015) and Dong and Siu (2013) also considered servicescape in hotel management with attributes of "ambience", "layout", "décor", and "signs".

Physical features of service environment are also named with similar terminologies instead of "servicescape". For instance, Turley and Milliman (2000) conducted a review of theoretical and empirical understanding of physical environment with the term of "atmospherics" and divided into four dimensions that "external variables",

"general interior variables", "layout and design variables" and "point of purchase and decoration variables". Another terms used for physical environment is "tangserv". Raajpoot (2002) identified this as encompassing three dimensions; "ambient factors", "design factors" and "product/service factors" in food service industry. Moreover, Baker, Grewal and Parasuraman (1994) investigated store atmospherics with three dimensions: "ambient factors", "design factors", "social factors". In addition, Baker's (1986) typology of "ambient factors", "design factors", "social factors" are used for explaining atmospherics at marketing service.

Besides studies that are conducted in different type of leisure services such as restaurants, airports or stadiums, hotel industry has been interested in servicescape dimension as well. For instance, Thapa (2007) explored which design features are most effective to create attractive hotel lobbies. After quantitative and qualitative methods of the study, results showed that various design elements, such as furniture layout, color, lighting, floor treatments, interiorscaping, color and accessibility have significant roles to create effective atmosphere at hotel lobbies. Moreover, Countryman and Jang (2006) examined the atmospheric elements of color, lighting, layout, style, and furnishing and they figured out that color, lighting and style were significantly related with overall impression of a hotel lobby. However, color was the most significant of these three atmospherics. Although Countryman and Jang (2006) emphasized just atmospheric elements, Naqshbandi and Munir (2011) identified atmospheric elements of hotel lobbies, customer's impressions and openness towards hotel lobbies. They compared boutique and convention hotels and their results showed that lighting is the most influential factor on lobby impression for both boutique and convention hotels. In addition to customer's impressions towards hotel

lobby, consequences of impressions were also studied by Fidzani (2002). He analyzed how first impressions of hotel lobby effects perception of whole hotel. Findings designated that impression of customers is shaped by ambient factors such as lighting and cleanness, design factors such as style, layout, color. Therefore, perception that occurred with the help of first impression affects overall judgment. Furthermore, Braun (2011) studied how modern hotels perform as a social centre of activities and meeting place for a social interactions. Results signified that well-designed hotel lobby attracts and stimulates a positive perception and experience. Hence, lobby's products and services generate customer satisfaction.

On the other hand, many of studies examine only single components. Reimer and Kuehn (2005) summarized various studies on different aspects of the servicescape such as color and lighting (e.g. Areni and Kim, 1994; Crowley, 1993; Crowley and Hasty, 1983), background music (e.g. Areni & Kim, 1993; Herrington, 1996; Herrington & Capella, 1994; Holbrook & Shindler, 1989; Hul, Dube & Chebat, 1997; Milliman, 1982, 1986; Yalch & Spangenberg, 2000), as well as odours (e.g. Mitchell, Kahn & Knasko, 1995; Spangenberg, Crowley & Henderson, 1996) indicate behavioral effects. Only a few studies considered more than one servicescape element (e.g. Chebat, Chebat & Filiatrault, 1993; Mattila and Wirtz, 2001; Wakefield and Blodgett, 1996).

2.3. Design Factors for This Study

"The importance of a particular servicescape component is likely to vary across different service organizations" (Kotler, 1973: 50). However, pertinent dimensions of the servicescape can be isolated and general patterns can be discovered (Bitner, 1992).

Baker and Cameron (1996: 340) summarized basic components of servicescape dimensions into three elements. First one is, "ambient elements; these are intangible background conditions that tend to affect the non visual senses and in some cases may have a relatively subconscious effect." Second one is, "design elements: these represent the components of the environment that tend to be visual and more tangible in nature." Last one is, "social elements: these are the people (customers and employees) in the service setting."

Hoffman and Turley (2002) mention that both tangible and intangible constituents are crucial in creating the service environment. However, intangible components such as social factors cannot be generalized for every type of service environment. Additionally, ambient factors such as temperature, noise, background music and odor cannot be controlled by interior designer. The nature of ambient factors and social factors vary from sector to sector and business administrator of service firms.

Crowley (1993: 23) states explanation of Alan Phillips that was about the importance of design factors "The most successful lobbies are those that do not need to rely on signage and graphic device but establish route, circulation and function by architectural articulation, language, materials and form".

The focal point of this study to analyze servicescape attributes which are visually apparent and controllable by interior designers in hotel lobby environment. That is, analyzing design factors in hotel lobbies is believed to be valuable for an interior design study.

According to Wakefield and Blodgett (1996), design factors are used to express and enhance a determined image or mood. In this sense, this study analyzed design factors under the servicescape title. Parameters of design factors - facility aesthetics and layout accessibility- are adapted from the studies of Wakefield and Blodgett (1996) , Ryu and Jang (2008), Baker, *et.al*, (1994), and Harris and Ezeh (2008). According to literature survey, facility aesthetics reserves interior design, artwork/furniture aesthetics/interiorscaping, color and lighting. Layout accessibility contains spatial layout & passageway, furniture layout & comfort (See Table 2). For the study, measurements of design factors were based on customers' judgments.

Table 2 : Design factors for this study

FOCUSED FACTORS	ATTRIBUTES
FACILITY AESTHETICS	Interior design
	Artwork/furniture aesthetics/interiorscaping
	Color
	Lighting
LAYOUT ACCESSIBILITY	Spatial layout & passageway
	Furniture layout & comfort

2.3.1. Facility Aesthetics

Facility aesthetics is a purpose of architectural design, interior design and also decor, which contribute to the pleasant appearance of the servicescape (Wakefield & Blodgett, 1996). According to their study, customers of leisure services pay attention (consciously and subconsciously) to the interior of a facility by observation. Therefore, based on previous research on servicescape dimensions, general perceptions toward interior design attributes, decoration features, and furniture aesthetics may affect customers perceptions toward service environment. Related statements about general perceptions of servicescape attributes in literature are stated below.

General Perception of Interior Design

- The interior design is attractive (Alsaqre, 2014).
- The decoration in this hotel is attractive (Alsaqre, 2014).
- The interior design is visually appealing (Jang & Namkung, 2009; Reimer & Kuehn, 2005; Tsaur, Luah & Syue, 2015; Turley & Milliman, 2000; Wakefield & Baker, 1998; Wakefield & Blodgett, 1999).
- The interior decor of this hotel is attractive (Kim & Moon, 2009).
- This is an attractive facility (Kim & Moon, 2009; Wakefield & Blodgett, 1996).
- This hotel lobby is decorated in an attractive fashion (Kim & Moon, 2009; Wakefield & Blodgett, 1996).
- The lobby of the hotel is designed innovatively (Ariffin & Aziz, 2012).

Furniture aesthetics is also concern of interior design for service environments. Baker and Cameron (1996) supposed that, furnishings in a service environment include the objects and materials that are used within the environment (e.g., furniture, window coverings, rugs etc.). Moreover, furnishings such as interesting artwork or sculpture or beautiful outside views take attention of customers' since they find enough activities to fill their time. Berlyne's (1971) model suggested that the furnishings in the service environment be not only partially arousing but also positively balanced which both capture consideration and pressure affect in a positive direction. The impression of furnishings can be shaped through the affective reactions of comfort. According to Lawson (1976), hotels that designed floor to-ceiling mirrors near elevators in high-rise hotels were taken fewer complaints from customers who spent time in lobby about the design of lobby environment. Proper interiorscaping may also play an vital role in customers' satisfaction intensity and overall evaluation of the physical environment (Thapa, 2007). Especially, plants decrease stress and increase efficiency of both workers and customers in hotel lobbies (Gilhooley, 2002). In this sense, mentioned implicit communicators are examined as visual servicescape dimensions at hotel lobby for this study.

Artwork / Furniture Aesthetics / Interiorscaping

- Painting/ pictures are attractive (Ariffin, Nameghi & Zakaria, 2013; Ryu & Jang, 2008).
- Wall decor is visually appealing (Ariffin, Nameghi & Zakaria, 2013; Ryu & Jang, 2008).
- The wall of the hotel lobby are decorated innovatively (Ariffin & Aziz, 2012).

- Plants/ flowers make me feel happy (Ryu & Jang, 2008).
- Interiorscaping (e.g. plants, flower, water bodies, fountains) plays a vital role in creating an attractive lobby (Thapa, 2007)
- Furniture is of high quality (Ariffin, Nameghi & Zakaria, 2013; Ryu & Jang, 2008).
- The furniture used by hotel lobby is unique (Ariffin & Aziz, 2012).

Colors and color combinations have been studied by those interested in retail atmospherics and cognitive psychology because color is one of the obvious visual cues in a servicescape (Lin, 2004). Eiseman (1998) suppose that color is a strong visual element of physical environment, especially in interior settings. Atmospheric studies confirm that color has the capability to produce pleasant feelings for customers. Color combinations may shape awareness and attitudes, and may even cause behavioral differences. Therefore, Lin (2004) believed that different colors stimulate varying moods and emotions. For instance, "dull colors may be relatively unattractive compared with bright colors" (Thapa, 2007: 52). Moreover, Bellizzi and Hite (1992) found that consumers react more positively to a blue environment in retail settings, and that warm-colored backgrounds seem to be more capable for awareness and attracting customers to approach a store environment. In addition, Guilford and Smith (1959), found that bright and highly saturated colors tend to create pleasant feeling in service environments. According to Baker and Cameron (1996: 342), "Studies have shown that warm colors are psychologically and physiologically arousing and sometimes stressful, whereas cool colors are relaxing and tend to decrease feelings of stress" (e.g., Crowley, and Hasty 1983).

The important point is that the effect of color depends on its amount and location in service environment. For example, small amount of bright or saturated color is suggested to be used to highlight specific function/service, otherwise neutral colored spaces will not have the same effect as that same color on large areas (Baker and Cameron, 1996). Moreover, color can be used as different intentions in physical environment of interior spaces. Eiseman. (1998: 23) supposed that "Colors and color combinations have also been found to help people find their way in a building." Besides, "colors and color combinations affect perceptions and attitudes, and may even cause certain behavioral differences" (Crowley, 1993: 62). Related statements about color in literature reviews are stated below. In term of self reported judgments of customers, the following statements are figured out in literature survey.

- Color used create a pleasant atmosphere (Jang & Namkung, 2009; Tsaur, Luah & Syue, 2015).
- The facility is painted in attractive colors (Wakefield & Blodgett, 1996).
- The interior wall and floor color schemes are attractive (Wakefield & Blodgett, 1996).
- The combination of colors used in hotel lobby is different from other hotels (Ariffin & Aziz, 2012).
- Color used create a warm atmosphere (Ryu & Jang, 2008).
- The colors of the physical facilities and the interior are pleasant (Baker, 1986; Baker, 1998; Reimer & Kuehn, 2005; Turley & Milliman, 2000; Wakefield & Baker, 1998).

"The type of lighting in an environment directly influence an individual's perception of the definition and quality of the space, influencing his or her awareness of physical, emotional, psychological, and spiritual aspects of the space" (Kurtich and Eakin, 1993: 25). "Research indicates that there is a relationship between lighting level preferences, the social situation, and the amount of visual attention required for an activity" (Baker and Cameron, 1996: 340). For example, in a service setting customers prefer a base level of lighting adequate for the type of activity involved and that negative emotions may consequences of the level which was below the base level" (Lin, 2004: 167). Lucas (2003), found that customers supposed that conditions of low levels of lighting compared to that in high levels of lighting in hotel lobby environment. Similarly, the comfort of subjects was figured out to enhance at relatively low levels of light, whereas comfort reduced with high levels of light (Hopkinson, Petherbridge, & Longmore 1966).

Environmental psychology has evaluated the relationship between light intensity and task productivity, revealing that people's awareness of light impress their perceptions towards the environment (Lin, 2004). Light impress the perceptions of form, color, texture, and enclosure (Ching, 1996). Moreover, Steffy (2002) supposed that physical environment of interior space in which the lighting was designed so to harmonize with furniture, accessories, artworks, interiorscaping were perceived as more satisfying than environments in which lighting did not harmonize with other dimensions of interior design in the lobby environment. Hence, studies indicate that lighting can manipulate emotional responses and approach/avoidance behaviors of customers. According to self reported judgments of customers, the following statements are found in literature survey.

- Lighting creates a warm atmosphere (Ariffin, Nameghi & Zakaria, 2013; Ryu & Jang, 2008).
- Lighting creates a comfortable atmosphere (Jang & Namkung, 2009; Ryu & Jang, 2008; Tsaur, Luah & Syue, 2015).
- Lighting makes me feel welcome (Ariffin, Nameghi & Zakaria, 2013; Ryu & Jang, 2008).
- The lighting is comfortable (Baker, 1986; Wakefield & Baker, 1998; Turley & Milliman, 2000; Reimer & Kuehn, 2005).
- Lights in the environment of this hotel are appropriate (Alsaqre, 2014).
- Lighting of the hotel lobby is different from other hotel lobbies (Ariffin & Aziz, 2012).

2.3.2. Layout Accessibility

Within the leisure service context, layout accessibility refers to the way in which furniture, service areas, equipment, doors and passageways are arranged, and the spatial relationship among these elements (Bitner, 1992). According to Wakefield and Blodgett (1996), an efficient layout should present ease of entry and exit and also should guide to service areas such as restrooms, souvenir stands. In case of hotel lobby environment, information desk, restrooms, elevators and lobby bar are assumed as service areas. Alan Phillips (1951: 55) states that,

Like the atrium to a classical Roman villa, from where the visitors could find staircases and entrance leading to other areas of the house, the lobby is responsible for the clean presentation of information about the building's physical organization.

Wakefield and Blodgett (1996) supposed that attractive and valuable servicescape layout may also fill pleasure requirements. It also influences how customers interact

with each other and with the employees (Bitner, 1992). Layout has the capacity to transmit a sense of privacy and manage as a boundary for the consumers (Lin, 2004). According to Ryu and Jang (2007), spatial layout that makes people feel constricted may have a direct effect on customer quality perceptions, excitement levels, and indirectly on their desire to revisit. The physical layout and design of workplaces are essential in influencing consumer's impression of the firm (Ornstein, 1992). Lawson (1976) and Rutes et al, (2001) supposed that the layout is contingent on numerous factors including the size of the hotel, grade or standard, patterns of arrivals and departures, tour and convention bookings, length of stay, and seasonality. According to Collins (2001), one of the most common mistake noticed in the design of a hotel lobby environment is that the front desk (information desk) is not directly visible to arriving customer and that there is a lack of smooth traffic flow from the front desk to the elevators (Collins, 2001). According to self reported judgments of customers, the following statements are found in literature survey.

Spatial Layout & Passageway

- In this hotel lobby, the aisles between the seating groups are wide enough to pass through easily (Kim & Moon, 2009).
- It is easy to walk around this lobby environment and find what you are looking for (Kim & Moon, 2009; Wakefield & Blodgett, 1996).
- Layout makes it easy for me to move around (Ariffin, Nameghi & Zakaria, 2013; Ryu & Jang, 2007; Tsaur, Luah & Syue, 2015; Wakefield & Blodgett, 1996).
- Layout makes it easy to get around (Alsaqre, 2014).

- The facility layout allows me to move around easily (Jang & Namkung, 2009; Tsaur, Luah & Syue, 2015).
- Passageway in this hotel lobby environment provide adequate directions (Alsaqre, 2014).

Furniture is a key factor in determining quality level of physical environment. Berens (1997) suggests that orientation and the density of furniture is effective for the perceptions towards physical environment. "The furniture placement may also transmit a sense of enclosure, define spatial movement, function as walls, and communicate visible or invisible boundaries" (Ariffin, Nameghi & Zakaria, 2013: 129). Besides furniture placement, seating comfort is also significant determinant of physical environment. Hence, customers may feel uncomfortable because of proximity of other seats and also, they may be displeased about quality of seats. Seating comfort is likely to be a particularly distinct subject for customers within a leisure setting who must sit for a number of hours observing or participating in some form of entertainment (Wakefield and Blodgett, 1996). "The amount of space between rows of seats is also an important dimension, in that it affects the ease with which customers may exit their seats to use ancillary service areas" (Wakefield and Blodgett, 1996: 50). Furthermore, if rows are too narrow to pass, customers may be forced to stand or shift in their seats. In terms of self reported judgments of customers, the following statements are found in literature survey.

Furniture Layout & Comfort

- Seating arrangement gives me enough space (Kim & Moon, 2009; Ryu & Jang, 2007; Wakefield & Blodgett, 1996).
- The furniture arrangement in this lobby is comfortable and accommodating (Thapa, 2007).
- The furniture in this hotel is comfortable (Alsaqre, 2014).
- The facility provides comfortable seats (Wakefield & Blodgett, 1996).
- Seats in this hotel are comfortable (Alsaqre, 2014).
- Seating arrangement makes me feel crowded (Ryu & Jang, 2007).
- It is easy to get in and out of the seats at this lobby (Kim & Moon, 2009).
- There was appropriate leg room in the seats (Harris & Ezech, 2008).
- There was appropriate elbow room in the seats (Harris & Ezech, 2008; Wakefield & Blodgett, 1996).
- This lobby's seats are comfortable (Kim & Moon, 2009; Wakefield & Blodgett, 1996).

Based on the importance of layout accessibility in the hotel lobbies, it may be summarized that spatial layout, furniture layout and comfort should be taken into consideration.

2.4. Emotions

The definition of "emotion" is a highly complex and subtle phenomena whose explanation requires careful and systematic analysis of their multiple characteristics and components (Ben-Ze'ev, 2000). Nevertheless, emotions have a central role in people's lives and they are of interest to everyone (Helvacioğlu, 2011) even if it has not one simple definition. Emotion is defined by Scherer (2005:697); "..an episode of interrelated, synchronized changes in the states of all or most of the five organismic subsystems in response to the evaluation of an external or internal stimulus event as relevant to major concerns of the organism". Moreover, Izard (1977: 30) figured out "differential emotion theory" so as understand emotion experience as a feeling state and define emotion like;

...emotion feeling at some level of intensity is always present in consciousness, influencing appraisals and other cognitive and non cognitive activators of the sequence of emotion feelings in the stream of consciousness. Each new feeling state in the sequence automatically and selectively cues or motivates conscious and unconscious cognition, but these are viewed as consequences of the feeling (motivation), not integral to it.

Moreover, Plutchik (1980: 21) interpreted definition of emotion in different way.

A number of emotion theorists, especially those influenced by Darwin, contemporary ethology, and neuroscience, assume that emotions are specific neuropsychological phenomena, shaped by natural selection, that organize and motivate physiological, cognitive, and action patterns that facilitate adaptive responses to the vast array of demands and opportunities in the environment.

So as to better understand characteristics of emotion, Clore, Ortony and Foss (1987) composed a framework that emotion is a valenced affective reaction to perception of situation (Richins, 1997). Their complete definition of emotion reserves three components; non-valenced cognition, bodily states and subjective evaluations of people (Richins, 1997). Hence, according to Parkinson (1997), emotions are

quantifiable short-term conditions. However, measuring and evaluating emotional states that occur during consumption, is also questionable issue.

Customer emotions play a major role in customer purchasing, evaluation, and decision making process (Ladhari, Brun, & Morales, 2008; Liljander & Strandvik, 1997; Mano & Oliver, 1993; Mattila & Ro, 2008; Oliver, 1992; Smith & Bolton, 2002; Westbrook, 1987; Westbrook & Oliver, 1991). That is, emotions determine what people do and how people do it (Donovan & Rossister, 1982; Mehrabian & Russel, 1974). Studies in psychology and marketing have recommended measures of customers emotions based on distinct approaches to understanding of emotional experiences when consuming a product or service and behaviors of customers. Literature identifies various descriptions to study the dimensions of emotions, which is presented in Table 3.

Table 3: Summary of emotional responses (Source: Han, Back & Barret, 2010: 303)

Authors	Terminology used	Categories/ dimensions	Number of descriptors (subcategories)
Plutchik and Kellerman (1974)	EPI	Fear	62 descriptor pairs
		Anger	
		Joy	
		Sadness	
		Acceptance	
		Disgust	
		Surprise	
Mehrabian and Russell (1974)	PAD	Pleasure Arousal Dominance	18 semantic differential descriptors
Izard (1977)	DES	Interest	30 descriptors
		Joy	
		Anger	
		Disgust	
		Contempt	
		Distress	
		Fear	
		Shame	
		Guilt	
		Surprise	
Plutchik (1980)	Plutchik measure	Fear	34 descriptors
		Anger	
		Joy	
		Sadness	
		Acceptance	
		Disgust	
		Surprise	
Havlena and Holbrook (1989)	Reduced set of the PAD	Pleasure	12 semantic differential descriptors
		Arousal	
		Dominance	
Edell and Burke (1987)	Feelings towards ads	Upbeat	65 descriptors
		Warm	
		Negative feeling	
Holbrook and Batra (1987)	SEP	Pleasure	27 descriptors (9 Arousal subcategories)
		Arousal	
		Dominance	
Richins (1997)	CES	Anger	43 descriptors
		Discontent	
		Worry	
		Sadness	
		Fear	
		Shame	
		Envy	
		Loneliness	
		Romantic love	
		Love	
		Peacefulness	
		Contentment	
		Optimism	
		Joy	
Excitement			
Surprise			
Oh (2005)	Affective reactions to print apparel ads	Warm	14 descriptors
		Negative feeling	
		Upbeat	
		Sensual	
		Bored	

Emotions have been measured with different instruments and techniques. Typically, two types of approaches are used when discovering the dimensionality of consumption emotions, namely the categorical dimension approach and the structural dimension approach (Oh, 2005). Researchers who are examining emotional characteristics of customer behaviors benefit from one these two approaches to demonstrate the formation of emotional experience.

The structural dimension approach assumes that emotional states are related to one another in systematic manner rather than independent of the one another (Oh, 2005). Mehrabian and Russell (1974), developed M-R Model, which incorporates the concepts of the physical environment, emotions, and response (Kim and Moon, 2009). This approach is mainly characterized by bi-polar categories (e.g.; Holbrook & Batra, 1987; Larsen & Diener, 1985; Mehrabian & Russell, 1974) and are comprised of three constitutive dimensions of emotion: pleasure-displeasure, arousal-non-arousal, and dominance-submissiveness (Chiappa, Andreu & Gallarza, 2014). As an example of pleasure dimension, listening popular songs should increase shopper's enjoyment level during shopping experience, while unpopular music moderate it (Han, Back, and Barret, 2010). The second dimension called arousal, assesses how much the environment stimulates the individual (Yalch and Spangenberg, 2000). According to Milliman (1982) listening slow music types caused slower customer movement within a supermarket. The third dimension is dominance, which concerns whether individual feels dominant (in control), or submissive (under control) in the environment (Yalch & Spangenberg, 2000). However, studies of Donovan and Rossiter (1982), Donovan, Rossiter, Marcoolyn

and Nesdale (1994), and Russel and Pratt (1980) found that dominance, has no significant effect on behavior.

The advantage of PAD (Pleasure-Arousal-Dominance) scale is that the scale is simple and intuitive (Bagozzi, Gopinath & Nyer, 1999). PAD model is conceptualized for various environment types and it is applied in both service and retail environments. For instance, Baker et al., (1994) applied M-R model for their study and they figured out relations between store environment and the dimensions of pleasure and arousal.

As an alternative to the structural approach, numerous studies supported categorical approach with empirical evidence and argued that this was able to reveal the more complex patterns of emotional reactions in a specific consumption situation (Holbrook & Westwood, 1989; Oh, 2005; Richins, 1997; Westbrook, 1987; Westbrook & Oliver, 1991). Besides, Han, Back and Barret (2009: 568) states that;

... since structural dimension approach simplifies representation of various emotional states elicited during product usage or consumption experience, it is not sufficient to assess the entire domain of consumption-based emotional reaction.

In the study of Machleit and Eroğlu (2000), three emotion measurement methods (DES, Plutchik measure and PAD) are compared with correlation analyses and the categorical dimension measurements (DES and Plutchik measure) are found more representative assessments of the emotional responses and suitable for different physical environments than structural dimension (PAD).

In the categorical dimension approach, several independent mono-polar categories of emotional responses exist (Oh, 2005). In that respect, it can analyze customers' positive and negative emotions at the same time (Babin, Darden, & Babin, 1998). As such, feeling a negative emotion does not necessarily preclude the coexistence of a positive emotions (Liu & Jang, 2009). For example a customer may feel an essential level of both happiness and unhappiness (Babin, et al, 1998). With the help of this approach, researchers have categorized the wide variety of individuals' emotional states into small sets (e.g. Izard, 1997; Mano, 1990; Oliver, 1992; Plutchik, 1984; Westbrook, 1987).

Therefore, Jang and Namkung (2009) and Yoo, Park & MacInnis (1998) have suggested that the uni-polar approach is suitable in understanding consumption emotion. Studies that adapted the categorical dimension approach (e.g. Abelson, Kinder, Peters & Fiske, 1982; Brandburn, 1969; Oliver, 1992; Westbrook, 1987) provided evidence of two independent univocal dimensions of consumption-related emotions - positive and negative emotions (Han, Back and Barrett, 2009). Albelson et al. (1982), in their study of individual's emotional experiences, specified that positive and negative emotions are two separate univocal dimensions. Moreover, Yalch and Spangenberg (2000) and Albelson et al., (1982) conducted their emotional study within a categorical dimension -positive and negative emotion. This research adapted from categorical dimension (uni-polar) approach to measure customer's emotional response at hotel lobbies. Since categorical dimension is operational for the consumption situations, emotions are analyzed within a separate dimensions - positive emotion and negative emotion- based on hotel customer's consumption.

2.4.1. Positive and Negative Emotions

Many of authors who prefer to measure emotions in case of positive and negative emotion, firstly analyzed essentials of emotional states. Richins (1997) mentions in his study that lots of research about emotional states make an effort on the universe of emotions by identifying a set of basic or essential emotions, however, there is no extensive agreement about the number or the nature of basic emotions. Both Plutchik (1984) and Izard (1977) give significance to the role of emotions in developing an organism's conversions of survival. Plutchik improved the Emotions Profile Index (EPI) (See Table 3). The index reserves 62 forced-choice emotion descriptor pairs; responses are transformed into scales representing each of the eight emotions (Richins, 1997). Holbrook and Westwood (1989) improved their own shorter version of primary emotions. Their version was composed by three emotion adjectives for each positive and negative emotion. Besides, Havlena and Holbrook (1989) composed their emotion adjective set by adapting from basic emotion set for their study. Additionally, Izard formed his own emotion set called Differential Emotion Scale (DES), and offered 10 fundamental emotions. However, Laverie, Kleine, and Kleine (1993), Mono and Oliver (1993), and Oliver (1997) noted in their studies that negative emotions of Izard's DES scale should need a broader sampling. Plutchik (1980), Izard (1977), Jang and Namkung (2009), have argued that more complex emotions are the result of mixtures of "basic" emotions. Hence, the reliance on basic emotions are questionable in terms of their questioned environment. After a widespread evaluation of the basic emotion literature, Ortony and Turner (1990: 317) states that; "... there is no coherent nontrivial notion of basic emotions as the elementary psychological primitives in terms of which other emotions can be explained".

Nevertheless, the basic emotions can be categorized into positive and negative emotions (Liu and Jang, 2009). Therefore, research studies often benefit from different scales so as to measure emotions and are interested in different emotions. Laros and Steenkamp (2005), composed a table that is a summary of general dimensions where positive and negative emotions words are stated.

Table 4: Summary of positive and negative emotion words in literature

(Source: Laros and Steenkamp, 2005: 1439)

Negative Emotions	Positive Emotions
Aggravation ^{a,b,c} , Agitation ^{a,b,c} , Agony ^{b,c} , Alarm ^{b,c,d} , Alienation ^b , Anger ^{a,b,c,d,e,f,g} , Anguish ^{a,b,c} , Annoyance ^{a,b,c,d,e,f,h} , Anxiety ^{a,b,c,e} , Apologetic ^c , Apprehension ^{a,b,c} , Aversion ^e , Awful ^c , Bad ^c , Bashful ^c , Betrayal ^c , Bitterness ^{a,b,c} , Blue ^{a,c,i} , Bothered ^c , Cheerless ^a , Confused ^h , Consternation ^c , Contempt ^{b,c,e,g} , Cranky ^c , Cross ^c , Crushed ^h , Cry ^c , Defeat ^b , Deflated ^{a,b} , Defensive ^c , Dejection ^{a,b,c} , Demoralized ^c , Depression ^{a,b,c,d,h} , Despair ^{b,c} , Devastation ^c , Different ^c , Disappointment ^{a,b,c,e,f} , Discomfort ^c , Discontent ^{a,c} , Discouraged ^c , Disenchantment ^c , Disgust ^{a,b,c,e,g,h} , Dislike ^{b,c,g} , Dismay ^{b,c} , Displeasure ^{a,b,c} , Dissatisfied ^{a,c} , Distress ^{a,b,c,d,g,i,j} , Distrust ^{c,e} , Disturbed ^c , Down ^{a,c} , Dread ^{b,c} , Dumb ^c , Edgy ^c , Embarrassment ^{a,b,c} , Empty ^{a,c} , Envy ^{a,b,c} , Exasperation ^b , Fear ^{b,c,d,e,f,g,h,i,j} , Fed-up ^a , Ferocity ^b , Flustered ^a , Forlorn ^c , Foolish ^c , Frantic ^c , Fright ^{a,b,c,h} , Frustration ^{a,b,c,d,f,g} , Fury ^{a,b,c} , Gloom ^{b,c,d,h} , Glumness ^b , Grief ^{a,b,c,f} , Grouchiness ^{b,c,i} , Grumpiness ^{b,c,i} , Guilt ^{b,c,e,g,j} , Heart-broken ^{a,c} , Hate ^{b,c} , Hollow ^c , Homesickness ^{a,b,c} , Hopelessness ^{b,c} , Horrible ^c , Horror ^{a,b,c,f} , Hostility ^{b,c,h,i,j} , Humiliation ^{b,c} , Hurt ^{a,b,c} , Hysteria ^b , Impatient ^{a,c} , Indignant ^c , Inferior ^c , Insecurity ^b , Insult ^{b,c} , Intimidated ^h , Irrate ^{a,c} , Irked ^a , Irritation ^{a,b,c,h,j} , Isolation ^{b,c} , Jealousy ^{a,b,c,e} , Jittery ^{i,j} , Joyless ^a , Jumpy ^c , Loathing ^b , Loneliness ^{a,b,c,i} , Longing ^c , Loss ^c , Lovesick ^a , Low ^{a,c} , Mad ^{a,c} , Melancholy ^{b,c} , Misery ^{a,b,c,d} , Misunderstood ^c , Moping ^c , Mortification ^{a,b} , Mournful ^c , Neglect ^{b,c} , Nervousness ^{a,b,c,i,j} , Nostalgia ^c , Offended ^h , Oppressed ^c , Outrage ^{a,b,c} , Overwhelmed ^a , Pain ^c , Panic ^{b,c} , Petrified ^{a,c} , Pity ^{a,b,c} , Puzzled ^h , Rage ^{b,c,e} , Regret ^{a,b,c,e,g} , Rejection ^{b,c} , Remorse ^{a,b,c} , Reproachful ^c , Resentment ^{a,b,c} , Revulsion ^b , Ridiculous ^c , Rotten ^c , Sadness ^{a,b,c,d,e,f,g,h,i} , Scared ^{a,c,h,j} , Scorn ^{b,c,i} , Self-conscious ^c , Shame ^{a,b,c,e,g,j} , Sheepish ^c , Shock ^{a,b,c} , Shy ^c , Sickened ^{a,c} , Small ^c , Sorrow ^{a,b,c,e,i} , Spite ^b , Startled ^{e,h} , Strained ^c , Stupid ^c , Subdued ^c , Suffering ^{b,c} , Suspense ^c , Sympathy ^b , Tenseness ^{b,c,h} , Terrible ^c , Terror ^{a,b,c} , Threatened ^h , Torment ^{a,b,c} , Troubled ^c , Tremulous ^c , Ugly ^c , Uneasiness ^{a,b,c} , Unfulfilled ^c , Unhappiness ^{a,b,c,i} , Unpleasant ^h , Unsatisfied ^c , Unwanted ^c , Upset ^{a,c,e,j} , Vengefulness ^{b,c} , Want ^c , Wistful ^c , Woe ^{b,c} , Worry ^{b,c} , Wrath ^{b,c} , Yearning ^c	Acceptance ^{c,h} , Accomplished ^c , Active ^{i,j} , Admiration ^c , Adoration ^{b,c} , Affection ^{b,c} , Agreement ^c , Alert ^{h,j} , Amazement ^b , Amusement ^{a,b,c} , Anticipation ^{b,c} , Appreciation ^c , Ardent ^c , Arousal ^{a,b,d} , Astonishment ^{b,d,i} , At ease ^{a,d} , Attentive ^{h,j} , Attraction ^{b,c} , Avid ^c , Bliss ^b , Brave ^c , Calm ^{a,d} , Caring ^{b,c} , Charmed ^a , Cheerfulness ^{a,b,c,h} , Comfortable ^c , Compassion ^{b,c} , Considerate ^c , Concern ^c , Contentment ^{a,b,c,d,l} , Courageous ^c , Curious ^h , Delight ^{a,b,c,d,h} , Desire ^{b,c} , Determined ^j , Devotion ^c , Eagerness ^{b,c} , Ecstasy ^{a,b,c} , Elation ^{a,b,c,i} , Empathy ^c , Enchanted ^c , Encouraging ^c , Energetic ^f , Enjoyment ^{b,c,f} , Entertained ^c , Enthralment ^b , Enthusiasm ^{b,c,e,f,i,j} , Euphoria ^{b,c} , Excellent ^c , Excitement ^{a,b,c,d,f,i,j} , Exhilaration ^{b,f} , Expectant ^c , Exuberant ^c , Fantastic ^c , Fascinated ^e , Fine ^c , Fondness ^{b,c} , Forgiving ^c , Friendly ^c , Fulfillment ^c , Gaiety ^{b,c} , Generous ^c , Giggly ^c , Giving ^c , Gladness ^{a,b,c,d} , Glee ^{b,c} , Good ^c , Gratitude ^c , Great ^c , Happiness ^{a,b,c,d,e,f,h,i} , Harmony ^c , Helpful ^{c,h} , High ^c , Hope ^{b,c,g} , Horny ^c , Impressed ^c , Incredible ^c , Infatuation ^{b,c} , Inspired ^j , Interested ^{f,j} , Jolliness ^b , Joviality ^b , Joy ^{a,b,c,e,f,g} , Jubilation ^{b,c} , Kindly ^{c,i} , Lighthearted ^c , Liking ^{b,c,g} , Longing ^b , Love ^{a,b,c,e} , Lust ^{b,c} , Merriment ^c , Moved ^a , Nice ^c , Optimism ^b , Overjoyed ^{a,c} , Passion ^{a,b,c} , Peaceful ^{c,f} , Peppy ⁱ , Perfect ^c , Pity ^c , Playful ^c , Pleasure ^{a,c,d,f,i} , Pride ^{a,b,c,e,f,g,j} , Protective ^c , Rapture ^b , Reassured ^c , Regard ^c , Rejoice ^c , Relaxed ^{c,d,f} , Release ^c , Relief ^{a,b,c,e,f,g} , Respect ^c , Reverence ^c , Romantic ^c , Satisfaction ^{a,b,c,d,f,i} , Secure ^c , Sensational ^c , Sensitive ^c , Sensual ^c , Sentimentality ^{b,c} , Serene ^{d,c} , Sexy ^c , Sincere ^c , Strong ^{i,j} , Super ^c , Surprise ^{b,e,f,i} , Tenderness ^{b,c} , Terrific ^c , Thoughtful ^c , Thrill ^{a,b,c} , Touched ^a , Tranquility ^c , Triumph ^b , Trust ^{c,h} , Victorious ^c , Warm-hearted ^{c,i} , Wonderful ^c , Worship ^c , Zeal ^b , Zest ^b

(^aMorgan and Heise (1988); ^bShaver et al. (1987); ^cStorm and Storm (1987); ^dRussel (1980); ^eFrijda et al. (1989); ^f

Havlena et al. (1989); ^gRoseman et al. (1996); ^hPlutchik (1980); ⁱWatson and Tellegen (1985); ^jWatson et al. (1985);

italics are Richins (1997)

Mentioned conceptualization's flexibility and comprehensiveness allows these emotion labels to be used extensively in diverse contexts (Holbrook, 1987; Westbrook, 1987). Therefore, lots of studies composed their emotional set for both positive and negative emotions in terms of their physical settings. Following research studies adapted their emotion words for positive and negative towards their physical surroundings. However, this is not representative of overall literature but serves as an example.

Table 5: Summary of emotional sets in literature

MAIN STUDIES	ADAPTED STUDIES	POSITIVE EMOTION WORDS	NEGATIVE EMOTION WORDS
Edel & Burke (1987), Holbrook & Barta (1987).	Price, Arnould and Deibler (1995)	Happy, Elated, Pleased, Warm-hearted, Caring, Affectionate, Loving	Sad, Sorry, Regretful, Angry
Bigne & Andreu (2004), Gill & Richie (2009), Silvia (2009), Russell (1980).	Chiappa, Andreu and Gallarza (2014)	Safe, Enjoyable, Fun, Astonished	Lost, Tired, Bored, Nervous
Oliver and Westbrook (1993), Westbrook and Oliver(1991), Liljander and Strandrik (1997)	Ladhari, Brun and Morales (2008)	Happiness, Pleasure, Excitement, Contentment, Enjoyment	Anger, Frustration, Contempt, Boredom, Disgust, Embarrassment, Sadness
Plutchik (1980) Izard (1977),	Liu and Jang (2009)	Pleasure, Excitement, Contentment, Refreshment, Interest, Relaxation	Anger, Disgust, Boredom, Regret, Distress, Contempt
General Emotion Scale (Smith and Lazarus, 1990)	Yoo, Park and MacInnis (1998)	Pleased, Attractive, Excited, Contented, Pride, Satisfied	Ignored, Anxious, Nullified, Displeased, Angry
General Emotion Scale (Smith and Lazarus, 1990)	Laros and Steenkamp (2005)	Happiness, Joy, Contentment, Love, Interest, Pleasure, etc.	Anger, Sadness, Distress, Anxiety, Pain, Guilt, etc.
Izard (1977)	Jang and Namkung (2009)	Joy, Excitement, Peacefulness, Refreshment	Anger, Distress, Disgust, Fear, Shame

The significant point is, many research studies centered on categorizing dominant dimension of emotional responses and these emotional words are appropriate in the contexts for which they were proposed and improved.

2.4.2. Measuring Emotions for This Study

The decision to focus on retail-specific emotional responses was based in part on the growing acknowledgment that specific contexts may have specific effects on consumer outcomes like emotions (Huffman & Huston, 1993; Park & Smith, 1989; Ratneshwar & Shocker, 1991) and the concern for this study is using specified emotion scales may not adequately characterize the nature and range of emotional experiences at hotel lobbies. Since there is so little research, that has explored emotional responses at hotel environment, the items used in this study adopted from literature surveys that feed from existing general emotion sets. However, in general emotional sets there are numerous number of emotions that refer to different situations or conditions. They all existing in general emotion literature (See Table 4 in Chapter 2.3.1.). These descriptors were selected from those most frequently cited in literature that were similar environments with hotel lobbies such as restaurants or shopping environments. Especially, research that analyzed perceived physical environment were taken as a basis for emotional words for this study. These emotions are; joyful, happy, satisfied, contented, good for positive emotions; unhappy, annoyed, dissatisfied, melancholic, and bad for negative emotions.

Table 6: Positive and negative emotion words in literature

POSITIVE EMOTIONS	
Joyful	Morgan and Heise (1988), Shaver et al. (1987), Storm and Storm (1987), Frijda et al. (1989), Roseman et al. (1996), Richins (1997), Jang and Namkung (2009).
Happy	Morgan and Heise (1988), Shaver et al. (1987), Storm and Storm (1987), Russell (1980), Frijda et al. (1989), Havlena et al. (1989), Plutchik (1980), Watson and Tellegen (1985), Richins (1997), Ladhari et al (2008).
Satisfied	Morgan and Heise (1988), Shaver et al. (1987), Storm and Storm (1987), Russell (1980), Havlena et al. (1989), Watson and Tellegen (1985), Yoo et al (1998).
Contented	Morgan and Heise (1988), Shaver et al. (1987), Storm and Storm (1987), Russell (1980), Richins (1997), Liu and Jang (2009), Ladhari et al (2008), Yoo et al (1998).
Good	Storm and Storm (1987).
NEGATIVE EMOTIONS	
Unhappy	Morgan and Heise (1988), Shaver et al. (1987), Storm and Storm (1987), Watson and Tellegen (1985).
Annoyed	Morgan and Heise (1988), Shaver et al. (1987), Storm and Storm (1987), Russell (1980), Frijda et al. (1989), Havlena et al. (1989), Plutchik (1980).
Dissatisfied	Storm and Storm (1987), Morgan and Heise (1988).
Melancholic	Shaver et al. (1987), Storm and Storm (1987).
Bad	Storm and Storm (1987).

2.5. Behavioral Intentions

Emotions prepare adaptive action tendencies and their motivational underpinnings (Scherer, 2005). That is, an extension of the relationship between stimuli and emotional responses leads to consumer behaviors (Jang & Namkung, 2009).

"Emotions usually lead to some kind of actions by the individual, i.e. they have some kind of consequences" (Bergenwall, 1998: 34). Emotions have been shown to be important determinants of behavioral intentions in several studies. For instance,

Wakefield and Blodgett (1999) examined customer response to service quality and atmospherics and they figured out that atmospherics had a positive effect on emotions, which cause revisit intentions and favorable comments.

Behavioral intention is defined as "the degree to which a person has formulated conscious plans to perform or not to perform some specific future behaviors" (Warshaw and Davis, 1985: 53). Previous research, especially studies that are based on Mehrabian and Russell's framework, explain behavioral intention as: spending more time than planned, willingness to repurchase and willingness to recommend positively the environment to others. Donovan and Rossiter (1982) studied understanding patronage intentions, such as willingness to return to the service environment and to deliver good "word-of-mouth" to other customers. Ladhari (2008), Liu and Jang (2009) also studied the relationship among perceived quality, customer satisfaction, emotions and behavioral intentions. They all found out through research that both positive and negative emotions had influence on behavioral intentions. Behavioral intentions have been specified as a surrogate indicator of actual behavior in marketing studies (Fishbein and Ajzen, 1975). Approach behaviors include all positive behaviors that might be directed at a particular place, such as desire to stay, explore, work, and affiliate (Mehrabian & Russel, 1974). Avoidance behaviors, however, reflect the opposite, in other words, a desire not to stay, explore, work and affiliate (Mehrabian & Russell, 1974). Tsauro, Luoh & Syue (2015: 118) stated;

The behavioral dimensions into the belief - attitude - intention model, and defined "behavior - intention loyalty" as a positive evaluation and emotions of consumers towards a brand as well as generating repeat purchase intentions and increasing consumers' coherence to the brand.

In terms of self reported judgments of customers, the following statements are found in literature survey.

- I would like to revisit this hotel lobby in the near future (Alsaqre, 2014; Kim & Moon, 2009; Tsaur, Luah & Syue, 2014).
- This hotel lobby would be my first choice over other hotel lobbies (Kim & Moon, 2009).
- I have strong intention to bring my family and friends to visit this hotel lobby again (Kim & Moon, 2009).
- I would like to recommend this hotel lobby to my friend in the future (Alsaqre, 2014; Tsaur, Luah & Syue, 2014).
- I enjoy spending time at this facility (Wakefield and Blodgett, 1996).
- I like to stay at this facility as long as possible (Wakefield and Blodgett, 1996)

2.6. Proposed Scheme for This Study

The application of the scheme provides understanding the effects of physical environment on customer's emotions and behavioral intentions at hotel lobbies.

Conceptual basis of physical environment was formed based on by literature survey on servicescape dimensions. As parameters of servicescape dimensions, design factors that reserves facility aesthetics and layout accessibility were analyzed.

Variables of design factors were adapted from the studies of Baker, Grewal, and Parasuman (1994), Harris and Ezeh (2008), Wakefield and Blodgett (1996),

This study used categorical dimension approach so as to measure customer's emotional responses. Therefore, emotions were examined into separate dimensions that contained positive and negative emotions at the hotel lobby.

Behavioral intentions were selected from literature (e.g. Alsaqre, 2014; Kim & Moon, 2009; Tsaur, Luah & Syue, 2014;) in order to examine relationship with emotional states of customers. Figure 4 represents proposed scheme for this study.

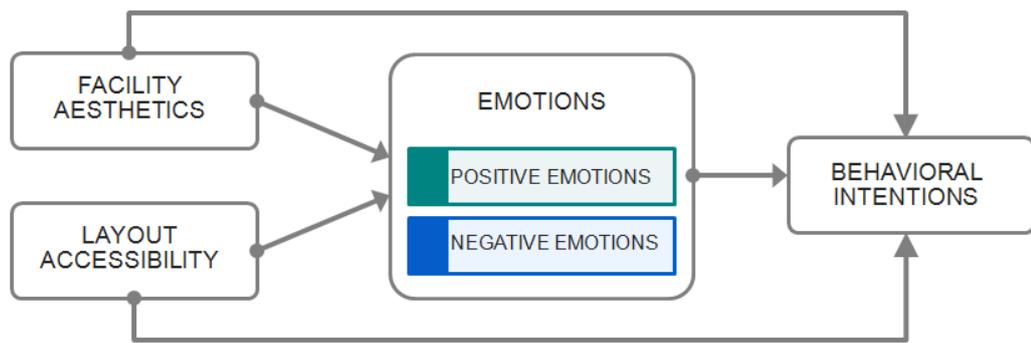


Figure 1 : Proposed Scheme for this study

CHAPTER III

RESEARCH DESIGN

3.1. Research Questions and Hypothesis

- Do facility aesthetics and layout accessibility have an effect on customers' emotions at hotel lobbies?
- Do the customers' emotions have an effect on customers' behavioral intentions at hotel lobbies?
- Do facility aesthetics and layout accessibility have an effect on customers' behavioral intentions at hotel lobbies?

- **H1:** Appropriate facility aesthetics has a positive effect on customers' positive emotions at hotel lobbies.
- **H2:** Inappropriate facility aesthetics increases customers' negative emotions at hotel lobbies.
- **H3:** Appropriate layout accessibility has a positive effect on customers' positive emotions at hotel lobbies.
- **H4:** Inappropriate layout accessibility increases customers' negative emotions at hotel lobbies.

- **H5:** Customers' positive emotions have a positive effect on customers' behavioral intentions.
- **H6:** Customers' negative emotions have a negative effect on customers' behavioral intentions

- **H7:** Appropriate facility aesthetics has a positive effect on customers' behavioral intentions.
- **H8:** Appropriate layout accessibility has a positive effect on customers' behavioral intentions.

3.2. Methodology

To empirically test the hypothesis of the study, multi item scales in previous studies were studied and adopted to fit the study settings. A questionnaire was composed related with hotel lobby environment and comprising of three main sections: design factors, emotional states and behavioral intentions. Therefore, the intent of the study was to examine visually apparent design factors at hotel lobby environment. As sub dimensions of focused design factors; facility aesthetics reserves interior design, artwork/furniture aesthetics/interiorscaping, color and lighting; and layout accessibility reserves spatial layout, furniture layout & comfort. While evaluating and measuring design factors of the hotel lobby, customers' perceptions were taken as a basis.

In addition to design factors, customer's emotions are also important concerns for this study. Emotions are analyzed based on emotion literature about service environment. Lastly, behavioral intention which may be named revisit intention (Han and Kim, 2009; Han and Ryu, 2007; Han et al., 2009; Ok, Back, & Shanklin, 2005) in case of hotel lobby environment was questioned. According to Peter and Olson (1990), behavioral intentions signalize an attitudinal constituent of likes and dislikes. Hence, to better understand behavioral intentions of customers, survey questions were selected from literature.

3.2.1. Setting of the Study

Experiencing the physical surroundings in the consumption environment for a survey is more important than the surveys that are applied on electronic environment or showing images from different parts of a space (Richins, 1997). Particularly, emotional states should be analyzed in real environment so as to obtain valuable results. Therefore, the study was conducted as a field study that is a valid method (Oliver, 1997) for these type of research, strengthening the measurement of the relationship between hotel environment and customer's emotional responses.

The data were collected from customers of Eyüboğlu Hotel at Kavaklıdere/ Ankara. The hotel has a central location in Ankara. The distance of the hotel to underground railway station and square of Kızılay is 500 meters. Moreover, the hotel which has 4 stars, also has 56 room -48 standard and 8 executive room-, special equipment for disabilities, special parking garage, satellite broadcasting and internet access for each room, health and fitness centre, transportation service, baby sitter service and 24 hours security.

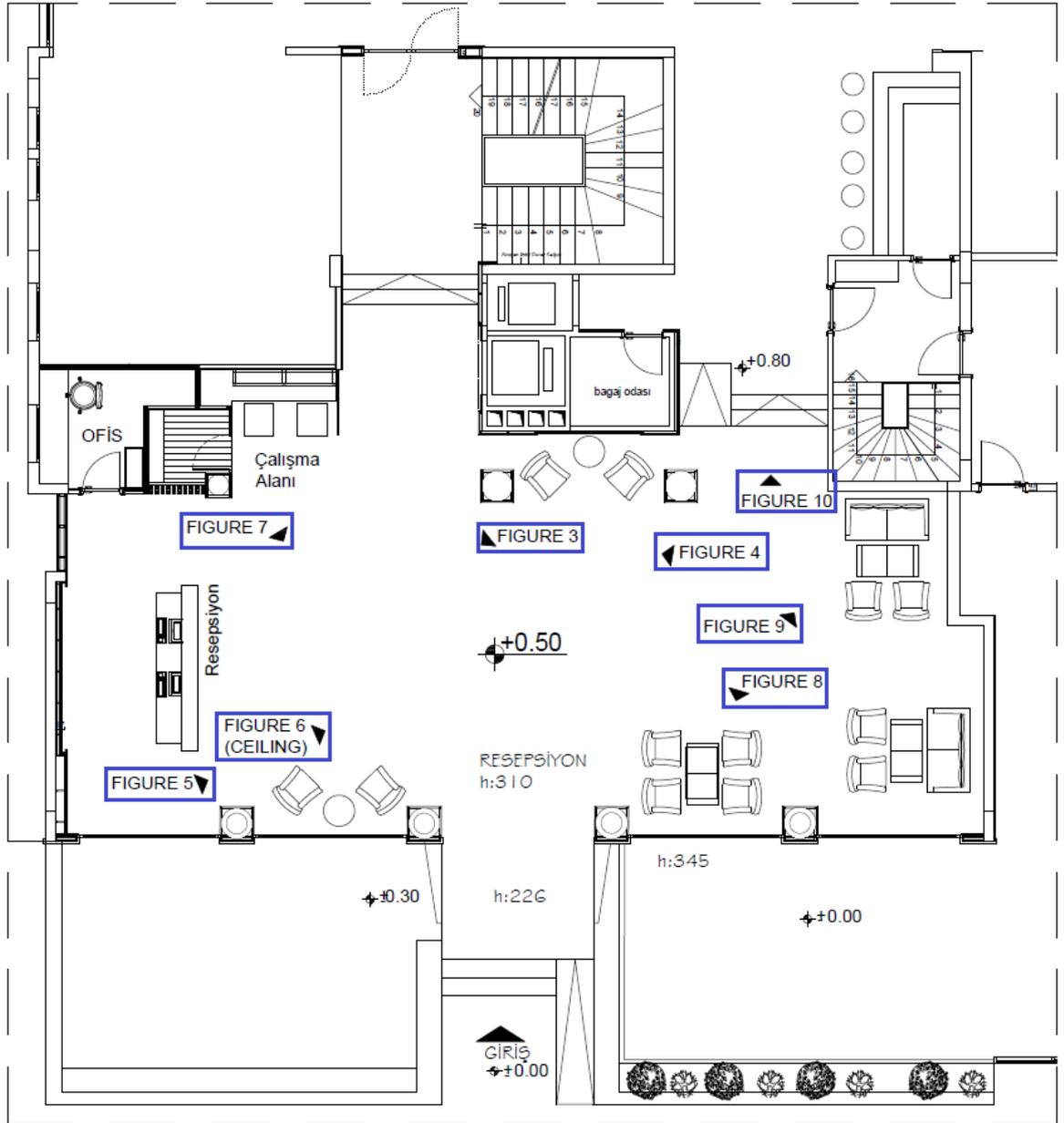


Figure 2: Floor plan of Eyüboğlu Hotel

The main reason of choosing Eyüboğlu Hotel is that, whereas a variety of services within a lobby (e.g. lobby bar, restaurant, etc.) may influence customers' perceptions toward hotel lobby environment with different subspaces and activity, compact lobby environments that reserves all services out of the lobby, enable to perceive the environment as a whole space. Therefore, compact lobby environment may be more suitable so as to ask focused questions related with physical environment of interior

space. Moreover, the lobby was designed in small scale but it attracts intensive attention because the hotel has five meeting rooms and one ball room that was enables it to be used convention hotel. For this reason, the hotel has user variety that gives opportunity to analyze physical environment of space with different perspectives. Besides, interior design of the lobby was renovated with modern vision and simple layout. Therefore, analyzing a contemporary design perspective with the primary function of the lobby may be beneficial not only for newly built hotel lobby but also existing hotels which are planned to be renovated.

Interior architect of Eyüboğlu Hotel is Beyhan Zagnos who specializes in hotel interiors. She reformed and redesigned the lobby fifteen years after first built. The lobby is approximately 145 square meters that is shaped in rectangular form (See Figure 2). General interior design features of the lobby is modern style. Besides, it has six main rectangular columns; four of them are on front facade and two of them are inside of the lobby (See Figure 3, 4, 5 & 6). All columns are designed with a combination of wood veneering and mirror. The materials that used in columns are visually appealing. Floor treatments are light colored shiny marble.



Figure 3: General view of Eyüboğlu Hotel's lobby

Interior plants are used as interiorscaping objects at the lobby. Colors used for seating groups are mostly dark (i.e. black, dark grey, grey and purple) (See Figure 3) and wood veneering finishing (i.e. dark brown) are main decoration elements at the lobby (See Figure 4). However, artwork and paintings are not primary design elements in the lobby and they can be observed as a supporting features. Walls are colored with beige and decorated with art works- paintings. Since the main walls, ceiling and the floor material are light color, the general atmosphere of the lobby environment is not dark. However contrast exists by the treatment of the columns and the furniture. Moreover, walls that define certain functional subspaces, such as the back of the reception area and a seating subspace in between passageways supports the variety within the color scheme and designates the functions (See Figure 4 & 5).



Figure 4: Information desk of Eyüboğlu Hotel's lobby



Figure 5: General view of Eyüboğlu Hotel's lobby

Both natural light and artificial light are observed in the lobby (See Figure 6 & 7).

Front facade is designed with large glasses so it enables to reach quality day light and also, communication opportunity with the lobby exterior. Two main pendant lighting fixtures, cove lights, spot lights and floor lamps are selected for both lighting.

Moreover, there are five pendant lighting fixtures above the reception desk. Main and secondary pendant light fixtures are compatible.



Figure 6: Main entrance of Eyüboğlu Hotel's lobby with full glazing gate



Figure 7: Lighting fixture above main space at Eyüboğlu Hotel's lobby

Spatial layout is organized by considering accessibility to every function of the hotel lobby. In addition to information desk and seating groups, the lobby has one official room next to reception desk and one work station that has computer and telephone for the usage of customers (See Figure 8, 9 & 10). Five different seating groups are placed with their personal spaces. Moreover, all groups are located considering their private zones. That is, comfort level of customers at seating groups is provided. The lobby has two main passageways, one of them reaches to the main restaurant and the other one reaches to the elevators and stairs for floors. Lastly, management of the hotel made possible a comfortable atmosphere with their service to customers while they are spending time at lobby.



Figure 8: One of the seating arrangement at Eyüboğlu Hotel's lobby



Figure 9: One of the seating arrangement at Eyüboğlu Hotel's lobby



Figure 10: One of the passageway of Eyübođlu Hotel's lobby

3.2.2. Participant of the Study

The experiment was performed between November 9th,2015 and November 15th, 2015 and the total number of the sample group were ninety one customers. After eliminating incomplete responses, seventy eight surveys were used for the final analysis (See Table 3 for demographics of the participants). Customers were selected from people who spend time at the lobby. Since, the hotel is located in central space in Kavaklıdere, sample group reserves customers who used the lobby as a social space together with hotel's customers. In addition, participation to the survey was voluntary.

3.2.3. Instrument of the Study

The questionnaire was prepared in English version and then translated into Turkish (see Appendix B for Turkish version). Yekanielibeiglou (2015) was also used as a guidance for translation especially for emotional words. All Turkish adjectives were checked with Turkish Language Association Dictionary for synonymous words (Türk Dil Kurumu, 2016). There were no synonymous words. Only "memnun" (contented) was close to "mutlu" (happy) and "sevinçli" (joyful) but since the meaning of "memnun" was clear with all the participants the word was kept for final questionnaire. After revisions and pilot tests, final version of question survey was conducted. The survey has four parts; demographic variables, physical environment, customer's emotional experiences and customer's behavioral intentions.

In the first section, the respondents are asked to answer their demographic features related to their gender, age range, hometown, visiting frequency, previous visiting for Eyüboğlu Hotel and their purpose of visiting. In the second section, survey is composed to analyze customer's physical environment experience by using 5 - point Likert scale: "How much do you agree or disagree with the statement?" (1= Strongly Disagree and 5= Strongly Agree). Questions were composed with the help of literature survey related with servicescape dimensions as mentioned in Chapter II. Therefore, the section includes two sub-titles called "Facility Aesthetics" and "Layout Accessibility". Facility aesthetics has 13 questions that are related with interior design, artwork/furniture aesthetics/interiorscaping, color and lighting. Layout accessibility has 8 questions that are associated with spatial layout & passageway, furniture layout & comfort (See Appendix A).

In third section, survey was arranged to analyze customer's emotional responses towards the physical environment. Categorical dimension approach was used and positive and negative emotions are examined. The emotion items were measured on a 5 point Likert scale ranging from 1 (I do not feel this emotion at all in this hotel lobby) to 5 (I feel this emotion strongly in this hotel lobby) (Jang & Namkung, 2009). In fourth section, survey composed with four statement to understand behavioral intentions by using 5 - point scale: "How much do you agree or disagree with the statement?" (1= Strongly Disagree and 5= Strongly Agree).

CHAPTER IV

RESULTS

To analyze the data, Statistical Package for the Social Sciences (IBM Corp. SPSS) 20.0 was used. After descriptive analysis of participants, mean scores and reliability testing of sections -facility aesthetics, layout accessibility, positive & negative emotions, and behavior intentions- was calculated. Regression analyses were used to understand relationship between main variables of the study. Each dimension was evaluated to understand linear relationship among two variables. For this study, independent variables were facility aesthetics and layout accessibility, and dependent variables were emotions and behavioral intentions. Lastly, so as to better understand effects of facility aesthetics and layout accessibility, additional statistical calculations were conducted with both their combined version (focused design factors) and their sub dimensions.

4.1. Descriptive Statistics

The survey was conducted with 78 participants who are spending time at Eyüpoğlu Hotel's lobby. There were 32 female (41%) and 46 male (59%) participants at total and age range of majority was less than 31 years old. Majority of customers came

from Ankara (41%) and other cities in Turkey (43,6%). Nevertheless, the hotel had foreign customers as well (15.4%). The number of participants who visited a hotel more than 9 times during a year was 36 (46.2%). Moreover, the majority number of participants (56.4%) used the hotel for the first time. The purposes of customers' visit were mainly for business (34.6%) and to join a convention (24.4%). Besides, other reasons (21.8%) for visiting the hotel was figured out as sport activities. Table 7 summarizes the demographic profile of the participants.

Table 7: Demographic characteristics of the participants of the study

		n	%
Gender	Female	32	41
	Male	46	59
Age	Less than 31	34	43,6
	Between 31-41	19	24,4
	Between 42-51	18	23,1
	More than 51	7	9
Hometown	Ankara	32	41
	Other cities in Turkey	34	43,6
	Other countries	12	15,4
How often do you visit a hotel per year?	None	2	2,6
	1-3 times	11	14,1
	4-6 times	19	24,4
	7-9 times	10	12,8
	More than 9 times	36	46,2
Have you ever visited this hotel before?	Yes	34	43,6
	No	44	56,4
What is your purpose of this travel/visit this lobby?	For business	27	34,6
	For leisure	2	2,6
	For business and leisure	5	6,4
	To join a convention	19	24,4
	To meet someone	8	10,3
	Other	17	21,8

Reliability testing is measured by coefficient alpha that reflects the degree of cohesiveness among the scale items, and it is an indirect indicator of convergent validity (Parasuraman, Berry, Zeithaml & 1991). The mean scores and cronbach's alpha values of focused design factors, positive & negative emotion and behavioral intention were calculated. According to Nunnally and Berstein (1994), an alpha of 0.7 and above is an indication of good internal consistency. It is labeled as "the assessment of reliability" in their research.

In case of this study, the total mean and median values of main variables (See Table 8), mean scores of main structure (See Table 9), and detailed mean values and Cronbach's alpha values for each variables (See Table 10) were stated below and they had good reliability and internal consistency for this study.

Table 8: Total mean and median values of main structures of the study

	n	Mean	Median	Min	Max	S.D.
Facility Aesthetics	78	49,5	51,0	19,00	61,00	6,7
Layout Accessibility	78	33,3	34,0	16,00	39,00	3,9
Positive Emotions	78	20,9	21,5	8,00	25,00	3,2
Negative Emotions	78	7,4	6,0	5,00	23,00	3,5
Behavioral Intentions	78	16,1	16,0	6,00	20,00	2,9

Table 9 indicates mean score of facility aesthetics and layout accessibility and the value of 3.8 for facility aesthetics and 4.1 for layout accessibility were figured out.

The mean score of positive emotions that reserves five positive emotions words was

4.2, while negative emotions that reserves five negative emotions words was 1.4.

Lastly, the mean score of behavioral intentions was 4.0.

Table 9: Mean scores of main structures of the study

	MEAN
FACILITY AESTHETICS	3.8
LAYOUT ACCESSIBILITY	4.1
POSITIVE EMOTIONS	4.2
NEGATIVE EMOTIONS	1.4
BEHAVIORAL INTENTIONS	4.0

Table 10 shows that detailed mean values of each questions for section 2-3-4. For second section, mean scores of facility aesthetic part ranged from 4.3 (agree) for general perception of interior design to 3.3 (neutral) both for paintings and interiorscaping objects. Similarly, layout accessibility ranged from 4.5 (strongly agree) for general layout to 3.9 (agree) for comfort of furniture in the lobby. In section three, positive emotion ranged from 4.4 (agree) for content to 4.1 (agree) both for joyful and happy. As positive and negative emotion are inverse proportion, negative emotional states ranged from 1.3 (strongly disagree) for melancholic and bad to 1.6 (disagree) for unhappy, annoyed and dissatisfied. In fourth section, behavioral intention section ranged from 4.2 (agree) for revisit possibilities in the near future to 3.9 (agree) for positive recommends and spending time in the hotel lobby.

Table 10: Mean values of entire survey questions

SECTION 2	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Cronbach's Alpha
The interior design is visually appealing.				4,3		0,782
This hotel lobby is decorated in an attractive fashion.				4,2		0,774
Painting/ pictures are attractive.			3,3			0,791
Wall decor is visually appealing.				4,2		0,788
Furniture is of high quality.				3,6		0,789
Plants/ flowers make me feel happy.			3,4			0,797
Interiorscaping (i.e. art objects, plants, flower) creates an attractive lobby.			3,3			0,793
Color used create a pleasant atmosphere.				3,7		0,778
The interior wall and floor color schemes are attractive.				3,6		0,785
The colors of the physical facilities and the interior are pleasant.				3,8		0,786
The overall lighting level in this lobby is appropriate.				4,2		0,788
Lighting creates a comfortable atmosphere.				4,1		0,78
Lighting makes me feel welcome.				3,9		0,789
Facility Aesthetics						0,799
Layout makes it easy for me to move around.					4,5	0,709
It is easy to find what you are looking for.				4,3		0,68
It is easy to get in and out of the seats at this hotel lobby.				4,1		0,717
Furniture in this hotel lobby is comfortable.				3,9		0,693
In this hotel lobby, the aisles between the seating groups are wide enough to pass through easily.				4,1		0,658
Seating arrangement gives me enough space.				4,2		0,73
Seating units are comfortable.				4		0,674
Passageway in this hotel lobby environment provide adequate directions.				4,1		0,696
Layout Accessibility						0,724

SECTION 3	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Cronbach's Alpha
I feel joyful in this hotel lobby.				4,1		0,87
I feel happy in this hotel lobby.				4,1		0,853
I feel satisfied in this hotel lobby.				4,2		0,851
I feel contented in this hotel lobby.				4,4		0,883
I feel good in this hotel lobby.				4,2		0,841
Positive Emotions						0,885
I feel unhappy in this hotel lobby.		1,6				0,916
I feel annoyed in this hotel lobby.		1,6				0,912
I feel dissatisfied in this hotel lobby.		1,6				0,922
I feel melancholic in this hotel lobby.	1,3					0,906
I feel bad in this hotel lobby.	1,3					0,899
Negative Emotions						0,928

SECTION 4	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Cronbach's Alpha
I like to stay at this facility as long as possible.				3,9		0,84
I enjoy spending time at this facility.				4,1		0,849
I would like to recommend this hotel lobby to my friend in the future.				3,9		0,862
I would like to revisit this hotel lobby in the near future.				4,2		0,871
Behavioral Intentions						0,887

4.2. Regression Analyses

Regression analysis is a statistical technique to analyze the relationship between a dependent variable and a set of independent variables (Burns & Burns, 2008).

Mean scores of main variables (facility aesthetics, layout accessibility, positive emotions, negative emotions and behavioral intentions) of the study were used to evaluate regression analysis.

Before the regression analyses, R- square which is the correlation coefficient squared that indicates the percentage of total variation of Y which explained by X (Pallant, 2007) was also controlled so as to be sure regression analyses of variables are statistically significant or not. The facility aesthetics and layout accessibility are the independent variables while emotions, and behavioral intentions are dependent variables of this study. Therefore, the 24.9% total variation of independent variables (facility aesthetics and layout accessibility) was explained by dependent variable (positive emotions) ($p < 0.05$) (See Appendix D, Table 15) and the model was significant. Moreover, the 17.8% total variation of independent variables (facility aesthetics and layout accessibility) was explained by dependent variable (negative emotions) ($p < 0.05$) (See Appendix D, Table 16) and the model was significant. Moreover, the 15% total variation of independent variables (facility aesthetics and layout accessibility) was explained by dependent variable (behavioral intentions) ($p < 0.05$) (See Appendix D, Table 17) and the model was significant.

In the following sections, the Standardized Coefficient (β) value of variables that shows relationship between variables are stated (Figure 11-15). In all figures, colored boxes indicate statistically significant values for the study.

4.2.1. Relationship Between Facility Aesthetics and Emotions

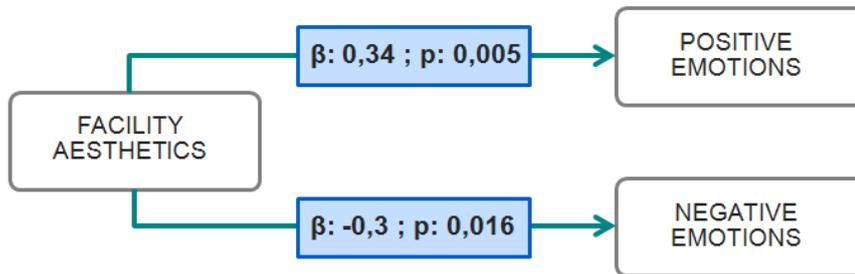


Figure 11: Standardized coefficient value of facility aesthetics associated with emotions

Figure 11 represents that facility aesthetics positively related with positive emotions ($\beta: 0.34, p=0.005$) and negatively related with negative emotions ($\beta: -0.3, p=0.016$).

That is, if facility aesthetics increase, positive emotions increase 0.34 times and negative emotions decrease 0.3 times ($p<0.05$). According to relative strength of beta values, facility aesthetics was in a weak relationship with both positive emotions and negative emotions (with inverse proportion).

4.2.2. Relationship Between Layout Accessibility and Emotions

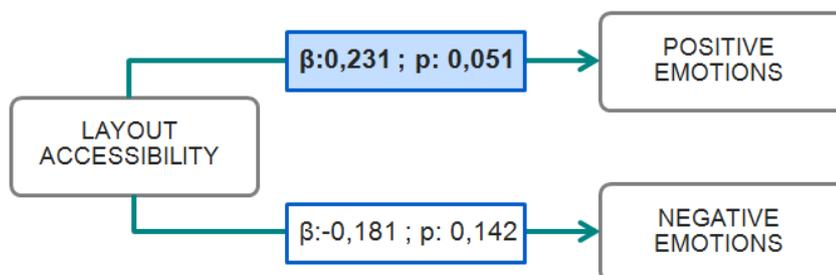


Figure 12: Standardized coefficient value of layout accessibility associated with emotions

Figure 12 represents that layout accessibility is positively related with positive emotions ($\beta: 0.231, p=0.051$). It means that, if layout accessibility increase, positive emotions increase 0.231 times. According to relative strength of beta values, layout accessibility was in very weak relationship with positive emotions. However, there is no significant relationship between layout accessibility and negative emotions ($p:0,142$).

4.2.3. Relationship Between Emotions and Behavioral Intentions

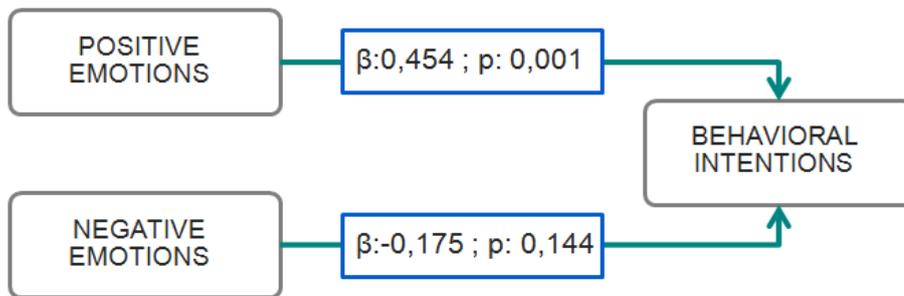


Figure 13: Standardized coefficient value of emotions associated with behavioral intentions

Figure 13 represents that positive emotions is positively related with behavioral intentions ($\beta: 0.454, p=0.001$). It means that, if positive emotions increase, behavioral intentions increase 0.454 times. According to relative strength of beta values, positive emotions was in a weak relationship with behavioral intentions. However, there is no significant relationship between negative emotions and behavioral intentions ($p:0,144$).

4.2.4. Relationship Between Facility Aesthetics and Behavioral Intentions

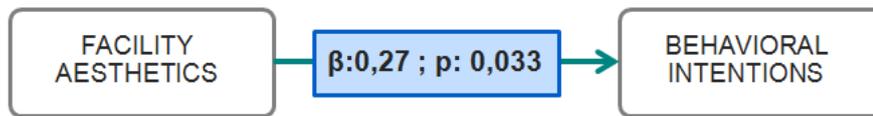


Figure 14: Standardized coefficient value of facility aesthetics associated with behavioral intentions

Figure 14 indicates that facility aesthetics ($\beta: 0.27, p=0.033$) positively related with behavioral intentions. That is, if facility aesthetics increase behavioral intentions increase 0.27 times. According to relative strength of beta value, behavioral intentions was in very weak relationship with facility aesthetics.

4.2.5. Relationship Between Layout Accessibility and Behavioral Intentions

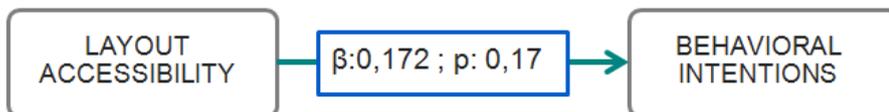


Figure 15: Standardized coefficient value of layout accessibility associated with behavioral intentions

Figure 15 indicates that there is no significant relationship between layout accessibility and behavioral intentions ($p:0,17$).

4.3. Additional Statistical Analyses

To better understand effects of facility aesthetics and layout accessibility on customers' emotional states and behavioral intentions additional statistical analyses were conducted for this study. Firstly, facility aesthetics and layout accessibility were combined as a one dimension that was named as a "design factors" based on the literature. Then, correlation analyses were performed with combination of facility aesthetics and layout accessibility. In statistics, correlation analyses is used for analyzing any statistical relationship between two independent or two sets of data (Bruns & Bruns, 2008). Correlation analyses ranges between -1 and +1 and measures the direction and strength of the linear association between the two variables. Therefore, correlation analyses of design factors associated with customers' emotions and behavioral intentions were studied so as to figure out differences on customers' perceptions on physical environment of interior space when facility aesthetics and layout accessibility were assumed as one component.

Secondly, sub-dimensions of facility aesthetics and layout accessibility were analyzed with regression analyses to discover which sub dimensions were the most effective and/or effectiveness degrees of each dimension on customers' emotions and behavioral intentions.

4.3.1. Correlation Analyses of Design Factors Associated with Emotions and Behavioral Intentions

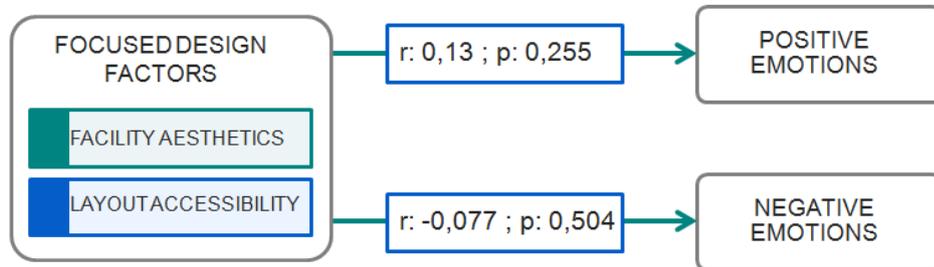


Figure 16: Correlation analyses of design factors associated with emotions

Figure 16 indicates that there is no significant relationship between design factors and both for positive emotions ($p:0,255$) and negative emotions ($p:0,504$).

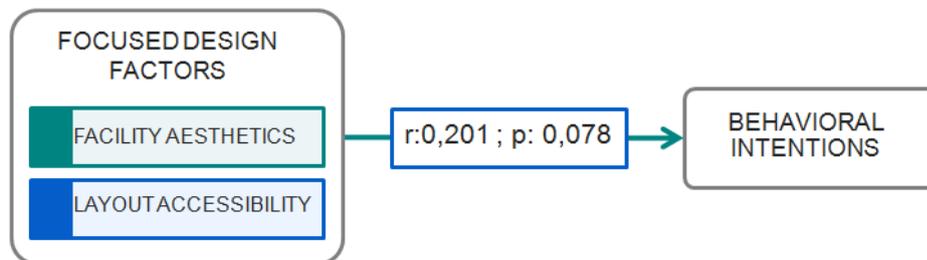


Figure 17: Correlation analyses of design factors associated with behavioral intentions

Figure 17 indicates that there is no significant relationship between design factors and behavioral intentions ($p:0,078$).

4.3.2. Regression Analyses of Sub-dimensions of Facility Aesthetics Associated with Emotions and Behavioral Intentions

Table 11: Sub-dimensions of facility aesthetics

Names	Codes	Question Numbers
Interior design (general perception)	FA-1	7, 8, 10
Artwork/Furniture Aesthetics/Interiorscaping	FA-2	9, 11, 12, 13
Color	FA-3	14, 15, 16
Lighting	FA-4	17, 18, 19

Table 11 is designated for showing sub dimensions of facility aesthetics and their short version codes. Moreover, question numbers of each sub dimensions are also given.

Table 12: Regression analyses of facility aesthetics associated with emotions and behavioral intentions

	Positive Emotions	Negative Emotions	Behavioral Intentions
FA-1	$\beta:0,39$; $p:0,001^*$	$\beta:-0,449$; $p:0^*$	$\beta:0,421$; $p:0,001^*$
FA-2	$\beta:0,071$; $p:0,542$	$\beta:-0,041$; $p:0,762$	$\beta:0,043$; $p:0,717$
FA-3	$\beta:0,101$; $p:0,411$	$\beta:-0,122$; $p:0,323$	$\beta:-0,064$; $p:0,614$
FA-4	$\beta:0,091$; $p:0,416$	$\beta:0,064$; $p:0,569$	$\beta:0,127$; $p:0,269$

*Bold indicates statistically significant values for the study.

The 26.3% total variation of dependent variable (positive emotions) was explained by independent variables (FA-1, FA-2, FA-3, FA-4) ($p < 0.05$) (See Appendix D) and the model was significant. Table 12 represents that FA-1 is positively related with positive emotions ($\beta: 0.39, p = 0.001$). It means that, if FA-1 increase, positive emotions increase 0.39 times. According to relative strength of beta values, FA-1 was in a weak relationship with positive emotions. However, there is no significant relationship between FA-2, FA-3, FA-4 and positive emotions ($p > 0.05$).

The 25.5% total variation of dependent variable (negative emotions) was explained by independent variables (FA-1, FA-2, FA-3, FA-4) ($p < 0.05$) (See Appendix D) and the model was significant. Table 12 represents that FA-1 is negatively related with negative emotions ($\beta: -0.449, p = 0$). It means that, if FA-1 increase, negative emotions decrease 0.449 times (inverse proportion). According to relative strength of beta values, FA-1 was in a weak relationship with negative emotions. However, there is no significant relationship between FA-2, FA-3, FA-4 and negative emotions ($p > 0.05$).

The 22% total variation of dependent variable (behavioral intentions) was explained by independent variables (FA-1, FA-2, FA-3, FA-4) ($p < 0.05$) (See Appendix D) and the model was significant. Table 12 represents that FA-1 is positively related with behavioral intentions ($\beta: 0.421, p = 0.001$). It means that, if FA-1 increase, behavioral intentions decrease 0.421 times. According to relative strength of beta values, FA-1 was in a weak relationship with behavioral intentions. However, there is no significant relationship between FA-2, FA-3, FA-4 and behavioral intentions ($p > 0.05$).

4.3.3. Regression Analyses of Sub-dimensions of Layout Accessibility Associated with Emotions and Behavioral Intentions

Table 13: Sub-dimensions of layout accessibility

Names	Codes	Question Numbers
Spatial Layout & Passageway	LA-1	20, 21, 27
Furniture Layout & Comfort	LA-2	22, 23, 24, 25, 26

Table 13 is designated for showing sub dimensions of layout accessibility and their short version codes. Besides, question numbers of each sub dimensions are also given

Table 14: Regression analyses of layout accessibility associated with emotions and behavioral intentions

	Positive Emotions	Negative Emotions	Behavioral Intentions
LA-1	$\beta:0,327$; $p:0,013^*$	$\beta:-0,256$; $p:0,057^*$	$\beta:0,214$; $p:0,114$
LA-2	$\beta:0,143$; $p:0,266$	$\beta:-0,131$; $p:0,327$	$\beta:0,141$; $p:0,296$

*Bold indicates statistically significant values for the study.

The 18.2 % total variation of dependent variable (positive emotions) was explained by independent variables (LA-1, LA-2) ($p<0.05$) (See Appendix D) and the model was significant. Table 14 represents that LA-1 is positively related with positive emotions ($\beta: 0.327$, $p=0.013$). It means that, if LA-1 increase, positive emotions increase 0.327 times. According to relative strength of beta values, LA-1 was in a

weak relationship with positive emotions. However, there is no significant relationship between LA-2 and positive emotions ($p>0.05$).

The 12.2 % total variation of dependent variable (negative emotions) was explained by independent variables (LA-1, LA-2) ($p<0.05$) (See Appendix D) and the model was significant. Table 14 represents that LA-1 is negatively related with negative emotions ($\beta: -0.256, p=0.057$). It means that, if LA-1 increase, negative emotions decrease 0.256 times (inverse proportion). According to relative strength of beta values, LA-1 was in very weak relationship with negative emotions. However, there is no significant relationship between LA-2 and negative emotions ($p>0.05$).

The 10.1 % total variation of dependent variable (behavioral intentions) was explained by independent variables (LA-1, LA-2) ($p<0.05$) (See Appendix D) and the model was significant. However, Table 14 represents that there is no significant relationship between LA-1, LA-2 and behavioral intentions ($p>0.05$).

4.4. Discussion

The purpose of the study was to put emphasis on the effect of the interior design of physical environment on customers' emotions in case of hotel lobbies. Moreover, behavioral intentions that were consequences of emotional states of customers were also analyzed. While analyzing design factors, customers' perceptions towards determinants of facility aesthetics and layout accessibility were taken as a basis of this study. Therefore, the results supported that facility aesthetics and layout accessibility have an effect on customers' positive emotions but, while facility aesthetics has an effect, layout accessibility has not an effect on customers' negative emotions and behavioral intentions. Moreover, emotions of customers have an effect on their behavioral intentions.

Most of research related with hotel lobby environment was conducted for hospitality management departments, marketing departments, etc. However, hotel lobbies should be taken into consideration as an interior space at first because lobby areas at hotels have a crucial role so as to draw customers' attention. Within different dimensions of servicescape, under the title of focused design factors, facility aesthetics and layout accessibility were examined as the first phase of this study.

Previous research that study effects of physical environments on customers' emotions, used different methods so to measure emotions. Categorical dimension approach (uni-polar approach) was used to test relationship between physical environment of interior space and emotional states in second phase of the study. A categorical dimension approach -positive and negative scheme- provides its unique influences on behavioral responses (Yalch & Spangenberg, 2000) as well as its

relationships with physical environment of interior space. Therefore, in last phase of the study, behavioral intentions of customers' examined.

In order to better understand relationship between main variables (facility aesthetics, layout accessibility, positive emotions, negative emotions and behavioral intentions) mean values were calculated and regression analyses were conducted in terms of hypothesis. In addition, correlation analyses of focused design factors (i.e. combination of facility aesthetics and layout accessibility) and regression analyses for sub categories were accomplished.

H1	Facility Aesthetics	β : 0,34 ; p: 0,005 (p<0,05) (direct proportion)	Positive Emotions	✓
H2	Facility Aesthetics	β : -0,3 ; p: 0,016 (p<0,05) (inverse proportion)	Negative Emotions	✓
H3	Layout Accessibility	β : 0,231 ; p: 0,051 (p<0,05) (direct proportion)	Positive Emotions	✓
H4	Layout Accessibility	β : -0,181 ; p: 0,142 (p>0,05) Non-significant	Negative Emotions	✗
H5	Positive Emotions	β : 0,454 ; p: 0,001 (p<0,05) (direct proportion)	Behavioral Intentions	✓
H6	Negative Emotions	β : -0,175 ; p: 0,144 (p>0,05) Non-significant	Behavioral Intentions	✗
H7	Facility Aesthetics	β : 0,27 ; p: 0,033 (p<0,05) (direct proportion)	Behavioral Intentions	✓
H8	Layout Accessibility	β : 0,172 ; p: 0,17 (p>0,05) Non-significant	Behavioral Intentions	✗

Figure 18: Summary of results related with hypothesis of this study

Figure 18 indicates summary of results in terms of hypothesis of the study. The results of regression analyses supposed that facility aesthetics was positively related with positive emotions (β : 0,34), and negatively related with negative emotions (β : -0,3). Besides, while layout accessibility was positively related with positive emotions (β : 0,23), there was no statistically significant relation between layout accessibility

and negative emotions. Moreover, while behavioral intentions were affected by positive emotions with direct proportion ($\beta: 0,454$), negative emotions did not have any effect on behavioral intentions. Lastly, facility aesthetics was positively related with behavioral intentions ($\beta: 0,27$). However, there was no statistically significant relationship between layout accessibility and behavioral intentions. Therefore, H1a, H1b, H2a, H3a, H4a were supported in terms of regression analyses analysis of the study.

Results were very similar with the study that conducted by Liu and Jang (2009) at dining environment. In their case, while interior design and spatial layout were found to be in a relationship with positive emotions, there were not statistically significant relation with negative emotions. Moreover, they also supposed that the relationship between emotional states and behavioral intentions was significant for dining environment. Another similar example for this study was conducted by Jang and Namkung (2009) and they figured out that while atmospherics had a statistically significant relationship with positive emotions, there was no relationship with negative emotions at restaurant environment. Besides, they figured out that behavioral intentions were found in a statistically significant relationship between both positive emotions and atmospherics. However, there was no relationship between behavioral intentions and negative emotions in terms of their study.

Extensive analyses were conducted to better understand effect of physical environment of interior space on customers' emotional states and behavioral intentions. Therefore, facility aesthetics and layout accessibility were analyzed as one component under the heading design factors, like the study of Jang and

Namkung (2009). However, when combined facility aesthetics and layout accessibility, results showed that there was no relationship between focused design factors and customers' emotional states, as well as behavioral intentions in terms of the study.

On the contrary, instead of analyzing facility aesthetics and layout accessibility as a one component, their sub dimensions were examined. Facility aesthetics were divided into four sub dimensions called; interior design, artwork/furniture aesthetics/interiorscaping, color and lighting. In addition, layout accessibility was divided into two sub dimensions named; spatial layout and passageway, and furniture layout and comfort. Therefore, regression analyses of each sub dimension between emotional states and behavioral intentions were conducted. Moreover, mean values of each sub dimensions were compared both with each other and results of regression analyses.

The questions related with first determinant of facility aesthetics -interior design- were frequently rated with 4.2. In the same line, regression analyses of "interior design" dimension designed that there was a statistically significant relation between "interior design" and customers' emotional states, as well as behavioral intentions.

The related questions in survey were asked about general perceptions toward Eyüboğlu hotel lobby's interior design. In the light of analyses, it was found that if "interior design" dimension increase, positive emotions increase 0.39 times (β : 0,39, $p < 0.05$) and negative emotions decrease (inverse proportion) 0.449 times (β : -0,449, $p < 0.05$). Moreover, there was statistically significant relationship between "interior design" and behavioral intentions (β : 0,421, $p < 0.05$).

The questions related with second determinant of facility aesthetics - artwork/furniture aesthetic/interiorscaping- were frequently rated with 3.4. The related questions in survey were asked about painting/pictures on walls, furniture quality and plants/flowers arrangements. Since, customers may be affected by textures, quality of materials and style of furnishing (Thapa, 2007). Therefore, majority number of customers confirmed that furniture aesthetics of Eyüboğlu hotel lobby was attractive in terms mean value of related questions. Moreover, the mean value of one of the determinants of second sub dimension that named interiorscaping was 3.3 in terms of related questions. Since lack of art objects and interiorscaping (greenery and flowers) were recognized by participants, it was rated in minimum attractiveness level in the hotel. However, using art objects and interiorscaping have a great importance in case o hotel lobby environment. Creation of water bodies, ponds, and plants could create more of a sense of place and bring more liveliness to the physical environment of the lobby (Thapa, 2007). Regression analyses indicated that there was no relationship between "artwork/furniture aesthetic/interiorscaping" and customers' emotions, as well as behavioral intentions ($p>0.05$). That means, second sub dimension, did not effective when it considered alone. However, if artworks or interiorscaping objects were used more than existing, the results may differs.

The questions related with third determinant of facility aesthetics -color- were frequently rated with 3.7. The related questions in survey were asked about color scheme of walls, floors and furniture. Mostly dark color were used at Eyüboğlu hotel lobby and according to mean value of third sub dimension, it was found good-looking by customers at the hotel lobby. Color played an important role as a design

factors for the study that conducted at hotel lobby by Countryman and Jang (2006). Different color lead to different moods, emotions, and feeling, and subsequently influence behavioral intentions (Bellizzi & Hite, 1992; Crowley & Hasty, 1983; Gorn, Chattopadhyay; Mikellides, 1990). Therefore, influence of the color scheme was also an important component for physical environments of interior space. However, regression analyses showed that there was no significant relationship between "color" and emotional states of customer and their behavioral intentions ($p>0.05$). That means, even if color is a determinant of general interior design and have an effect on composing attractive interior spaces, it was not effective when it considered alone in terms of this study. In other words, color scheme of the hotel lobby was not prominent or conspicuous, so even if color was integral to general interior design, it was not perceived as a strong design feature at Eyüboğlu hotel lobby that had a singular direct effect on customers emotions and behavioral intentions.

The questions related with fourth determinant of facility aesthetics -lighting- were frequently rated with 4.0. The related questions in survey were asked about lighting that creates comfortable environment for customers. Therefore, it may assumed that next to artificial lighting and its aesthetics design, natural lighting conditions were also well reasoned for customers' of Eyüboğlu hotel when considered mean value of the fourth sub dimension. Similarly with the results of this study, Kurtich and Eakin (1992) also figured out that lighting could influence customers' perception of the value of space, effecting awareness towards physical, emotional and psychological aspects of spaces. However, regression analyses indicated that there was no relationship between emotional states of customer and their behavioral intentions in

this study ($p>0.05$). That means, lighting features were not perceived as separate components but they were viewed within the general perception of interior design of Eyüboğlu hotel lobby environment. Similarly, lighting was found as a less important issue at the study that examined at restaurant by Liu and Jang (2009).

The questions related with first determinant of layout accessibility -spatial layout & passageway- were frequently rated with 4.3. Service or retail facilities that are specifically designed to add some level of pleasure or excitement to the service experience, should ensure that the layout plan is appropriate for their customers (Ryu and Jang, 2009). Indeed, first determinants of layout accessibility called spatial layout that gives opportunity to reach every part of lobby with ease was rated as the most appropriate requirements. According to Bitner (1992) passageways should arrange with high considerations because they have to provide for ease of entry and exist to restrooms, restaurants and souvenir stands. Therefore, the mean score of passageway questions showed that customers were satisfied for passageways of Eyüboğlu hotel lobby. In this direction, regression analyses was corroborative with mean values of "spatial layout & passageway". There was a statistically significant positive relationship with positive emotions ($\beta: 0,327, p<0.05$) and negative relationship with negative emotions ($\beta: -0,256, p<0.05$). However, there was no relationship between "spatial layout & passageway" and behavioral intentions ($p>0.05$).

The questions related with second determinant of layout accessibility -furniture layout & comfort- were frequently rated with 4.0. According to Thapa (2007) furniture layout could extensively shape a lobby's physical environment of interior

space. Therefore, crowded seating conditions can also generate feelings of physical discomfort (Lucas, 2003). Giving enough space for customers while they get in and out of the seats was important factor for furnishing layout at Eyüboğlu hotel lobby and mean values of related questions rated with 4.1. According to Wakefield and Blodgett (1996), larger aisles and walkways and additional entrances/exits will better facilitate the flow of customers before, during, and after the leisure service event (Wakefield & Blodgett,1996). Seating arrangement not only affects where people sit, but also the character of interaction that can occur between them (Davis, 1984). Hence, in case of Eyüboğlu hotel, seating arrangement gives opportunity to interact with other customers, and to have personal spaces for its customers in terms of mean values of related questions. Although, personal spaces for each seating groups rated at adequate level, comfort level of seating group was rated with minimal ratio at Eyüboğlu hotel. Results of regression analyses of "furniture layout & comfort" designated that there was no statistically significant relationship both with emotions and behavioral intentions of customer ($p>0.05$).

As a conclusion of first phase of the study, it may be assumed that even if all sub dimensions of facility aesthetics and layout accessibility have not statistically significant when they considered as a separate dimensions or combined version of them, they were components of facility aesthetics and layout accessibility and they effect results of main dimensions of the study. The research also shows that the effect of each design components has a different effect to the emotions of customers. There is a value in both the customers view of general perception, as well as comments on singular features. As such, the general perception of interiors where all of the components are already a part of the design has the most direct affect on customers

emotions and behavioral intentions. However, results may be different where there are outstanding lighting color or artwork features which may themselves be apparent to the customer. Overall, the cohesiveness and unity of design where all of the features have an integral influence seems to be a determinant on a positive perception, which at the same time influence emotions and behavioral intentions. While layout and comfort results may differ where layout is a big issue (especially at complex areas) it is a concern for customers. Similarly the time spent at lobby and additional functions may have an effect on the perceptions of negative comfort.

Nevertheless, perceptions towards facility aesthetics and layout accessibility may change in terms of type of service business, personal characteristics of customers, design perspective of interior architects and so on. Therefore, we should be cautionary when comparing the results with previous research in case of physical environment of interior spaces, since design features of every type of environment have different materials, colors, shapes and size. Hence, each research that are conducted for similar features should be evaluated in its own rights.

In the second phase of the study emotions of customers are examined. Hence, mean scores of emotions and each independent emotion words were figured out so as to understand which emotion was mostly felt in the hotel lobby during survey. Results showed that, for positive emotions, "contented" was rated as the most powerful positive emotion for this lobby. The mean value of "contented" was 4.4. Later on, "satisfied" and "good" were rated with 4.2 as a secondary powerful positive emotions according to their mean values. In addition to positive emotions, negative emotions also analyzed in term of mean values. Since negative emotions have inverse

proportion with other determinants, results showed that "melancholic" and "bad" were rated with 1.3 as the most powerful negative emotions in case of this study.

In the same manner with physical environment of interior space, emotional states also may differ by personalities of service environments and user profile. For instance, while the feeling "happy" was the most powerful positive emotion for the study of Ladhari, Brun and Morales (2008) at dining environment, it was the least powerful emotion for the study of Lin and Liang (2011) that performed at store environment. Besides, feeling "joyful" is approximately same value for this thesis and the study that accomplished by Jang and Namkung (2009) at restaurants. Another example for feeling "contented", both for this thesis and study that conducted by Laros and Steenkamp (2005) as a marketing study for general service environments was a majority answer for the positive emotions. When considered regression analyses of emotional states of customers', it was figured out that, while there was statistically significant relation between positive emotions and behavioral intentions, there was not relationship between negative emotions and behavioral intentions according to statistical results ($p > 0.05$). Results of the study of Jang and Namkung (2009) were same with the results of this study. The reasons of findings of negative emotions maybe because people do not often reveal their negative emotions, so proposed relationship may not have been significantly assessed to the study. In consequences of differences about mean scores and regression analyses, it is hard to generalize analyzing emotional states of customers for service environments.

Last phase of the study was related with behavioral intentions. Lin (2004: 168) interpreted behavioral intentions as; "individuals retrieve sensory cues from a servicescape and form a subconscious mental image of the servicescape prior to experiencing any emotion and making judgments towards the specific servicescape". That is, facility aesthetics make positive contribution to behavioral intentions and results of the study verified this vision. However, there was no relationship between layout accessibility and behavioral intentions for this study. Therefore, it may be summarized that facility aesthetics in the study, was efficient for positive recommendations and revisit intentions. Similarly with the study of Jang and Namkung (2009), while positive emotions of customers have an effect on behavioral intentions, negative emotions have not any significant relations with behavioral intentions for this study as well.

Besides theoretical implications, this study gives opportunity to numerous managerial implications. The results of the study may help hotel managers to better understand importance of physical environment of interior space on customers' emotional states and behavioral intentions. That is, managers of hotels should provide well designed environment with quality products so as to evoke positive emotions and eradicate negative emotions towards hotel lobby. Hence, hotel managers have a chance for influencing future behaviors of customers' like revisit intentions, desire to stay more than planned and positive recommendations. Since positive emotions contribute to positive behavioral intentions, customers may suggest a hotel to other people with compliments. Although the relation between product quality and behavioral intentions was not fundamental for the study of Jang and Namkung (2009), managers should not ignore the significance of product quality

(Jang & Namkung, 2009; Sulek & Hensley, 2004) because of competitive business environment. Moreover, the study may help to other service environment such as corporate business branch, large scale cinemas, or restaurants where design of the physical environment should be taken into consideration.

CHAPTER V

CONCLUSION

Hotel lobbies express personalities of hotels so lobby areas have significant role on creating desirable atmosphere for their customers. Elenor Curtis in research that conducted by Collins (2001: 8) mentioned that,

The lobby has become set with theatrical lighting (See Paramoun, New York), an organic garden (See W, New York), a fashion cat-walk with permanent DJ (See Standard, LA), or a city film set (See Paris, Las Vegas).

In this sense, physical environments' features perform as nonverbal communication instruments for hotel lobbies. There are various categorizations of physical environment of interior space dimensions in service business such as, servicescape, atmospherics and tangserv in literature. This study is conducted considering design factors, which is a sub dimension of servicescape. Design factors reserved two main components called; facility aesthetics and layout accessibility in the study. While, facility aesthetics included interior design, artwork/furniture aesthetic/interiorscaping, color and lighting; layout accessibility involved spatial layout & passageway, furniture layout & comfort.

Customers expect to find aesthetic design in service environment, and when the design of the servicescape is perceived as more aesthetical, their positive emotions are increased (Lin & Liang,2011). Hence, design factors generate customers emotional states towards physical environments. So as to measure emotions, a variety type of approaches can be observed by research. In this study, categorical dimension approach that accommodates both positive and negative emotions, was used. Emotion words that were used to analyze customers' emotional states were selected from general emotional scales and adapted to the study.

Different emotions can have different behavioral consequences (Laros & Steenkamp, 2005) and these short term consequences refer to customers' efforts to concretization the experience at environment (Bigne, Mattila & Andreu, 2008). Evaluations of relationship between behavioral intentions with emotions and focused design factors were conducted according to literature survey.

The general aim of this thesis was to investigate the effect of the interior design of physical environment on customers' emotions in case of hotel lobbies Correspondingly with focused design factors (facility aesthetics and layout accessibility) and emotions, behavioral intentions of customers were also analyzed. Hence the results of the study revealed that there is a significant positive relationship between features of physical environment of interior space (facility aesthetics and layout accessibility) and positive emotions of customers. Moreover, facility aesthetics also have statistically significant relationship between negative emotions of customers. When behavioral intentions considered, both positive emotions and facility aesthetics have statistically significant relations. Further analyses specified

that facility aesthetics and layout accessibility did not have significant relationship between both emotional states and behavioral intentions when they considered as a one dimension or when they considered with their sub dimensions.

The most important contribution of this thesis is that previous studies related with servicescape dimensions, emotional states and behavioral intentions conducted at dining or shopping environments but this study is conducted in a hotel lobby environment. Even if hotel lobbies were analyzed for studies, they all examined atmospheric elements (eg. Naqshbandi & Munir, 2011), satisfaction levels of customers (eg. Arriffin, Namegri & Zakaria, 2013), attraction parameters (eg. Thapa, 2007), first impressions (eg. Fidzani, 2002), loyalty intentions (eg. Alsaqre, 2014), etc. Moreover, research that conducted at hotel lobbies, mostly used colored photos so as to analyze hotel lobby environment during their survey (eg. Fidzani, 2002; Thapa, 2007). However, this thesis was conducted in real environment and customers responded to the survey while they were inside the hotel lobby. Hence, perceiving a real hotel lobby environment is believed to bring more influential results for this study. Moreover, focused design factors of facility aesthetics and layout accessibility and its' effects on emotions and related behavioral intentions of customers at hotel lobby environment was conducted first time in Turkey. Nevertheless, literature reviews and measurement methods were very similar with previous research

This study had a number of limitations that should be considered for future studies. First, the data were collected from a four star hotel, so caution must be exercised while generalizing results of this study. Since qualified hotels have specific customer profiles, expectations may differ from other customer profiles. Similarly, the hotel

was located in a central place at Ankara, so there is no constant users that use the hotel for same purpose. For this reason, results may change according to type of hotel such as convention hotel or boutique hotel. That is, customer characteristics that could influence perceptions toward service environments, were not examined in this study.

According to results of this study, in order to improve customers' positive emotions toward hotel lobby environment and in parallel with their revisit intentions, the effects of design factors should be considered. Besides, the results are beneficial for interior designers, environmental psychologists, instructors or students who may be interested in physical environments' of hotel lobbies.

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APPENDICES

APPENDIX A

SECTION 1:

(Please check one and write if necessary)

✓

1. Gender;

Female	
Male	

2. Age;

Less than 31	
Between 31-41	
Between 42-51	
More than 51	

3. Hometown;

Ankara		
Other cities in Turkey (Please write where)		
Other countries (Please write where)		

4. How often do you visit a hotel per year?

None	
1-3 times	
4-6 times	
7-9 times	
More than 9 times	

5. Have you ever visited this hotel before?

Yes	
No	

6. What is your purpose of this travel /visit this lobby?

For business	
For leisure	
For business and leisure	
To join a convention	
To meet someone	
Other (Please write why)	

SECTION 2 :

(Please rate one; 5- Strongly agree, 4- Agree, 3- Neutral, 2- Disagree, 1- Strongly disagree)

Facility Aesthetics						
7	The interior design is visually appealing.	1	2	3	4	5
8	This hotel lobby is decorated in an attractive fashion.	1	2	3	4	5
9	Painting/ pictures are attractive.	1	2	3	4	5
10	Wall decor is visually appealing.	1	2	3	4	5
11	Furniture is of high quality.	1	2	3	4	5
12	Plants/ flowers make me feel happy.	1	2	3	4	5
13	Interiorscaping (i.e. art objects, plants, flower) creates an attractive lobby.	1	2	3	4	5
14	Color used create a pleasant atmosphere.	1	2	3	4	5
15	The interior wall and floor color schemes are attractive.	1	2	3	4	5
16	The colors of the physical facilities and the interior are pleasant.	1	2	3	4	5
17	The overall lighting level in this lobby is appropriate.	1	2	3	4	5
18	Lighting creates a comfortable atmosphere.	1	2	3	4	5
19	Lighting makes me feel welcome.	1	2	3	4	5
Layout Accessibility						
20	Layout makes it easy for me to move around.	1	2	3	4	5
21	It is easy to find what you are looking for.	1	2	3	4	5
22	It is easy to get in and out of the seats at this hotel lobby.	1	2	3	4	5
23	Furniture in this hotel lobby is comfortable.	1	2	3	4	5
24	In this hotel lobby, the aisles between the seating groups are wide enough to pass through easily.	1	2	3	4	5
25	Seating arrangement gives me enough space.	1	2	3	4	5
26	Seating units is comfortable.	1	2	3	4	5
27	Passageway in this hotel lobby environment provide adequate directions.	1	2	3	4	5

SECTION 3:

(Please rate one; 5- Strongly agree, 4- Agree, 3- Neutral, 2- Disagree, 1- Strongly disagree)

Positive Emotions						
28	I feel joyful in this hotel lobby	1	2	3	4	5
29	I feel happy in this hotel lobby	1	2	3	4	5
30	I feel satisfied in this hotel lobby	1	2	3	4	5
31	I feel contented in this hotel lobby	1	2	3	4	5
32	I feel good in this hotel lobby	1	2	3	4	5
Negative Emotions						
33	I feel unhappy in this hotel lobby	1	2	3	4	5
34	I feel annoyed in this hotel lobby	1	2	3	4	5
35	I feel dissatisfied in this hotel lobby	1	2	3	4	5
36	I feel melancholic in this hotel lobby	1	2	3	4	5
37	I feel bad in this hotel lobby	1	2	3	4	5

SECTION 4:

(Please rate one; 5- Strongly agree, 4- Agree, 3- Neutral, 2- Disagree, 1- Strongly disagree)

38	I like to stay at this facility as long as possible.	1	2	3	4	5
39	I enjoy spending time at this facility.	1	2	3	4	5
40	I would like to recommend this hotel lobby to my friend in the future.	1	2	3	4	5
41	I would like to revisit this hotel lobby in the near future.	1	2	3	4	5

THANK YOU FOR YOUR PATIENCE

APPENDIX B

References of Survey Questions:

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APPENDIX C

KISIM 1:

Lütfen aşağıdaki soruları yanıtlayınız.

1. Cinsiyetiniz;

Bayan	
Bay	

2. Yaşınız;

31 den küçük	
31-41 arasında	
42-51 arasında	
51 den büyük	

3. Nereden geliyorsunuz?

Ankara		
Şehir dışından (Lütfen neresi olduğunu yazınız)		
Ülke dışından (Lütfen neresi olduğunu yazınız)		

4. Bir yılda kaç kez otel kullanıyorsunuz?

Hiç	
1-3 kez	
4-6 kez	
7-9 kez	
9 dan fazla	

5. Bu otele daha önce geldiniz mi?

Evet	
Hayır	

6. Ziyaretinizin yada seyahatinizin sebebi nedir?

İş sebebi ile		
Keyif almak için		
Hem iş hem keyif almak için		
Toplantıya katılmak için		
Birisi ile buluşmak için		
Diğer (Başka bir sebebi varsa lütfen yazınız)		

KISIM 2 : Aşağıdaki ifadelere ne derece katılıyorsunuz?

5- Tamamen katılıyorum; 4- Katılıyorum; 3- Ne katılıyorum/ne katılmıyorum;
2- Katılmıyorum; 1- Kesinlikle katılmıyorum

İç Mimari Nitelikler						
7	Lobinin iç mekan tasarımı görsel anlamda çekici.	1	2	3	4	5
8	Bu otel lobisi modaaya uygun şekilde dekore edilmiş.	1	2	3	4	5
9	Tablolar/ resimler çekici.	1	2	3	4	5
10	Duvar dekorasyonu görsel anlamda çekici.	1	2	3	4	5
11	Mobilyalar yüksek kalitede.	1	2	3	4	5
12	İç mekan bitkileri iyi hissetmeyi sağlıyor.	1	2	3	4	5
13	Lobide kullanılan sanat objeleri ve iç mekan bitkileri çekici.	1	2	3	4	5
14	Lobide kullanılan renkler zevkli bir atmosfer yaratmış.	1	2	3	4	5
15	Duvarlarda ve yerlerde kullanılan renk şeması çekici.	1	2	3	4	5
16	Fiziksel elemanlar ve iç mekan tasarımında kullanılan renkler hoş.	1	2	3	4	5
17	Lobinin genel ışıklandırılması yeterli.	1	2	3	4	5
18	İşıklandırma konforlu bir ortam sağlıyor.	1	2	3	4	5
19	Lobinin ışıklandırması iyi karşılanma hissi veriyor.	1	2	3	4	5
Yerleşim						
20	Yerleşim etrafta dolaşmak için uygun.	1	2	3	4	5
21	Lobi içerisinde aradığım alana erişmem kolay.	1	2	3	4	5
22	Oturma grupları kullanışlı.	1	2	3	4	5
23	Lobideki mobilyalar konforlu.	1	2	3	4	5
24	Lobi içerisindeki oturma grupları arasındaki boşluk kolayca geçiş için uygun.	1	2	3	4	5
25	Oturma düzeni bana yeterli alanı sağlıyor.	1	2	3	4	5
26	Lobideki koltuklar konforlu.	1	2	3	4	5
27	Lobideki koridorlar ve geçiş alanları yönlendirici nitelikte.	1	2	3	4	5

KISIM 3 : Aşağıdaki ifadelere ne derece katılıyorsunuz?

5- Tamamen katılıyorum; 4- Katılıyorum; 3- Ne katılıyorum/ne katılmıyorum;
2- Katılmıyorum; 1- Kesinlikle katılmıyorum

Olumlu Duygular						
28	Bu otel lobisinde sevinçli hissediyorum.	1	2	3	4	5
29	Bu otel lobisinde mutlu hissediyorum.	1	2	3	4	5
30	Bu otel lobisinde keyifli hissediyorum.	1	2	3	4	5
31	Bu otel lobisinde memnun hissediyorum.	1	2	3	4	5
32	Bu otel lobisinde iyi hissediyorum.	1	2	3	4	5
Olumsuz Duygular						
33	Bu otel lobisinde mutsuz hissediyorum.	1	2	3	4	5
34	Bu otel lobisinde rahatsız hissediyorum.	1	2	3	4	5
35	Bu otel lobisinde keyifsiz hissediyorum.	1	2	3	4	5
36	Bu otel lobisinde üzüntülü hissediyorum.	1	2	3	4	5
37	Bu otel lobisinde kötü hissediyorum.	1	2	3	4	5

KISIM 4 : Aşağıdaki ifadelere ne derece katılıyorsunuz?

5- Tamamen katılıyorum; 4- Katılıyorum; 3- Ne katılıyorum/ne katılmıyorum;
2- Katılmıyorum; 1- Kesinlikle katılmıyorum

Davranış Eğilimi						
38	Bu otelin lobisinde mümkün olduğunca fazla vakit geçirmek isterim.	1	2	3	4	5
39	Bu otelin lobisinde vakit geçirmekten keyif aldım.	1	2	3	4	5
40	Tanıdıklarım bu otelin lobisini tavsiye edeceğim.	1	2	3	4	5
41	Bu otelin lobisini yeniden kullanacağım.	1	2	3	4	5

İLGİNİZ İÇİN TEŞEKKÜR EDERİM

APPENDIX D

Table 15: Regression analyses of positive emotions associated with facility aesthetics and layout accessibility

Variables Entered/Removed a			
Model	Variables Entered	Variables Removed	Method
1	Facility Aesthetics, Layout Accessibility	.	Enter
a Dependent Variable: Positive Emotions			
b All requested variables entered.			

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,499	0,249	0,229	2,82224	1,678
a Predictors: (Constant), Facility Aesthetics, Layout Accessibility					
b Dependent Variable: Positive Emotions					

Coefficients								
Model	Unstandardized Coefficients	Standardized Coefficients		t	Sig.	95,0% Confidence Interval for B		
		B	Std. Error			Beta	Lower Bound	Upper Bound
1	(Constant)	6,53	2,991		2,184	0,032	0,573	12,488
	Facility Aesthetics	0,162	0,056	0,34	2,915	0,005	0,051	0,273
	Layout Accessibility	0,192	0,097	0,231	1,983	0,051	-0,001	0,384
a Dependent Variable: Positive Emotions								

Table 16: Regression analyses of negative emotions associated with facility aesthetics and layout accessibility

Variables Entered/Removed a			
Model	Variables Entered	Variables Removed	Method
1	Facility Aesthetics, Layout Accessibility	.	Enter
a Dependent Variable: Negative Emotions			
b All requested variables entered.			

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,422	0,178	0,156	3,17258	1,413
a Predictors: (Constant), Facility Aesthetics, Layout Accessibility					
b Dependent Variable: Negative Emotions					

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	20,372	3,362		6,06	0	13,675	27,069
	Facility Aesthetics	-0,154	0,062	-0,3	-2,46	0,016	-0,278	-0,029
	Layout Accessibility	-0,161	0,109	-0,181	-1,485	0,142	-0,377	0,055
a Dependent Variable: Negative Emotions								

Table 17: Regression analyses of behavioral intentions associated with facility aesthetics and layout accessibility

Variables Entered/Removed a			
Model	Variables Entered	Variables Removed	Method
1	Facility Aesthetics, Layout Accessibility	.	Enter
a Dependent Variable: Behavioral Intentions			
b All requested variables entered.			

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,387	0,15	0,127	2,66811	1,631
a Predictors: (Constant), Facility Aesthetics, Layout Accessibility					
b Dependent Variable: Behavioral Intentions					

Coefficients a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	6,245	2,827		2,209	0,03	0,613	11,878
	Facility Aesthetics	0,114	0,053	0,27	2,176	0,033	0,01	0,219
	Layout Accessibility	0,126	0,091	0,172	1,386	0,17	-0,055	0,308
a Dependent Variable: Behavioral Intentions								

Table 18: Regression analyses of behavioral intentions associated with emotions

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	Positive Emotions, Negative Emotions	.	Enter
a Dependent Variable: Behavioral Intentions			
b All requested variables entered.			

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,576	0,331	0,313	2,36617	1,85
a Predictors: (Constant), Positive Emotions, Negative Emotions					
b Dependent Variable: Behavioral Intentions					

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	8,753	2,706		3,235	0,002	3,363	14,143
	Positive Emotions	0,403	0,105	0,454	3,84	0	0,194	0,612
	Negative Emotions	-0,144	0,098	-0,175	-1,478	0,144	-0,339	0,05
a Dependent Variable: Behavioral Intentions								

Table 19: Correlation analyses of focused design factors associated with emotions and behavioral intentions

		Focused Design Factors	
Positive Emotions	r	0,13	
	p	0,255	
	n	78	
Negative Emotions	r	-0,077	
	p	0,504	
	n	78	
Behavioral Intentions	r	0,201	
	p	0,078	
	n	78	

Table 20: Regression analyses of sub dimensions of facility aesthetics associated with positive emotions

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	FA-1, FA-2, FA-3, FA-4	.	Enter
a Dependent Variable: Positive Emotions			
b All requested variables entered.			

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df 1	df2	Sig. F Change	
1	,513a	0,263	0,223	2,83355	0,263	6,521	4	73	0	1,802
a Predictors: (Constant), FA-1, FA-2, FA-3, FA-4										
b Dependent Variable: Positive Emotions										

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	9,206	2,448		3,761	0	4,328	14,085
	FA-1	0,58	0,168	0,39	3,446	0,001	0,244	0,915
	FA-2	0,077	0,125	0,071	0,613	0,542	-0,173	0,326
	FA-3	0,158	0,191	0,101	0,827	0,411	-0,223	0,539
	FA-4	0,129	0,157	0,091	0,819	0,416	-0,185	0,442
a Dependent Variable: Positive Emotions								

Table 21: Regression analyses of sub dimensions of facility aesthetics associated with negative emotions

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	FA-1, FA-2, FA-3, FA-4	.	Enter
a Dependent Variable: Negative Emotions			
b All requested variables entered.			

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,505a	0,255	0,214	3,06283	0,255	6,233	4	73	0	1,516
a Predictors: (Constant), FA-1, FA-2, FA-3, FA-4										
b Dependent Variable: Negative Emotions										

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	18,253	2,646		6,898	0	12,979	23,526
	FA-1	-0,717	0,182	-0,449	-3,939	0	-1,079	-0,354
	FA-2	-0,048	0,135	-0,041	-0,352	0,726	-0,317	0,222
	FA-3	-0,206	0,207	-0,122	-0,996	0,323	-0,618	0,206
	FA-4	0,097	0,17	0,064	0,572	0,569	-0,242	0,436
a Dependent Variable: Negative Emotions								

Table 22: Regression analyses of sub dimensions of facility aesthetics associated with behavioral intentions

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	FA-1, FA-2, FA-3, FA-4	.	Enter
a Dependent Variable: Behavioral Intentions			
b All requested variables entered.			

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,469a	0,22	0,178	2,58966	0,22	5,159	4	73	0,001	1,76
a Predictors: (Constant), FA-1, FA-2, FA-3, FA-4										
b Dependent Variable: Behavioral Intentions										

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	7,546	2,237		3,373	0,001	3,087	12,005
	FA-1	0,556	0,154	0,421	3,613	0,001	0,249	0,862
	FA-2	0,042	0,114	0,043	0,363	0,717	-0,186	0,27
	FA-3	-0,089	0,175	-0,064	-0,507	0,614	-0,437	0,26
	FA-4	0,16	0,144	0,127	1,114	0,269	-0,126	0,446
a Dependent Variable: Behavioral Intentions								

Table 23: Regression analyses of sub dimensions of layout accessibility associated with positive emotions

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	LA-1, LA-2	.	Enter
a Dependent Variable: Positive Emotions			
b All requested variables entered.			

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,426a	0,182	0,16	2,94587	0,182	8,336	2	75	0,001	1,616
a Predictors: (Constant), LA-1, LA-2										
b Dependent Variable: Positive Emotions										

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	9,219	2,931		3,146	0,002	3,381	15,057
	LA-1	0,632	0,248	0,327	2,553	0,013	0,139	1,126
	LA-2	0,173	0,154	0,143	1,12	0,266	-0,134	0,48
a Dependent Variable: Positive Emotions								

Table 24: Regression analyses of sub dimensions of layout accessibility associated with negative emotions

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	LA-1, LA-2	.	Enter
a Dependent Variable: Negative Emotions			
b All requested variables entered.			

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df 2	Sig. F Change	
1	,349a	0,122	0,098	3,28021	0,122	5,19	2	75	0,008	1,325
a Predictors: (Constant), LA-1, LA-2										
b Dependent Variable: : Negative Emotions										

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	17,737	3,263		5,435	0	11,236	24,237
	LA-1	-0,532	0,276	-0,256	-1,93	0,057	-1,082	0,017
	LA-2	-0,169	0,172	-0,131	-0,986	0,327	-0,511	0,173
a Dependent Variable: Negative Emotions								

Table 25: Regression analyses of sub dimensions of layout accessibility associated with negative emotions

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	LA-1, LA-2	.	Enter
a Dependent Variable: Behavioral Intentions			
b All requested variables entered.			

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,318a	0,101	0,077	2,7434	0,101	4,218	2	75	0,018	1,593
a Predictors: (Constant), LA-1, LA-2										
b Dependent Variable: Behavioral Intentions										

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	8,267	2,729		3,029	0,003	2,83	13,703
	LA-1	0,368	0,231	0,214	1,597	0,114	-0,091	0,828
	LA-2	0,151	0,144	0,141	1,053	0,296	-0,135	0,437
a Dependent Variable: Behavioral Intentions								