THE INFLUENCE OF DINESCAPE ON EMOTIONS AND BEHAVIORAL INTENTIONS OF CUSTOMERS: AN UPSCALE RESTAURANT SETTING

A Master's Thesis

by

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Graduate School of Economics and Social Sciences
of
İhsan Doğramacı Bilkent University

by

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In Partial Fulfillment of the Requirements for the Degree of
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in

THE DEPARTEMENT OF
INTERIOR ARCHITECTURE AND ENVIRONMENTAL DESIGN
İHSAN DOĞRAMACI BILKENT UNIVERSITY
ANKARA

July 2015

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.

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ABSTRACT

THE INFLUENCE OF DINESCAPE ON EMOTIONS AND BEHAVIORAL INTENTIONS OF CUSTOMERS: AN UPSCALE RESTAURANT SETTING

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This study explores the impacts of physical environmental items (DINESCAPE) on emotions and behavioral intentions of customers at an upscale restaurant. The theoretical framework is grounded on the Mehrabian- Russell model which suggests that any environment will evoke one of the three emotional states: pleasure, arousal, and dominance. A field study approach is used in this study and conducted with 152 participants who were dining at a restaurant. Among upscale restaurants in Ankara, two branches of Midpoint chain restaurants were selected as the case study to evaluate the influence of the DINESCAPE items in evoking emotional states that have an impact on behavioral intentions of customers. Using the multiple regression analysis, the findings indicated that the facility aesthetic has a positive effect on arousal dimension; layout on arousal and dominance dimensions; table set up on pleasure dimension; and ambience on pleasure and dominance dimensions. Furthermore, the results indicated that table set up and ambience dimensions of DINESCAPE have a direct influence on behavioral intentions. Among customer emotions, pleasure and dominance dimensions were the significant determinants of behavioral intentions.

Keywords: behavioral intentions; DINESCAPE; emotions; Mehrabian–Russell Model; physical environment; upscale restaurants

ÖZET

DINESCAPEIN MÜŞTERILERIN DUYGU VE DAVRANIŞ EĞILIMLERI ÜZERINDEKI ETKISI: BIR LÜKS RESTORAN ÖRNEĞI

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Danışman: Prof. Dr. Halime Demirkan

Temmuz 2015

Bu çalışma, fiziksel çevre elemanlarının (DINESCAPE) lüks restoran müşterisinin duygu ve davranış eğilimine etkisini araştırmaktadır. Araştırmanın teorik çerçevesinde Mahrebian-Russell'ın modeli temel alınmıştır. Alan araştırması yaklaşımıyla, bir restoranda yemek yiyen 152 denekle bu çalışma gerçekleştirilmiştir. Çevre elemanlarının ve DINESCAPE maddelerinin müşterilerin duygu durumları ve davranış eğilimleri üzerindeki etkisini ölçmek için Midpoint restoran zincirinin iki şubesi kullanılmıştır. Çoklu regresyon testinin sonuçları; tesis estetiğinin duyguları harekete geçirme ölçütüne, mekan yerleşim planının duyguları harekete geçirme ve baskınlık ölçütlerine, ambiyansın memnuniyet ve baskınlık ölçütlerine pozitif etkisi olduğunu göstermiştir. Buna ek olarak test sonuçları doğrultusunda, DINESCAPE maddelerinden masa yerleşimi ve ambiyans boyutlarının müşterilerin davranış eğilimlerine doğrudan etkisi olduğu bulunmuştur. Müşterilerin duygu ve davranış eğilimlerinde öne çıkan belirleyici ölçütler memnuniyet ve baskınlık ölçütleri olmuştur.

Anahtar Kelimeler: davranış eğilimleri; DINESCAPE; duygular; fiziksel çevre elemanlar; lüks restoranlar; Mahrebian-Russell Modeli

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CHAPTER I

INTRODUCTION

1.1. Problem Statement

Today, with the increasing competition among the restaurants market, being innovative, standing out from what market offers and providing a unique impressing dining environment along with acceptable products and services is a critical issue to contribute to the customer satisfaction level (Liu & Jang, 2009a). Previous theoretical and experimental studies in environmental psychology proposed physical environment as an essential element for evoking emotions of the users of spaces.

This thesis explores the impacts of physical environmental items on emotions and behavioral intentions of customers at an upscale restaurant. Although numerous studies have been carried out which investigate the impact of physical environment on

human psychology and behavior, they are limited to one particular environment or few physical environmental dimensions. Studies that are focused on the combined effect of physical environmental dimensions with the human emotions or behavioral intentions are scarce. Thus, this study is intended to fill the research gap while investigating the impact of physical environment items on customers' emotions and behavioral intentions at an upscale restaurant. The previous researches generally considered dominance as an ineffectual emotional dimension (Chebat & Michon 2003; Mattila & Wirtz 2006). However, this study intends to evaluate the influence of dominance on customers' behavioral intentions, besides the impacts of physical environment on the emotions of customers.

1.2. Aim of the Study

Interaction between the user and the physical environment is unavoidable and spontaneous. This interaction can evoke positive or negative emotions of users. A good interior space should consider all the dimensions of an environment for a user to function appropriately as well as has positive feelings about the environment.

Design items act as a psychological tool in evoking the emotions of users in an environment. The physical environment plays an important role in customer pleasure and behavioral intentions especially in the cases when customers spend moderate to long time and the service is used for hedonic reasons in that physical environment (Wakefield & Blodgett, 1996).

Previous studies in environmental psychology suggest that the influence of physical environments on emotional perception of customers is higher than cognitive evaluation (Donovan & Rossiter, 1982; Turley & Milliman, 2000). Therefore, the physical environment where the customers spend a long time is a significant factor that evokes their positive emotions (Ryu & Jang, 2007; Wakefield & Blodgett, 1994).

This study evaluates the influence of DINESCAPE (see Appendix A) dimensions on emotions and behavioral intentions of customers at an upscale restaurant. Additionally, the study evaluates the effect of customers' emotional experiences (pleasure, arousal, dominance) on customers' behavioral intentions at an upscale restaurant. Finally, the study explores the determinant factors of DINESCAPE items related to customers' emotional experiences.

1.3. Structure of the Thesis

The primary purpose of this study is to determine the items of physical environment that have an influence on emotions and behavioral intentions of customers at an upscale restaurant. To achieve this purpose, chapter II of the study presents a brief review of physical environment literature with a focus on SERVICESCAPE (see Appendix A) and DINESCAPE contexts. Chapter III which is named "FRAMEWORK" proposed conceptual framework grounding on the Mehrabian–Russell’s (1974) environmental psychology model. The application of the proposed

framework provides an understanding of the impacts of environmental changes on emotions and human behavior. For assessing effectively dining environments, DINESCAPE that is defined by Ryu & Jang (2008) as *man-made physical and human surroundings in the dining area of upscale restaurants* is used in this study. Chapter IV is named "EMPIRICAL STUDY" and provides some explanations about participants, setting and instrument of the study. The survey is conducted with the customers of two branches of Midpoint chain restaurants. Instrument of the study is a questionnaire that is based on the Mehrabian- Russell model (1975) to explore whether or not physical environment has an effective influence on emotions and behavioral intentions of customers. Results of the survey are presented and discussed in Chapter V. In addition, the findings regarding the role of DINESCAPE are presented and the relation between DINESCAPE, customers' emotional experiences and behavioral intentions are discussed further. Chapter VI includes conclusion of the study and discusses about in limitations and future suggestions areas.

CHAPTER II

LITERATURE REVIEW

This chapter presents a brief review of literature with the main attention being focused on the physical environment, also with a special emphasis given to SERVICESCAPE and DINESCAPE contexts. SERVICESCAPE (related to physical environment) and DINESCAPE (related to physical environment of dining area) are the scales for measuring how customers perceived the physical environment when they spend moderate to long period in the service setting.

2.1. On SERVICESCAPE

The atmosphere of the physical environment can be more critical than the product itself in purchase decision making. Atmosphere can play a significant role in creating an impressive experience that customers seek away from home. In marketing

"[a]tmosphere is the effort to design, buying environments to produce specific emotional effects in the consumer that enhance his/her purchase probability" (Kotler, 1973, p. 50). Therefore, atmosphere can be generated through the feelings. Hoffman and Turley (2002) claimed that the collection of tangible service elements of physical environment is considered a key variable effecting customer emotions and behavior. Therefore, the physical environment can be designed to evoke specific emotions.

SERVICESCAPE is explained as the man-made, physical environment as opposed to the natural or social surroundings (Bitner, 1992). Wakefield and Blodgett (1994) claimed that SERVICESCAPE has been accepted as an important component of customer psychology and behavior in the cases where customers take advantage of the service due to hedonic reasons when they spend relatively longer time in the service setting. Bitner (1992) explained that the environmental dimensions influence both customers and employees and give rise to emotional responses. These responses can also affect the social interactions between the customers and employees. More specifically, the approach and avoidance behaviors of the customers and the employees are affected by the environmental dimensions. Approach behavior corresponds to the willingness to stay and interact, while avoidance behavior involves the inclination to leave or to ignore. Roberts (2004) claimed that the five senses "sight, smell, sound, taste, and touch" are considered crucial and significant to the design of tangible elements in the service design. The senses can be a direct way to one's emotions since people get information about their physical environment with the aid of their senses (Haeckel, Carbone, & Berry 2003; Pine & Gilmore 1998). The previous literature has been well documented the impact of the physical environment

on consumer behavior reactions related to services such as hotels(Countryman & Jang, 2004; Perran, 1995; Saleh & Ryan, 1991), restaurants (Millman, 1986; Stevens et al., 1995; Turley & Bolton, 1999), healthcare (Hutton et al., 1995; McAlexander&Kaldenberg, 1994), and leisure (Chang, 2000; Wakefield & Blodgett, 1996, 1999; Wakefield & Blodgett, 1994). The ability of the physical environment to evoke a positive emotions and behavior of customers is particularly related to the *hospitality* industry (Booms & Bitner, 1982).

The restaurant is a place where we experience a sense of pleasure, excitement and well-being. Traditionally, food quality and its price have been the most important factors in restaurant choices. However, in recent years a developing number of atmosphere restaurants have opened (Kotler, 1973). The atmosphere has the capability of attracting costumers more than the food itself. Many researches mentioned to the importance of the physical environment in restaurants settings (Shostack, 1987; Ward, Bitner, & Barnes, 1992; Zeithaml, Parasuraman, & Berry, 1985). The food and Service quality of restaurants cannot be judged before experiencing those cues. Therefore, customers pursue sensible cues (e.g., layout, lighting) to say what the restaurant will afford. In addition, environmental elements are key items in categorizing restaurants to different categories including casual restaurants, quick service restaurants, family restaurants and upscale restaurants. Hamaker (2000) claimed that more investment is done in restaurant design as the restaurant owners try to win the competition noting to the fact that aesthetics have recently become a vital element of dining out and accordingly higher attention is placed on the interior design and décor.

Babin et al., (1994) explained that individuals look for pleasure or emotional fulfillment from the service experience. Customers of the upscale restaurant are more sensitive to the aesthetic qualities of their environments, because of the emotional context (Wakefield & Blodgett, 1994). The amount of time spent in a physical environment of the services influences customer attitudes and satisfaction.

Wakefield and Blodgett (1996) proposed that when the service duration is short, e.g. in fast food restaurants, physical environment possesses a little influence on service encounters. In this study, service encounter refers to "a period of time during which a consumer directly interacts with a service" (Shostack, 1985, p. 243). This definition includes all aspects of the service with the user interact involving personnel, physical facilities and other touchable elements during a specific time. Bitner (1990) discussed that in service encounters of short duration, clients naturally spend only a short time inside the restaurant. Wakefield and Blodgett (1996) suggested that in these situations, intangible aspects such as reliability and assurance play a more important role in customers' perceived quality than the role of the tangible aspects (e.g., physical environment). For instance, in fast food restaurants customers emphasize on the duration of serving the meal than on the environment of the restaurant. At an upscale restaurant, however, costumers typically spend several hours in the physical environment of the restaurant (Wakefield & Blodgett, 1996). In these situations, it is important for the costumers not to be bored throughout the waiting time. The physical environment might be used to enhance excitement and prevent boredom.

Past studies presented that pleasant physical environment enhances customers' positive emotions (Sherman et al, 1997; Wakefield & Baker, 1998; Morin et al, 2007). Ambient dimension can generate a sense of harmony with the décor and accordingly give rise to a more pleasant experience for the customer (Harris & Ezeh, 2008; Liu & Jang, 2009). An appropriate design of the physical environment can lessen the pressure and induce positive emotions; such as being pleased. On the other hand, an inappropriate design can induce negative feelings, such as feeling being ignored, to the customers (Baker et al,. 2002; Wong, 2004; Yoo et al, 1998).

2.2. On DINESCAPE

Customers in seek of a dining experience different from the home environment can be more attracted by the physical atmosphere of the restaurant rather than the food itself. While the concept atmosphere is an important item in almost all of the restaurant settings, the relative importance of this concept is differentiated based on the labeling of the restaurants, including quick service, family casual and upscale restaurants. Wakefield and Blodgett (1996) explained that atmosphere at an upscale restaurant context is a relatively influential element of customer satisfaction and behavior since the service is consumed primarily for emotional purposes rather than the functional reasons. In these restaurants, customers typically spend several hours observing the surroundings either consciously or unconsciously during their stay at the restaurant. Along with the food and the service which are required to be provided with an acceptable quality, pleasurable atmosphere, such as layout, delightful lighting and an

appropriate table set up, can highly influence the amount of customers' satisfaction (Donovan &Rossiter, 1982; Mehrabian& Russell, 1974). Several research studies have been conducted to clarify what constitutes the physical environment (Baker, 1987; Baker, Levy, & Grewal; 1992; Berman & Evans, 1995; Bitner, 1992; Brady & Cronin, 2001; Parasuraman, Zeithaml, & Berry, 1988; Raajpoot, 2002; Stevens, Knutson, & Patton, 1995; Turley & Milliman, 2000; Wakefield & Blodgett; 1996, 1999).

DINESCAPE is a scale for measuring how customers perceived the physical environment of the dining area, especially an upscale restaurant. (Ryu & Jang, 2007, 208a). Bitner (1992) defined DINESCAPE as *the man-made physical and human surroundings, and not the natural environment in the dining area of upscale restaurants.* It involves with how customers perceive the physical environment of the restaurant and includes four dimensions (Ryu & Jang, 2007):

1. Facility aesthetics
2. Layout
3. Table settings
4. Ambience

The next chapter provides more explanation about four dimensions of DINESCAPE and proposes hypotheses about the influence of DINESCAPE on emotion and behaviors of customers.

CHAPTER III

THEORETICAL BACKGROUND OF THE STUDY

This chapter consists of three sections: Mehrabian- Russell Model, Dimensions of DINESCAPE, and Proposed Framework

3.1. Mehrabian - Russell Model (1974)

Mehrabian- Russell (1974) model presented a role of physical environments in environmental psychology, marketing and retailing. This model is divided into three parts: physical environment, emotional reaction, and behavioral intentions (see Figure 1).

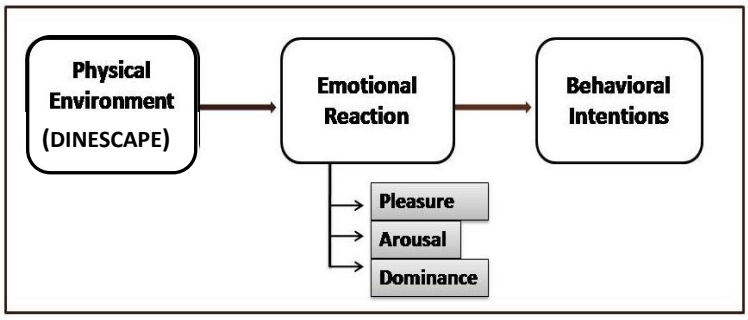

Figure 1: The Mehrabian-Russell model (1974, p.8)

DINESCAPE is a scale for measuring how customers perceive the physical environment and surrounding of the dining area, especially an upscale restaurant (Bitner, 1992; Ryu & Jang, 2007, 2008a). The DINESCAPE where the customers spend a moderate to a long time is an important factor that evokes their emotions (Ryu & Jang, 2007; Wakefield & Blodgett, 1994). The DINESCAPE creates an emotional states that evoke either approach or avoidance behaviors. The Mehrabian-Russell model suggests that physical environment (DINESCAPE) has an effect on emotional states of customers that can be characterized as: *pleasure*, *arousal*, and *dominance*, and these three emotional states influence on behavioral intentions in environments. Pleasure dimension denotes the degree that a person feels pleased or happy, while arousal dimension refer to the degree that individuals feel excited or stimulated. Dominance dimension refers to the degree that individuals feel in control and influential (Mehrabian & Russell, 1974). However dominance has been fund to have a non-significant influence on behavior in the previous researches (Russell & Pratt, 1980; Donovan & Rossiter, 1982; Donovan et al., 1994).

In addition, responses to an environment can be divided to approach or avoidance behaviors, where approach means the tendency to stay, and to communicate with others in the environment, while avoidance involves the opposite behaviors (Mehrabian & Russell, 1974).

Mehrabian and Russell (1974) proposed their model for a range of different environments; such as retail and service areas (Machleit & Mantel, 2001). Baker et al., (1992) found correlations between store environments and the emotional feelings of pleasure and arousal. Wakefield and Baker (1998) suggested that the architectural design and décor of a shopping mall play a key role in inducing an excitement emotion to customers. Furthermore, Donovan and Rossiter (1982) and Donovan et al. (1994) evaluated the emotional experiences and behavioral intentions linkage of the Mehrabian and Russell model and found that pleasure is a significant determinant of approach–avoid behaviors within stores. These studies declared that pleasure influences intended approach and actual approach behaviors. Baker et al. (1992) suggested that not only pleasure but also arousal are positively linked to interest and motivation to buy.

3.2. Dimensions of DINESCAPE

The following section provides the explanation about four dimensions of DINESCAPE (facility aesthetic, table set up, layout, and ambience).

3.2.1. Facility Aesthetics

Facility aesthetic refers to architectural, interior and decoration design, which contribute to the pleasant appearance of the physical environment (Wakefield & Blodgett, 1994). Facility aesthetics can play a significant role in attracting and possibly retaining restaurant clients (Cobe, 2007). Barbas (2002) claimed that facility aesthetics is employed by various dining establishments so as to create specific restaurant themes. Facility aesthetics serve as an important marketing tool by influencing on customers' emotional and behavioral responses (Wall & Berry, 2007; Han & Ryu, 2009; Kim & Moon, 2009; Liu & Jang, 2009; Pullman & Gross, 2004; Pullman & Robson, 2007; Ryu & Jang, 2007). In addition, The colors of the restaurant’s floor and also the color of the wall covering can influence the costumers. Other aspects of interior design (e.g. pictures/paintings, plants/flowers, wall decorations and ceiling decorations) can also improve the quality of the physical environment and atmosphere creating emotions (pleasure, arousal and dominance) and influencing behavioral intentions of customers. This study considers attractive decoration, paintings/pictures, color of decoration and color of walls and floors as the

items of facility aesthetic to evaluate the influence of facility aesthetic on feelings of the customers in the upscale restaurants.

3.2.2. Layout

The way that objects are arranged within the environment is called layout. An interesting layout can assist fulfillment of emotional needs (Wakefield & Blodgett, 1994; Ryu & Jang, 2008b). Wakefield and Blodgett (1994) stated that table placement may have directly effect on user's quality perceptions, excitement levels and, indirectly, on their desire to return. Layout has the ability to transmit a sense of privacy and operate as a boundary for the consumers (Lin, 2004). According to Wakefield and Blodgett (1994) service facilities which are interested in presenting some level of excitement or arousal to their customers are required to consider sufficient space to make possible stimulation and exploration within the physical environment. This study considers easily enter and exit, privacy and way finding as the items of layout to evaluate the influence of layout on feelings of the customers in the upscale restaurants.

3.2.3. Table Settings

Table settings are an important factor and element of DINESCAPE at an upscale restaurant. Restaurants try to deliver an impressive image to entice customers. For instance, high quality flatware and glassware can effectively influence customers' perceptions of overall restaurant service quality. The way of decorating tables in restaurants such as using an attractive flowers or candle on the tables can make customers feel that they are in a prestigious environment. Ryu and Han (2011) found that table setting can affect customers' emotions, responses and influence customer behavior. This study considers comfortable sittings, suitable distance and easy get in and out of the seats as the items of table set up to evaluate the influence of table set up on feelings of the customers in the upscale restaurants.

3.2.4. Ambience

Ambient items are intangible background characteristics that tend to influence the non-visual senses and may have a subconscious influence on customers. These background items include *music*, *scent*, *temperature*, *lighting* and *noise* (Baker, 1987). Previous studies have found that atmospheric music can influence on customer perceptions of business places (North & Hargreaves, 1998; Mattila & Wirtz, 2001), increase shopping time and waiting time (Yalch & Spangenberg, 2000), decrease perceived shopping time and waiting time (Hul et al., 1997; Yalch & Spangenberg, 2000), evoke emotions (Ryu & Jang, 2007), influence customer satisfaction and relaxation (Magnini & Parker, 2009; Oakes, 2003), influence dining speed (Milliman, 1986). Furthermore, the impact of pleasant scents as a notable tool to increase sales

has gained much attention in retail businesses (Bone & Ellen, 1999; Chebat & Michon, 2003; Mattila & Wirtz, 2001).

Scents are capable of influencing client's mood and his or her emotional states (Bone & Ellen, 1999; Chebat et al., 2009). Additionally, Zemke and Shoemaker (2008) suggested an experimental study to evaluate how introducing an ambient scent can influence interactions among people.

Psychological studies proposed that certain temperatures are associated with negative emotions. Low temperatures are associated with negative affective states (Bell & Baron, 1977).

Previous studies indicate that lighting levels can influence on emotional responses and approach-avoidance behaviors of customers. Kurtich and Eakin (1993) suggested that different lighting types could affect users' perception of the quality of space and change their perception of physical features of the environment. In addition, lighting can influence on behavioral intentions of individuals. Lighting can act as one of the most significant physical elements in restaurants. Bright lighting may convey quick service and low prices at fast food restaurants, while warm lighting may representatively offer full service and high prices. This study considers temperature, scent, air quality, background music, noise level, adequate lighting, warm atmosphere

and feeling welcome as the items of ambience to evaluate the influence of ambience on feelings of the customers in the upscale restaurants.

3.3. Proposed Framework

The proposed framework of the study is shown in Figure 2. The theoretical basis of the proposed model is grounded on the Mehrabian- Russell (1974) model, which presented the role of physical environments in environmental psychology, retailing, and marketing. The application of the model provides understanding the effects of environmental changes on individuals' emotions and behaviors. The physical environment of this study is an upscale restaurant called DINESCAPE. The proposed model is divided into three parts: DINESCAPE, emotional experiences, and behavioral intentions.

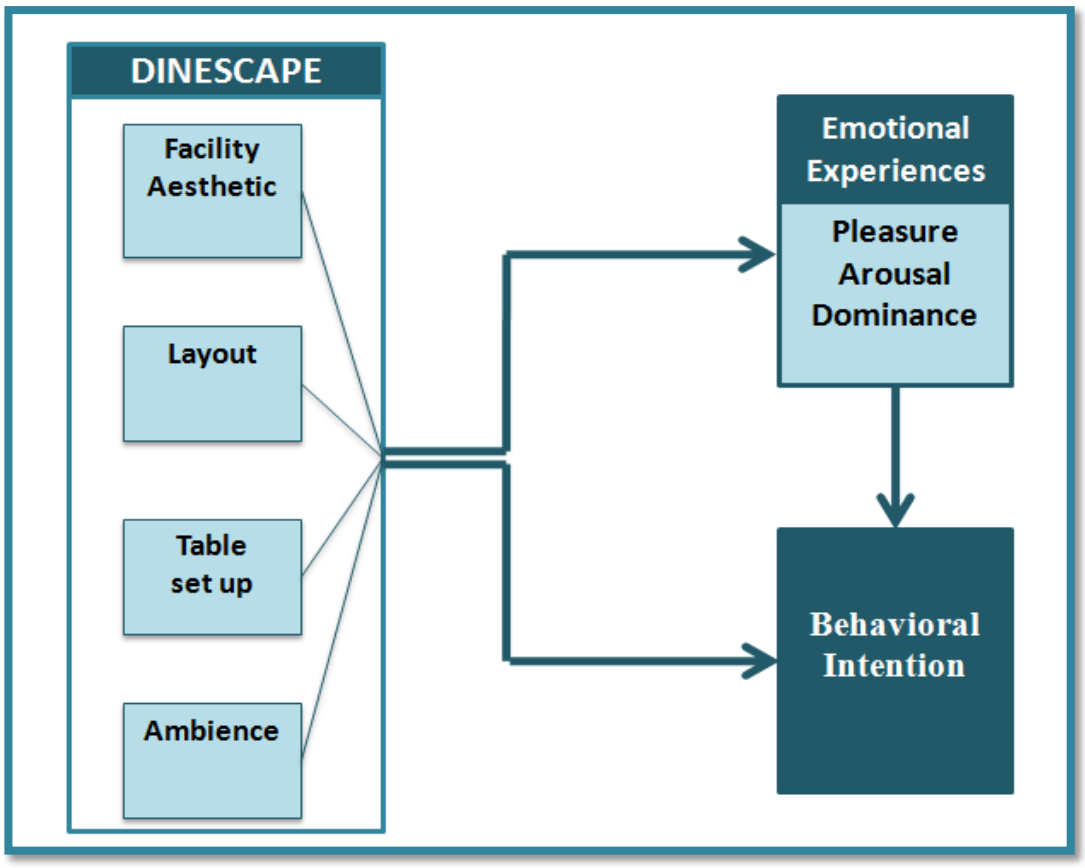

Figure 2: Proposed model of the study

3.3.1. DINESCAPE

Figure 3 presents dimensions of DINESCAPE and their related items that were investigated to be evaluated in this study. This study did not consider external environmental dimensions (e.g., parking space) or contain some internal environmental dimensions (e.g., restroom).

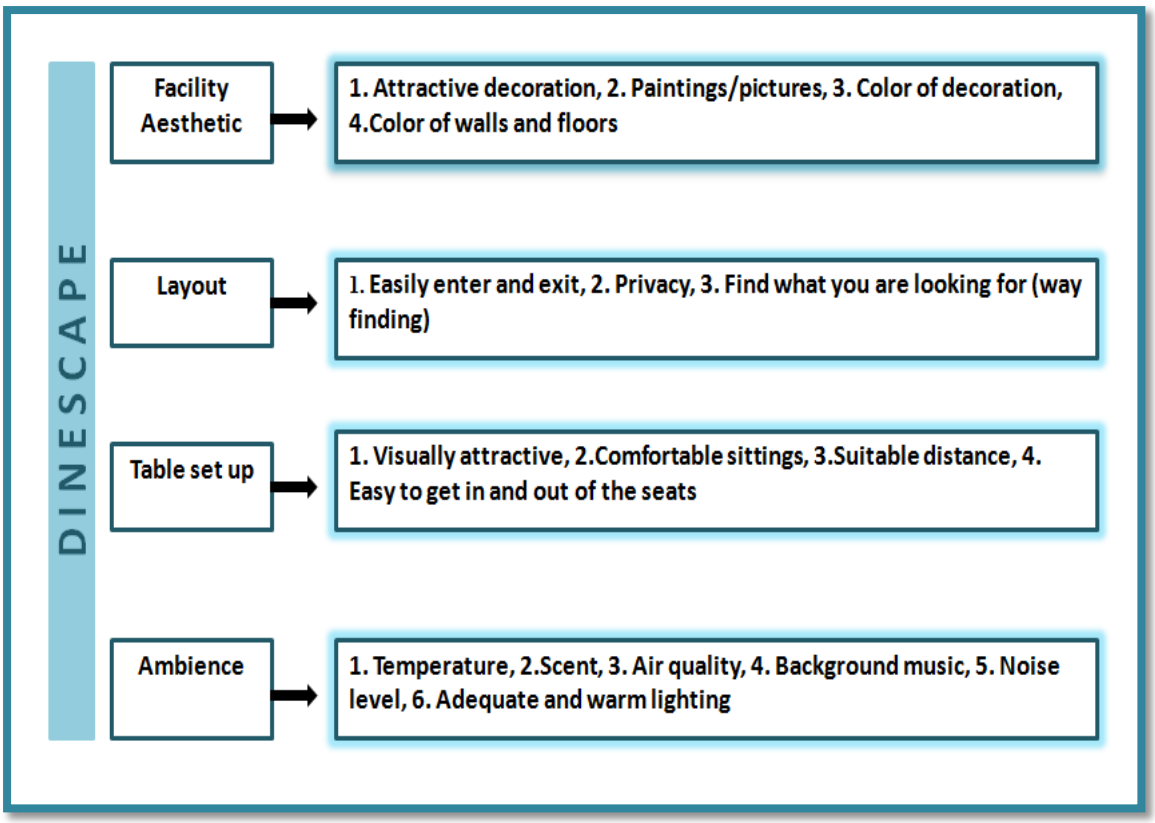

Figure 3: Four DINESCAPE elements

3.3.2. Emotional States

Environmental psychology studies presented that properly designed physical environment items may create feelings of excitement, pleasure, or relaxation (Mehrabian & Russell, 1974; Russell & Pratt, 1980). The Mehrabian- Russell (1974) model claims that any environment will evoke an emotional state in one of three ways: pleasure, arousal, and dominance. This study used pleasure, arousal, and dominance in the adapted model to understand and evaluate the effects of environmental changes on emotional experiences of customers.

3.3.3. Behavioral Intentions

It has been suggested by Mehrabian and Russell (1974) that it is possible to label all responses of a customer to physical environment as either approach or avoidance behaviors. Based on their study, approach and avoidance behaviors have four aspects: (1) a willingness to physically stay in or to leave the environment (2) an enthusiasm to look around the environment versus a reluctance about moving through the environment; (3) a willingness about communicating with the people around them as opposed to a lack of enthusiasm about interacting with others; and (4) the degree of enhancement of satisfaction with task performance. Therefore, behavioral intentions are used in the adapted model to evaluate approach or avoidance behaviors of customers at an upscale restaurant.

3.4. Research Questions and Hypotheses

The research framework of this study took a few steps toward a more complete picture of how items of DINESCAPE influence on emotions, and behavioral intentions of customers at an upscale restaurant. This study uses a questionnaire in order to measure the impact of the DINESCAPE, on emotional states and behavioral intentions of customers. In this respect, the research questions are:

A. What is the influence of DINESCAPE design items, on customers' emotional experiences?
B. What is the influence of DINESCAPE design items, on customers' behavioral intentions?
C. What is the influence of customers' emotional experiences on customers' behavioral intentions at an upscale restaurant?

This study intended to fill the research gaps by investigating the impact of physical environment items on emotions and intended behaviors of customers at an upscale restaurant. The specific objectives of this study are:

- Evaluating the effect of DINESCAPE dimensions on customers' emotional experiences and behavioral intentions.
- Evaluating the effect of customers' emotional experiences (pleasure, arousal, dominance) on customers' behavioral intentions at an upscale restaurant.
- Finding the most important factors of DINESCAPE dimensions and customers' emotional experiences.

To achieve the objectives of the study, the following hypotheses were tested:

- H1a. Proper facility aesthetic has a positive influence on customers' emotional experiences.
- H2a. Proper layout has a positive influence on customers' emotional experiences.
- H3a. Proper table set up has a positive influence on customers' emotional experiences.
- H4a. Proper ambience has a positive influence on customers' emotional experiences.

- H1b. Proper facility aesthetic has a positive influence on customers' behavioral intentions.
- H2b. Proper layout has a positive influence on customers' behavioral intentions.
- H3b. Proper table set up has a positive influence on customers' behavioral intentions.
- H4b. Proper ambience has a positive influence on customers' behavioral intentions.

In addition, it is proposed that:

- Hc. Customers' emotional experiences (pleasure, arousal, dominance) have a positive influence on customers' behavioral intentions.
- Hd. There will be some important factors of DINESCAPE and customers' emotional experiences.

The following chapter explains the participants, the setting and the instrument which have been employed in this thesis to obtain results and check whether the above-mentioned hypotheses are supported or not.

CHAPTER IV

EMPIRICAL STUDY

The following section presents some explanation about the participants, the setting and the instrument of the study.

4.1. Participants of the Study

The data were collected from customers at two branches of an upscale restaurant named Midpoint in Ankara. A total of 152 responses were collected at Midpoint Bilkent Station on 20-25 February 2015 and Midpoint Ankara Armada shopping mall on 24-30 March 2015. After eliminating the incomplete responses, 126 surveys were used for the final analysis (82.9% response rate) (See table 5 for demographics of the participants). After finishing their meal, customers at these upscale restaurants were asked whether or not they are interested in completing a questionnaire. Therefore, participation of this study was voluntary.

4.2. Setting of the Study

A field study approach was used in this research work for the several causes. Subjects of the study spent a moderate to a long time while directly observing and experiencing the physical surroundings in the real environment. According to Wakefield and Blodgett (1996) this process provides more valid and reliable responses than if customers had been surveyed outside the service encounter. The physical environment causes emotional states that are difficult to verbalize and recall. Thus, a field study was the best method for this research to reduce difficulties of the measuring the relationship between physical environment and customer emotional states.

Among upscale restaurants in Ankara, two branches of Midpoint chain restaurants were selected; namely, as the Bilkent Station and the Armada shopping mall as the two settings of the study. Interior architecture in both Midpoint restaurants offer high-quality ambience with warm atmosphere and modern design. Colors used on walls and floors are combination of brown, gray and yellow which are consistent with the colors of window treatments and furniture, as seen in Figure 4- 9. Natural and artificial lights are in line with concept of the restaurants, and flexibility is a key to day-part light adjustments. Large dining room windows frame provide a view of the outside and pleasant light. The food and beverage offering, history, style, culture and environment in both restaurants are following the same concept. The aim of the restaurants is to adore customer's time and conversations with comfortable and

appealing table set up, warm lighting, chosen cheerful music and a peaceful atmosphere.

Figure 4 : Midpoint Bilkent station (Image by Sepideh Yekanialibeiglou)

Figure 5 : Midpoint Bilkent station (From foursquared.com)

Figure 6 : Midpoint Bilkent station (From foursquared.com)

Figure 7 : Midpoint Ankara Armada shopping mall (Image by Sepideh Yekanialibeiglou)

Figure 8 : Midpoint Ankara Armada shopping mall (Image by Sepideh Yekanialibeiglou)

Figure 9 : Midpoint Ankara Armada shopping mall (Image by Sepideh Yekanialibeiglou)

Figures 10 and 11 present layout plan of the restaurants. The layout of the dining rooms enables customers to enjoy the entire rooms, visually and acoustically. Tables are rectangular shaped and randomly spaced throughout the room (clustered) with different sizes, colors and types which lead to a feeling of informality and create a visually interesting restaurant. More specifically, table setting in Midpoint Bilkent station is as follows. Twenty six 4-person tables are placed along with a single 8 person table. As for the case of Midpoint Ankara Armada shopping mall, twenty 4-person tables exist along with a single 8-person table.

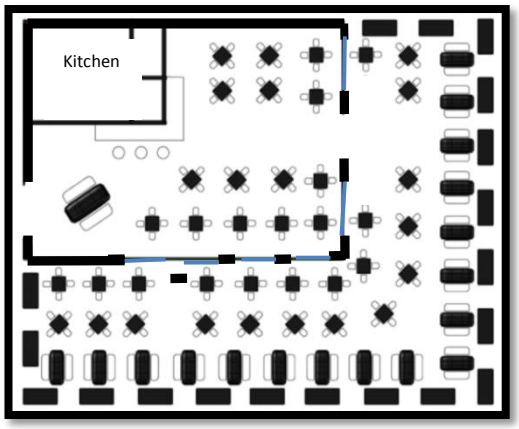

Figure 10 : Midpoint Bilkent station layout plan

(Drawing by Sepideh Yekanialibeiglou, not to scale)

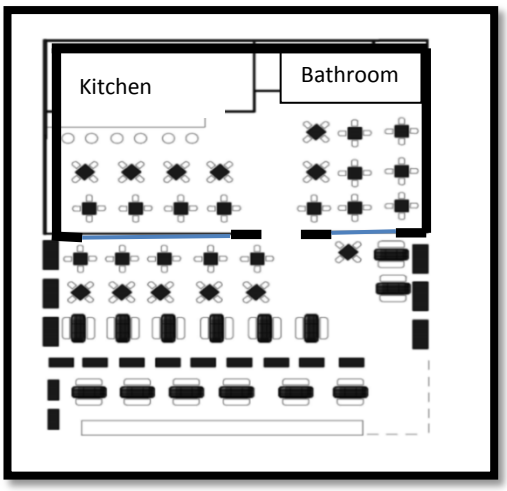

Figure 11 : Midpoint Ankara Armada shopping mall layout plan

(Drawing by Sepideh Yekanialibeiglou, not to scale)

4.3. Instrument of the Study

The questionnaire designed for this study is prepared based on the Mehrabian- Russell model (M-R model) which aims to examine the relationships between the quality of DINESCAPE, customer emotional experiences, and customer behavioral intentions at an upscale restaurant setting. The questionnaire was first developed in English and then translated into Turkish and the complete Turkish version of the questionnaire was then back-translated into English (see Appendix 2 for Turkish version). These translations were made by two bilingual experts who are native speakers in order to check the items with their originals. Few items are revised in Turkish translation according to their suggestions. Then, a pilot test of the research instrument was conducted as a primitive test of the final version of the instrument. Ten customers at an upscale restaurant participated to assess the sufficiency of the content. Based on the results of a content sufficiency assessment, modifications of questionnaire items were made.

The questionnaire consists of four parts: physical environments (DINESCAPE), customer's emotional experiences, customer's behavioral intentions and demographic variables:

In the first part, the respondents are asked to rate DINESCAPE items related to customers' physical environmental perceptions in the dining area using a 5-point scale ("extremely disagree", "disagree", "neutral", "agree", "extremely agree"). The questionnaire included a pool of 19 measurement items composed of four dimensions (facility aesthetics, layout, table settings, ambience) derived from the DINESCAPE scale of Ryu and Jang (2007, 2008a, 2008b). More specifically, this list of 19 items consisted of five items for aesthetic design (attractive interior design, attractive decoration, paintings/pictures, color of walls and color of decoration), four items for layout (easily enter and exit, find what you are looking for, privacy), three items for table set up (visually attractive, comfortable sittings, easy to get in and out of the seats), seven items for ambience (temperature, sound level, scent, air quality, background music, warm light, feeling welcome light). Table 1 presents all of the measurement items that were assessed using a five-point scale.

Table 1: DINESCAPE items in the first part of the questionnaire

Part 1		Extremely Disagree	Disagree	Neutral	Agree	Extremely Agree
	Aesthetic Design					
1	The interior design of the restaurant is attractive.					
2	The decoration of the restaurant is appealing.					
3	The color of decoration and furniture is suitable.					
4	The painting and pictures on the walls are visually attractive.					
5	color used on floors and walls creates a warm atmosphere.					
	Layout					
6	I can easily access from the entrance to the table.					
7	I can easily access from the table to the restroom.					
8	The table arrangement in the restaurant provides enough space for my privacy.					
9	The table arrangement in the restaurant provides enough space for group communication.					
	Table Set up					
10	The table set up of this restaurant is visually attractive.					
11	The table set up of this restaurant is comfortable.					
12	The table set up of this restaurant is easy to go in and out.					
	Ambience					
13	Temperature is comfortable.					
14	The sound level is appropriate.					
15	Background music is pleasing.					
16	The scent is enticing.					
17	The air quality is pleasant.					
18	Lighting creates a warm atmosphere.					
19	Lighting makes me feel welcome.					

In the second part, customer's emotional responses are measured by using the sixteen items that are representing pleasure, arousal and dominance dimensions as suggested by Mehrabian and Russell (1974). The original Mehrabian and Russell (1974) items are adapted according to the upscale restaurant setting. Subjects evaluated their emotional states with respect to the physical environment of the upscale restaurant. All items are rated on a five point scale ("extremely negative", "negative", "neutral", "positive", "extremely positive"), in which an emotion and its opposite constituted the two ends of the scale, as seen in Table 2. The scale of pleasure that is related to the emotions likely to be felt in the restaurant consisted of six bipolar measures: bored–entertained; despair-hopeful; unhappy–happy; melancholic-contented; annoyed–pleased; dissatisfied-satisfied. The measure of arousal that is thought to be related to emotions inspired in the restaurant comprised the following six items: calm–excited; unaroused-aroused; dull-jittery; relaxed-stimulated; sleepy–awake, sluggish-wild. The scale of dominance that is related to the act or behavior which was influenced by the restaurant consisted of four items: dominant-submissive; in control-cared for; autonomous-guided; influential- influenced.

Table 2: Emotional states items in the second part of the questionnaire

Part 2	How does the restaurant make you feel and think?						
Pleasure: Considering your pleasure, which emotions are more likely to be felt in this restaurant?							
		Extremely Negative	Negative	Neutral	Positive	Extremely Positive	
1	Bored						Entertained
2	Despair						Hopeful
3	Unhappy						Happy
4	Melancholic						Contented
5	Annoyed						Pleased
6	Dissatisfied						Satisfied
Arousal: Which emotions, do you think, are inspired by this restaurant?							
7	Calm						Excited
8	Unaroused						Aroused
9	Dull						Jittery
10	Uninteresting						Stimulated
11	Sleepy						Wide awake
12	Sluggish						Wild
Dominance: How does this restaurant influence your act and behavior?							
13	Dominant						Submissive
14	In control						Cared for
15	Autonomous						Guided
16	Influential						Influenced

Furthermore, the M-R model proposed that individual reactions to every environment may be categorized as approach or avoidance. According to Mehrabian and Russell (1974) approach- avoidance behaviors have four aspects: a willingness to physically stay in or to leave the environment, an enthusiasm to look around the environment versus a reluctance about moving through the environment, a willingness about communicating with the people around them as opposed to a lack of enthusiasm about interacting with others and the degree of enhancement of satisfaction with task

performance. These aspects of approach-avoidance behaviors can be suitable for describing various behaviors at an upscale restaurant setting. In this study in part three (Table 3), by considering the effect of these four aspects, customer's behavioral intentions was measured using a 5-point scale ("extremely disagree", "disagree", "neutral", "agree", "extremely agree") with four items which is mentioned in the following table.

Table 3: Behavioral intentions variables in the third part of the questionnaire

Part 3	Behavioral Intention	Extremely Disagree	Disagree	Neutral	Agree	Extremely Agree
1	I will spend more with this restaurant.					
2	This restaurant would be my first choice.					
3	I will recommend this restaurant to others.					
4	I will say positive things about this restaurant.					

Finally, demographic items (e.g., gender, age, education, visit frequency) were measured in part 4 (Table 4). Also, to identify if the participants were first time or frequent visitors to the restaurant, one question was asked ("How often do you visit this restaurant in a month?").

Table 4: Demographic items in the fourth part of the questionnaire

Part 4		Details				
1	Gender	Male	Female			
2	Age					
3	Education level	Elementary	High school	University	Graduate	
4	How often do you visit this restaurant in a month?	Once	Twice	Three	Four	First visit

The results of the statistical analysis and the findings of the empirical study are presented in the next chapter.

CHAPTER V

RESULTS

This chapter includes the statistical analysis and the findings of the empirical study. First, descriptive analysis was done to construct the demographic background of the respondents. Second, mean scores and reliability testing of the factors of DINESCAPE was calculated. Third, correlation analysis tested for the existence of multi co-linearity and multiple regression analysis helped to test the relationship between the set of independent and dependent variables in the research framework. Fourth, factor analysis testing helped to reduce the complexity of research constructs.

5.1. Related to Demographics

The survey was conducted with 152 participants who were dining at a restaurant. A field study approach is used in this study since subjects are in a space where they spend several hours while observing and experiencing directly the physical surroundings. Participation was voluntarily, and no reward incentive was provided. Among the participants, 45.6% are men and 54.4% are women. Table 5 summarizes the demographic profile of the respondents.

Table 5: Demographic characteristics of the participants of the study

Characteristics	Category	Frequency	Percentage
Gender	Female	68	54.4
	Male	57	45.6
Age	18 to 27	64	50.7
	28-37	43	34.1
	38-47	18	14.4
	48 and older	1	0.8
Education level	High school	6	4.8
	University	69	54.8
	Graduate	47	37.7
	Post-graduate	3	2.7
Average monthly restaurant visit	Once in a month	1	1
	Twice in a month	12	13.1
	Three times in a month	38	41.7
	Four times in a month and more	34	37.7
	First visit	6	6.5

The average age of the participants is 28. Figure 12 presents age distribution of the participants of the study. The age range of the participants is 18 to 51 years old. Vast majority of the participants (107 people, 88%) are in the 18-37 age range.

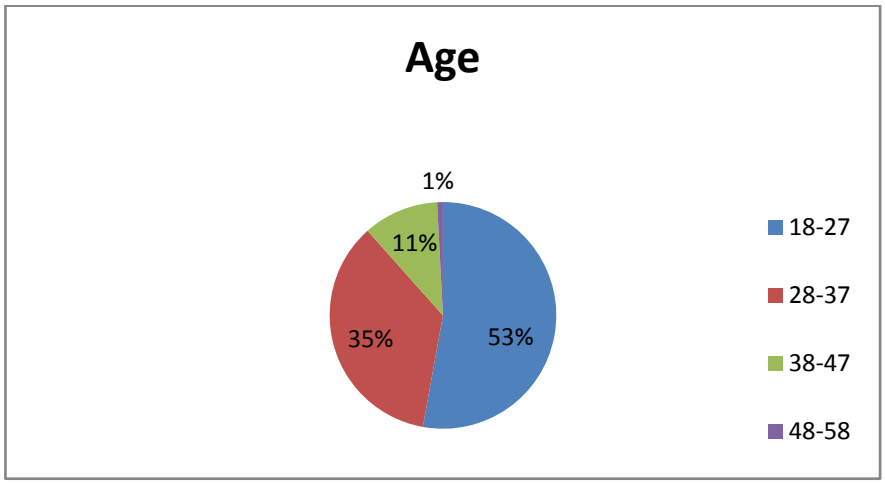

Figure 12: Age distribution of the participants of the study

Finding related to the visiting frequency of the restaurant in a month showed that the highest percentage is 42% who visit the restaurants three times in a month and followed by the 38% of participants who visit the restaurant four times and more in a month (Figure 13). Therefore, the participants may be accepted as regular customers of the restaurants.

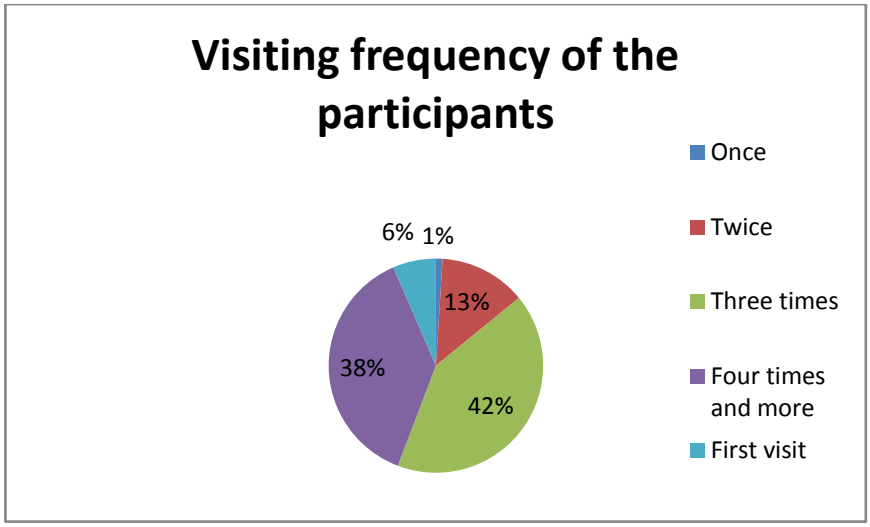

Figure 13: Visiting frequency of the participants of the study in a month

5.2. Related to the Items of DINESCAPE

The results related to the mean scores and reliability testing values of the factors of DINESCAPE items, customers' emotional experiences and behavioral intentions at an upscale restaurant are presented in Tables 6, 7 and 8. For reliability testing, Cronbach's alphas were computed to ensure consistency of the survey data. Bowling (1997) considered an alpha of 0.5 and above an indication of good internal consistency. Cronbach's alphas indicated that all constructs had good reliability and internal consistency.

As seen in Table 6, mean scores for the factors of DINESCAPE items ranged from 3.73 (agree) for "Color used on floors and walls creates a warm atmosphere" to 4.33 (agree) for "Temperature is comfortable". Therefore, participants agreed or extremely agreed with proper designed and suitable items of DINESCAPE in the

restaurants. Scores for Cronbach's alpha ranged from 0.70 to 0.78 which shows good reliability of the constructs related to DINESCAPE.

Mean scores for the facility aesthetic items ranged from 3.73 (agree) for "Color used on floors and walls creates a warm atmosphere" to 4.15 (agree) for "The decoration of the restaurant is appealing". Participants agreed (five items) with suitability of facility aesthetic design in the restaurant.

Mean scores for the items of layout dimension range from 3.82 (agree) for "I can easily access from the table to the restroom" to 4.00 (agree) for "The table arrangement in the restaurant provides enough space for my privacy". Related to proper design of layout, participants agreed with the all four items.

Mean scores for the items of table set up ranged from 4.10 (agree) for "The table set up of this restaurant is visually attractive" to 4.24 (agree) for "The table set up of this restaurant is comfortable". Participants agreed with suitable design of all the three items of table set up.

Mean scores for the items of ambience is ranged from 3.83 (agree) for "The scent is enticing" to 4.33 (agree) for "temperature is comfortable". Related to the suitability of ambience factors, participants agreed with the all seven items.

Table 6: Mean scores and reliability testing for the items of DINESCAPE at an upscale restaurant

A		Extremely Disagree	Disagree	Neutral	Agree	Extremely Agree	Cronbach's Alpha
Facility Aesthetic							
1	The interior design of the restaurant is attractive.				4.06		**0.70**
2	The decoration of the restaurant is appealing.				4.15		**0.70**
3	The color of decoration and furniture is suitable.				4.08		**0.70**
4	The painting and pictures on the walls are visually attractive.				3.83		**0.72**
5	Color used on floors and walls creates a warm atmosphere.				3.73		**0.70**
Layout							
6	I can easily access from the entrance to the table.				3.87		**0.71**
7	I can easily access from the table to the restroom.				3.82		**0.70**
8	The table arrangement in the restaurant provides enough space for my privacy.				4.00		**0.78**
9	The table arrangement in the restaurant provides enough space for group communication.				3.99		**0.70**
Table Set up							
10	The table set up of this restaurant is visually attractive.				4.10		**0.70**
11	The table set up of this restaurant is comfortable.				4.24		**0.70**
12	The table set up of this restaurant is easy to go in and out.				4.19		**0.70**
Ambience							
13	Temperature is comfortable.				4.33		**0.70**
14	The sound level is appropriate.				3.85		**0.70**
15	Background music is pleasing.				3.97		**0.70**
16	The scent is enticing.				3.83		**0.70**
17	The air quality is pleasant.				3.99		**0.70**
18	Lighting creates a warm atmosphere.				4.21		**0.70**
19	Lighting makes me feel welcome.				4.21		**0.70**

Mean scores for the items of customers' emotional experiences ranged from 3.54 (neutral) for "calm-excited" in arousal dimension to 4.42 (positive) for "dissatisfied-satisfied" in pleasure dimension, as seen in Table 7. Among the items of *pleasure*, participants selected six feelings as "positive" (hopeful, happy, contended, pleased, satisfied and entertained). Participants felt "neutral" about the one item of *arousal* (calm-excited) and "positive" about five items (aroused, jittery, stimulated, wild and wide awake). For the items of *dominance*, all four items were felt "positive" (submissive, cared for, guided, influenced) by the participants. Scores for Cronbach's Alpha ranged from 0.70 to 0.75 which shows good reliability of the constructs related to feelings.

Table 7: Mean scores and reliability testing for the items of customers' emotional experiences at an upscale restaurant

B. Please Rate	How does the restaurant make you feel and think?						Cronbachs Alpha
Pleasure:	Extremely Negative	Negative	Neutral	Positive	Extremely Positive		
1 Bored				3.98		Entertained	0.73
2 Despair				4.03		Hopeful	0.73
3 Unhappy				4.02		Happy	0.73
4 Melancholic				4.22		Contented	0.72
5 Annoyed				4.19		Pleased	0.73
6 Dissatisfied				4.42		Satisfied	0.72
Arousal:							
7 Calm			3.54			Excited	0.73
8 Unaroused				3.77		Aroused	0.73
9 Dull				3.66		Jittery	0.74
10 Uninteresting				3.82		Stimulated	0.74
11 Sleepy				4.10		Wide awake	0.70
12 Sluggish				3.72		Wild	0.72
Dominance:							
13 Dominant				4.21		Submissive	0.73
14 In control				4.13		Cared for	0.72
15 Autonomous				3.59		Guided	0.74
16 Influential				3.78		Influenced	0.75

Figure 14, shows the difference between the *female* and *male* respondents on means of selected items of emotional experiences at an upscale restaurant. Major differences between genders were observed over the feelings of "uninteresting-stimulated" in arousal items, which *males* felt "positive"; however, *females* felt "neutral" over the both mentioned feelings. On the other hand, lowest differences between genders were observed over the feelings of "melancholic-contented" and "influential-influenced" in arousal items.

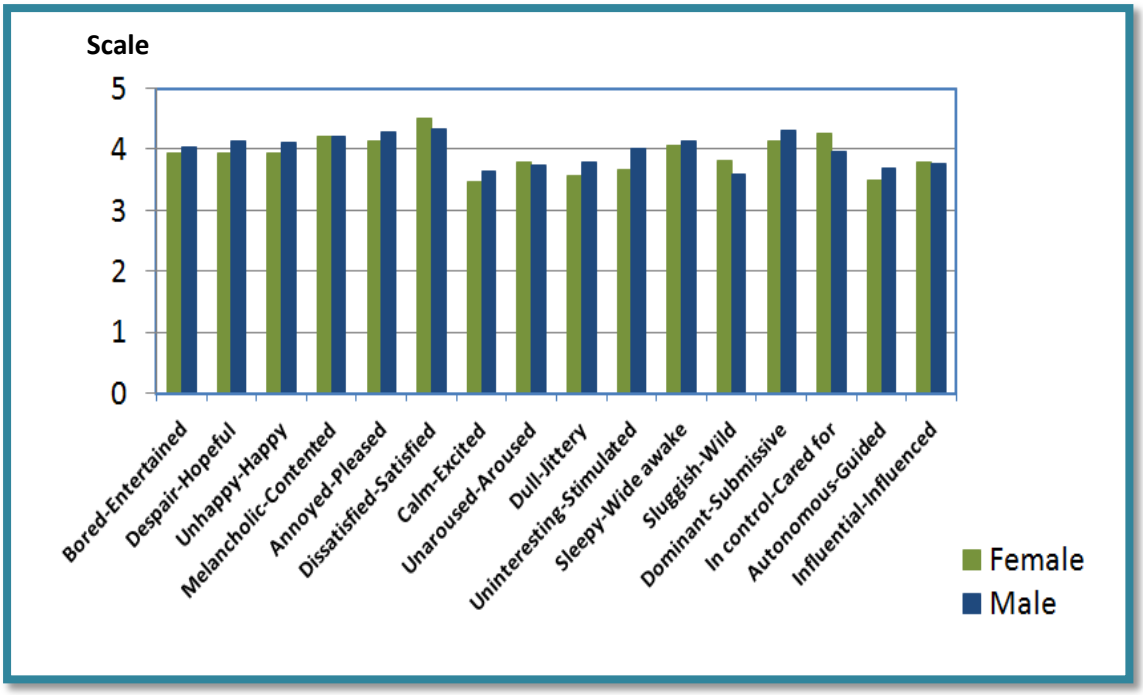

Figure 14: Selected items of emotional experiences at an upscale restaurant according to the female and male respondents

Table 8 presents mean scores and reliability testing values for the items of customers' behavioral intentions at an upscale restaurant. Mean scores for the factors of customers' behavioral intentions ranged from 3.92 (agree) to 4.58 (positive). Scores for Cronbach's Alpha ranged from 0.52 to 0.63.

Table 8: Mean scores and reliability testing for the items of customers' behavioral intentions at an upscale restaurant

C	Behavioral Intention	Extremely Disagree	Disagree	Neutral	Agree	Extremely Agree	Cronbachs Alpha
1	I will spend more with this restaurant.					4.58	0.61
2	This restaurant would be my first choice.				3.97		0.52
3	I will recommend this restaurant to others.				3.92		0.54
4	I will say positive things about this restaurant.				4.18		0.63

5.3. Related to Correlation and Regression Analysis

5.3.1. Correlation Analysis

Using correlation analysis, the relationships among the DINESCAPE items, customers' emotional experiences, and behavioral intentions at an upscale restaurant are investigated. The results showed the existence of a moderate relationship among the emotional experiences and the DINESCAPE items, with having values 0.5 and above. As Table 9 presents, "facility aesthetic" has a positive moderate correlation with "in control-cared for" (dominance; r =0.501, at 0.05 level, two-tailed). "Layout" has a positive moderate correlation with "unhappy-happy" (pleasure; r =0.532, at 0.05 level, two-tailed), "sleepy-wide awake" (arousal; r =0.571, at 0.05 level, two-tailed) and "influential-influenced" (dominance; r =0.616, at 0.05 level, two-tailed). "Table set up" has positive moderate correlation with "unhappy-happy" (pleasure; r =0.526, at 0.05 level, two-tailed), "dissatisfied-satisfied" (arousal; r =0.548, at 0.05 level, two-tailed) and "influential-influenced" (dominance; r =0.631, at 0.05 level, two-tailed). "Ambience" has positive moderate correlation with "bored-entertained" (pleasure; r =0.501, at 0.05 level, two-tailed). The other weak and moderate correlations among the customers' emotional experiences and behavioral intentions at an upscale restaurant having a value below 0.5 at 95% significance level are also depicted in Table 9 (see the full table in Appendix C, Table 13).

Table 9: Correlations among the DINESCAPE items, emotional experiences and behavioral intentions (significant at the 0.05 level, 2-tailed)

	FA	L	TS	A	B-E	D-H	U-H	M-C	A-P	D-S	C-E	U-A	D-J	R-S	SI-W	S-W	D-S	I-C
FA																		
L	0.364																	
TS	0.461	0.429																
A																		
B-E				0.521														
D-H			0.351	0.423	0.327													
U-H	0.409	0.532	0.526	0.437	0.372	0.31												
M-C																		
A-P		0.431	0.350		0.491		0.457	0.313										
D-S	0.338																	
C-E										0.500								
U-A	0.345									0.623	0.41							
D-J										0.366		0.587						
R-S		0.418				0.30							0.31					
SI-W	0.334	0.571	0.360				0.334							0.555				
S-W								0.459				0.316						
D-S		0.398	0.548					0.392	0.41					0.318	0.393	0.334		
I-C	0.501		0.362			0.33	0.499											
A-G			0.351														0.421	
I-I	0.407	0.616	0.631		0.399		0.512		0.50						0.363		0.570	0.418
BI		0.400						0.357						0.374				

Note. FA=Facility Aesthetic; L= Layout; TS=Table set up; A= Ambient; B-E=Bored-Entertained; D-E=Despair-Hopeful; U-H=Unhappy-Happy; M-C=Melancholic-Contented; A-P=Annoyed-Pleased; D-S=Dissatisfied-Satisfied; C-E=Calm-Excited; U-A=Unaroused-Aroused; D-J=Dull-Jittery; R-S=Relaxed-Stimulated; SL-W=Sleepy-Wide awake; S-W=Sluggish-Wild; D-S=Dominant-Submissive; I-C=In control-Cared for; A-G=Autonomous-Guided; I-I= Influential-Influenced; BI=Behavioral Intentions

5.3.2. Regression Analysis

The multiple regression analysis is used to investigate the relationship between the whole set of independent and dependent dimensions of the study. The dimensions of DINESCAPE (facility aesthetic, layout, table set up and ambience) are the independent variables where the dimensions of emotional experiences (pleasure, arousal and dominance) are the dependent variables. In order to determine the regression among the dimensions of the study, firstly mean scores of the four DINESCAPE dimensions (facility aesthetic, layout, table set up, and ambience) and three dimensions of the customers' emotional experiences (pleasure, arousal, dominance) for each subject were calculated. Then regression analysis was conducted with the mean scores of the dimensions of DINESCAPE and customers' emotional experiences. The following figures (Figure 15-21) illustrate the data obtained from Standardized Coefficient (β) of each independent dimension to the dependent dimension (Argyrous, 2011).

Figure 15 indicates that table set up and ambience dimensions are positively related to pleasure ($p < .05$) (for the related regression table, see Appendix C, Table 14). The relation between facility aesthetic and layout with pleasure is not statistically significant at the p = 0 .05 level.

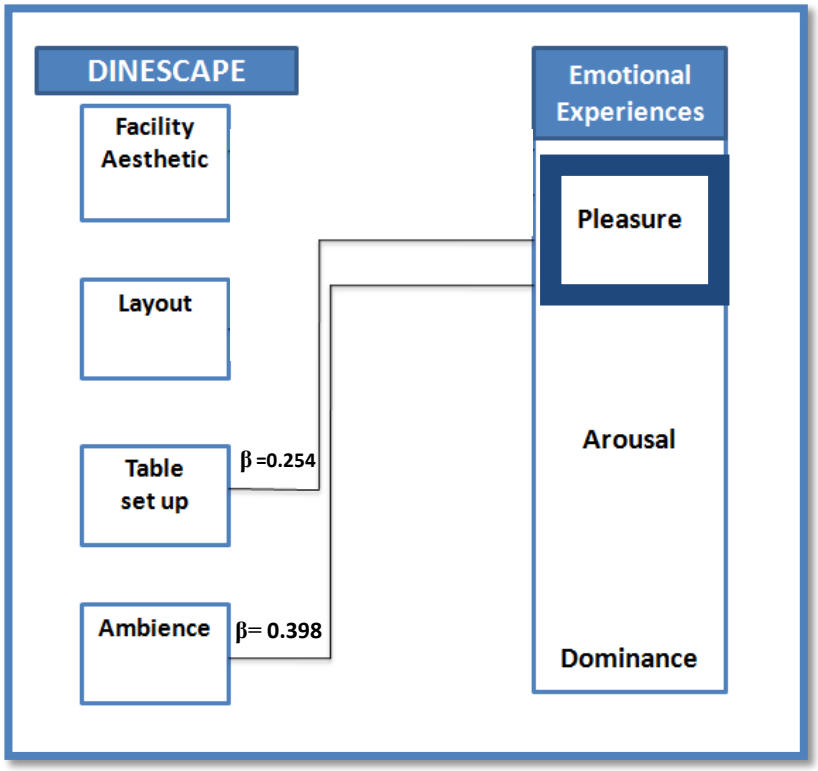

Figure 15: Research framework representing the coefficients of DINESCAPE dimensions and pleasure

Figure 16 presents that facility aesthetic and layout are positively related to arousal ($p < .05$). However, the relation between table set up and ambience with arousal is not statistically significant at the $p = 0\ .05$ level (see Appendix C, Table 15 for the related regression table).

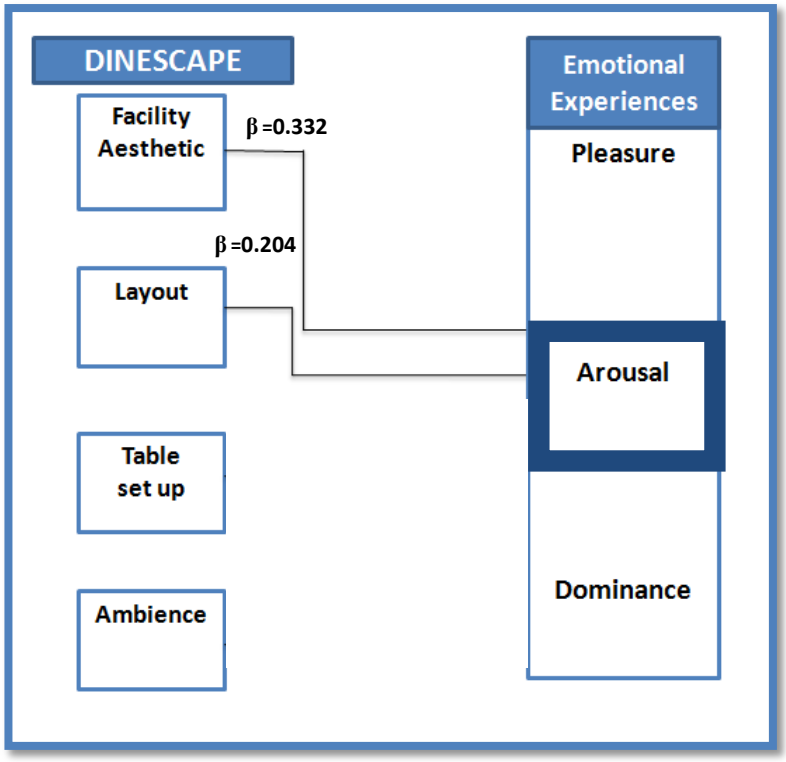

Figure 16: Research framework representing the coefficients of DINESCAPE dimensions and arousal

Figure 17 indicates that layout and ambience is positively related to dominance ($p < .05$). The relation between facility aesthetic and table set up with dominance is not statistically significant at the p = 0 .05 level (see Appendix C, Table 16, for the related regression table).

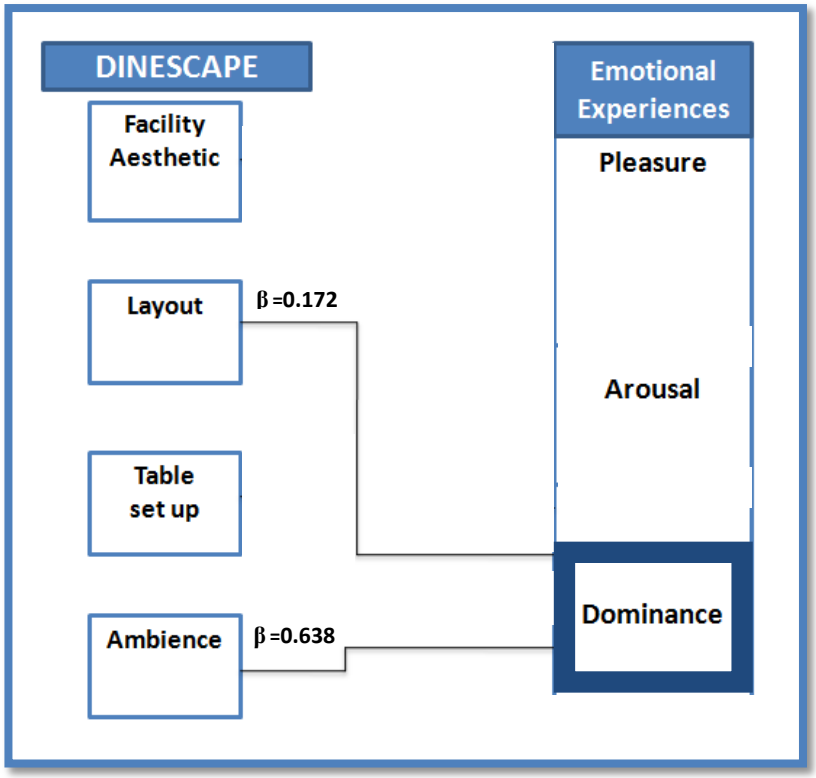

Figure 17: Research framework representing the coefficients of DINESCAPE dimensions and dominance

In order to determine the regression among the dimensions of DINESCAPE and customers emotional experiences, firstly the mean scores of the four DINESCAPE dimensions (facility aesthetic, layout, table set up, and ambience) for each subject were calculated. Then mean scores of the total customers' emotional experiences value for each subject were calculated. Finally, the regression analysis was conducted with the mean scores of the dimensions of DINESCAPE and mean scores of the total customers' emotional experiences value. Figure 18 presents that layout, table set up and ambience is positively related to emotional experiences ($p < .05$). The relation between facility aesthetic and emotional experiences is not statistically significant at the p = 0 .05 level (see Appendix C, Table 17, for the related regression table).

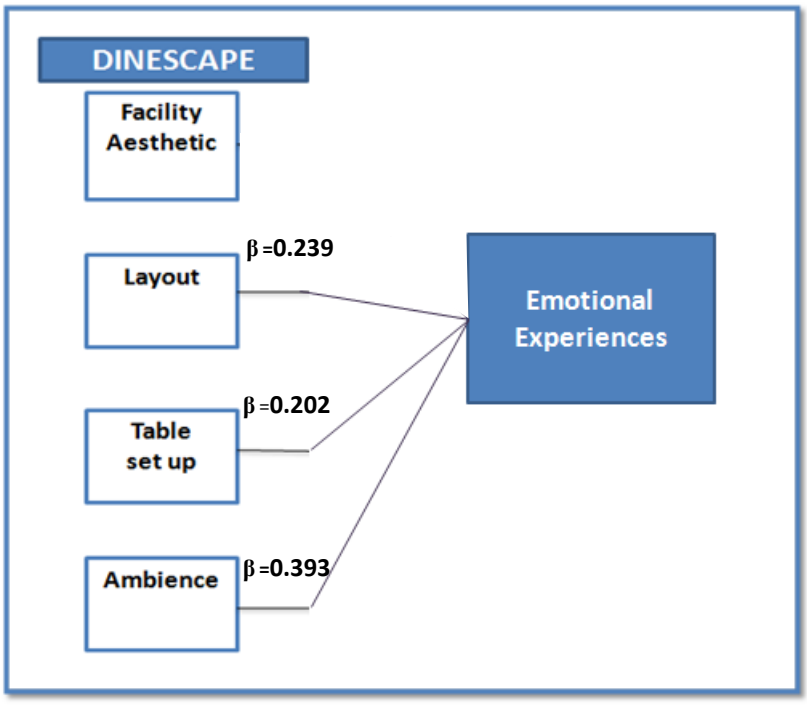

Figure 18: Research framework representing the coefficients of DINESCAPE dimensions and emotional experiences

Figure 19 presents relationship between dimensions of the customers' emotional experiences as independent variables and total behavioral intentions value as dependent variable. In order to determine the regression among the customers' emotional experiences and behavioral intentions, firstly the mean scores of the three dimensions of the customers' emotional experiences (pleasure, arousal, dominance) for each subject were calculated. Then the mean score of the total behavioral intentions value for each subject was calculated. Finally, the regression analysis was conducted. Results presented that pleasure and dominance is positively related to behavioral intentions ($p < .01$). The relation between arousal and behavioral intentions is not statistically significant at the $p = 0 .05$ level (see Appendix C, Table 18, for the related regression table).

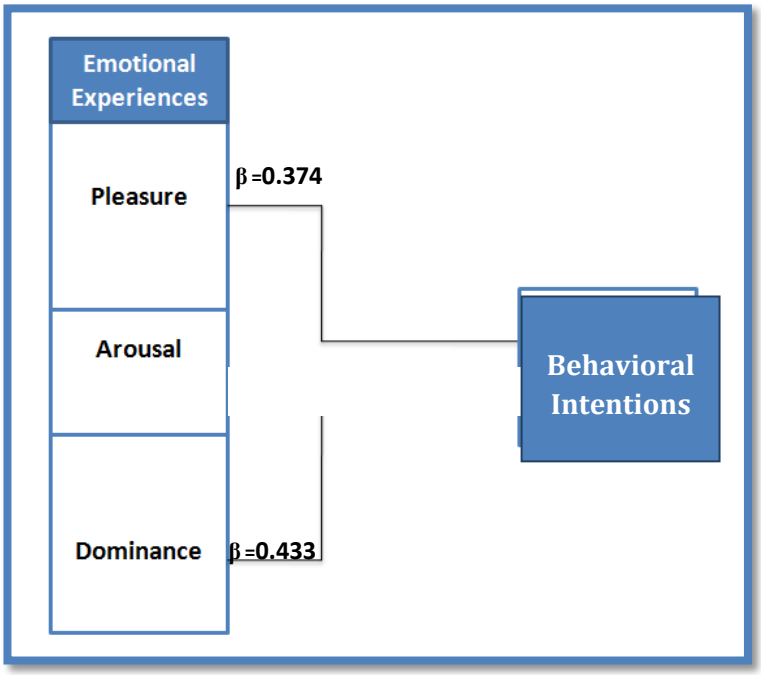

Figure 19: Research framework representing the coefficients of emotional experiences dimensions and behavioral intentions

Relationship between the customers' total emotional experiences as independent variables and total behavioral intentions value as dependent variable are presented in Figure 20. In order to determine the regression among the customers' total emotional experiences and behavioral intentions, firstly the total mean scores of the customers' emotional experiences for each subject were calculated. Then the mean score of the total behavioral intentions value for each subject was calculated. Finally, the regression analysis was conducted. Results revealed a significant correlation between emotional experiences and behavioral intentions ($p < .01$) (see Appendix C, Table 19, for the related regression table).

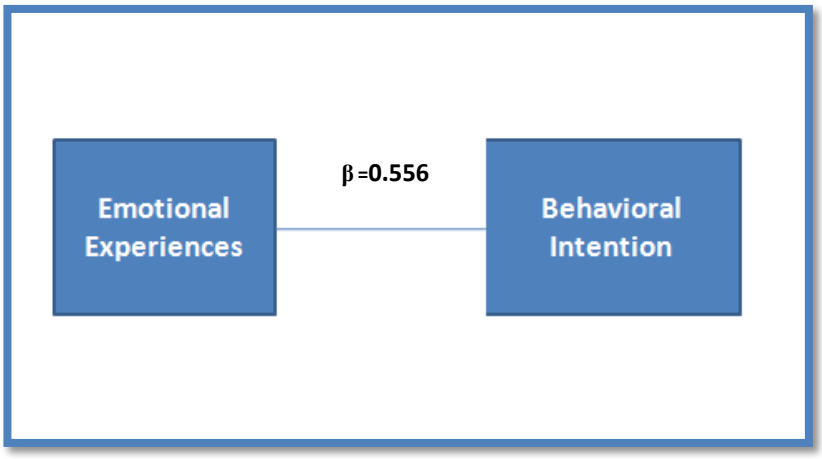

Figure 20: Research framework representing the coefficients of emotional experiences and behavioral intentions

To calculate the regression among the dimensions of DINESCAPE and behavioral intentions, firstly the mean scores of the four DINESCAPE dimensions (facility aesthetic, layout, table set up, and ambience) for each subject were calculated. Then the mean score of the total behavioral intentions value for each subject was calculated. Finally, regression analysis was conducted. Figure 21 presents that table set up and ambience is positively related to behavioral intentions ($p < .01$). The relation between facility aesthetic and layout with behavioral intentions is not statistically significant at the $p = 0 .05$ level (see Appendix C, Table 20, for the related regression table).

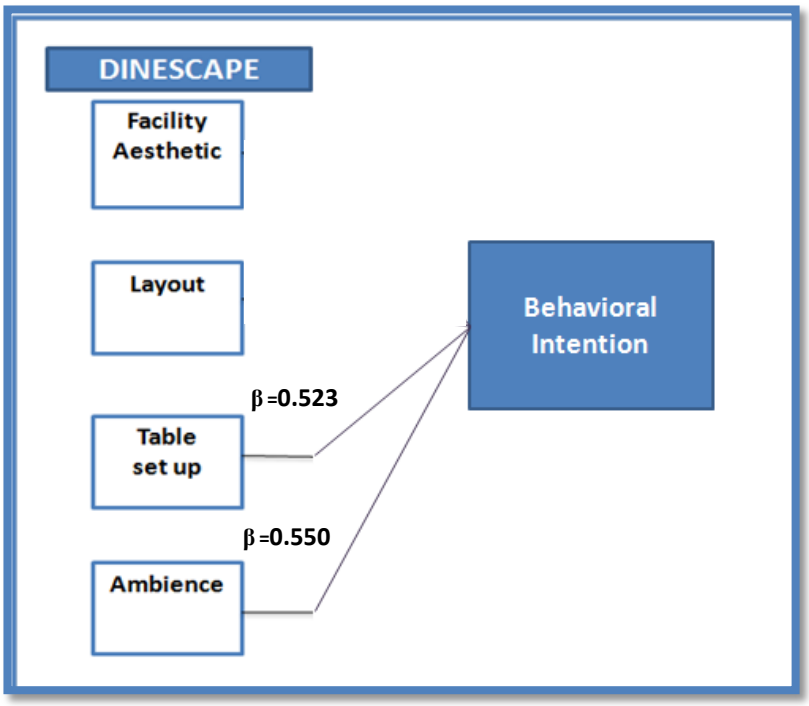

Figure 21: Research framework representing the coefficients of DINESCAPE dimensions and behavioral intentions

Figure 22 presents significant and not significant relations between the items of the proposed model of the study. Accordingly, layout, table set up and ambience have significant relation with emotional experiences. However, facility aesthetics has a less correlation with the emotional experiences.

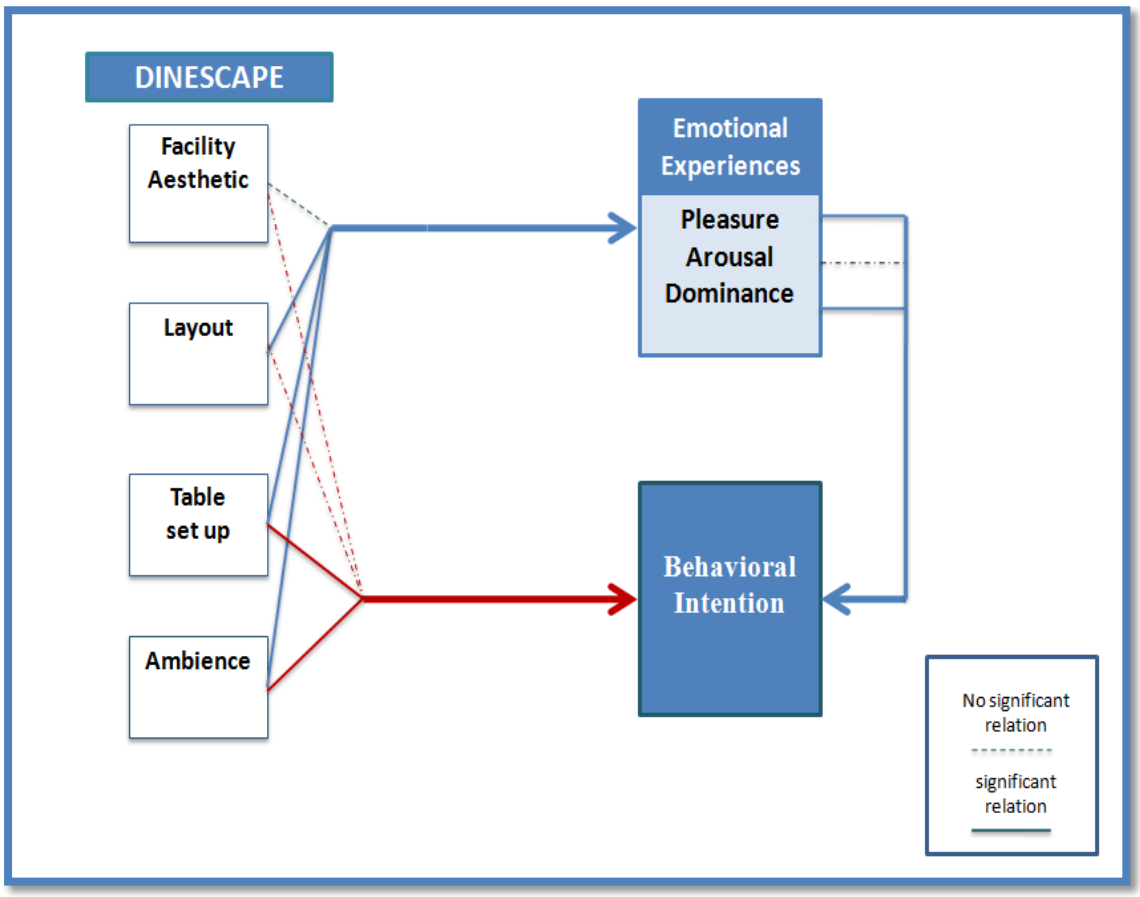

Figure 22: Proposed model of the study

5.4. Related to Factor Analysis

According to Henson and Roberts (2006), factor analysis helps to verify the validity of all research constructs and also reduces the complexity of research constructs to make sure that minimal latent constructs are used in explaining the shared variance of measured constructs. Tabachnick and Fidell (2001) explained that with greater loadings, the item's pure measure of the factor increases. Items that had relationships 50% and above with the factor were considered to describe the factor the best. In order to determine the effective factors of the study, firstly mean scores of the four DINESCAPE dimensions (facility aesthetic, layout, table set up, and ambience) for each subject were calculated. Then factor analysis was conducted with the mean scores of DINESCAPE dimensions and customers' emotional experiences. These four factors accounted for the 68.74 % of the total variance as seen in Table 10 (for the related factor analysis data, see Appendix C, Tables 21, 22 and 23).

Table 10: Summary of rotated factors, all respondents

Factors	Items	Var. (%)	Cum. (%)
1	Facility Aesthetic, Autonomous-Guided, Melancholic-Contented	**19.90**	**19.90**
2	Calm-Excited, Dull-Jittery, Unaroused-Aroused, Uninteresting-Stimulated	**18.15**	**38.05**
3	Sleepy-Wide awake, Sluggish-Wild, Layout, Table set up	**17.06**	**55.11**
4	Influential-Influenced, In control-Cared for, Ambience	**13.62**	**68.74**

Therefore, three items consisting of dominance and arousal dimensions with the facility aesthetic dimension of DINESCAPE (facility aesthetic, autonomous-guided, melancholic-contented) that had loadings above 0.50 were eligible items in describing the first factor (Table 11). The second factor includes only four items of the arousal dimension (calm-excited, dull-jittery, unaroused-aroused, and uninteresting-stimulated).

Third factor includes two items of the arousal dimension with layout and table set up dimensions of DINESCAPE (sleepy-wide awake, sluggish- wild, layout table set up). Last factor has two items of dominance (influential-influenced, in control-cared for) with one DINESCAPE dimension (ambience).

Table 11: Rotated factor matrix, all respondents

Factor	Rotated Component Matrix				
1	Facility Aesthetic Autonomous-Guided Melancholic-Contented	**0.791** **0.776** **0.769**			
2	Calm-Excited Dull-Jittery Unaroused-Aroused Uninteresting-Stimulated		**0.877** **0.861** **0.648** **0.603**		
3	Sleepy- Wide awake Sluggish-Wild Layout Table set up			**0.737** **0.727** **0.692** **0.654**	
4	Influential-Influenced In control- Cared for Ambience				**0.837** **0.745** **0.629**

Figure 23 presents the relationship of 14 items in 4 factors resulted from the rotated factor analysis. The first factor includes items of pleasure, dominance and facility aesthetic. In the second factor, there are only items of arousal. The third factor has two items of arousal and two items of DINESCAPE (table set up and layout). The fourth factor includes two items of dominance and one item of DINESCAPE (ambience).

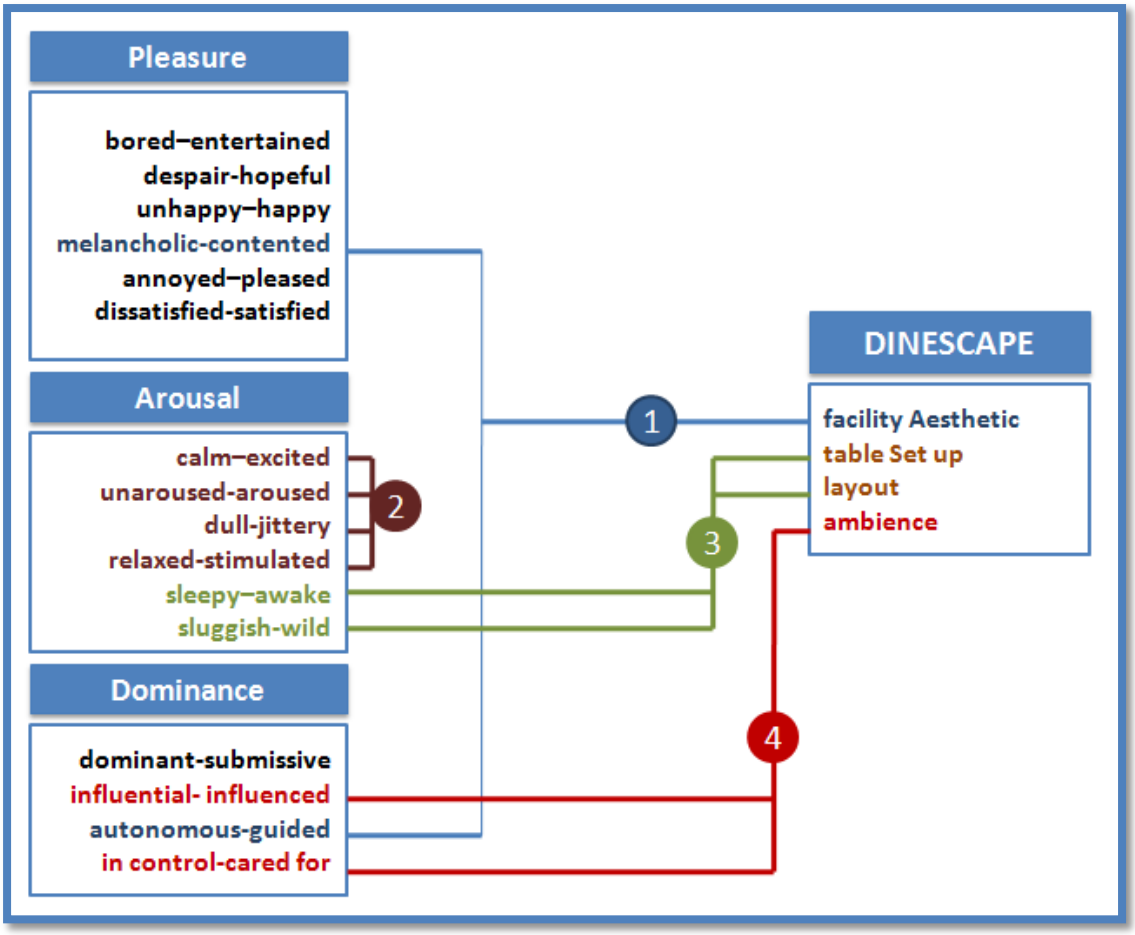

Figure 23: Relationship of 14 items on 4 factors resulted from the rotated factor matrix

5.5. Discussion

The objective of this study was to understand the effect of DINESCAPE dimensions on the emotional experiences of customers and their behavioral intentions at an upscale restaurant. The aim of this study was also to discover the most important factors of DINESCAPE items and the emotional experiences of customers. The findings revealed that DINESCAPE dimensions have significant influence on the emotional experiences of the customers and their post-dining behavioral intentions.

Both theoretical and managerial implications are provided in this study. In the previous research studies, e.g. Chebat and Michon (2003), and Mattila and Wirtz (2006), less attention had been paid to the feeling of dominance. To overcome this shortcoming, in this study we investigated this feeling and it turned out that the dominance is a significant feeling that is experienced by the customers of the restaurants and has a positive influence on their behavioral intentions. Furthermore, this study evaluated the direct effect of dimensions of DINESCAPE on behavioral intentions of customers. From a practical standpoint, this study helps restaurants managers better understand the important role of dimensions of DINESCAPE on behavioral intentions of customers. Mills (2000) mentioned that, today's' customers desire a good overall restaurant experience. This study suggests that a favorable DINESCAPE could be an additional marketing tool for upscale restaurants to evoke customers' positive emotions and keep them loyal to their restaurants. In addition, this study not only illustrates that DINESCAPE is important to customer's experience, but further presents specific aspects of each DINESCAPE dimension and its influence on

the emotions and the behavioral intentions of customers. The results for evaluating the effect of DINESCAPE dimensions on customers' emotional experiences and behavioral intentions at an upscale restaurant are presented in the following sections.

5.5.1. On DINESCAPE and Emotional Experiences

H1a (Hypothesis 1a) posits that proper facility aesthetics has a positive influence on customer's emotional experiences. However, no significant relation between facility aesthetic and emotional experiences of customers (β=0.138, *p*=0.071) is observed. Therefore, H1a is rejected. The study also evaluates influence of the facility aesthetic separately on each dimension of the emotions (pleasure, arousal, dominance). The facility aesthetic is turned out not to have a significant influence on the pleasure (β=-0.073, *p*=0.399) and also the dominance (β=-0.025, *p*=0.748). Interestingly, the findings confirms that facility aesthetic (β=0.332, *p*=0.001) is significantly and positively related to arousal.

This result is not in line with the previous findings which emphasized the role of the facility aesthetics as an important marketing tool by affecting customer emotions, and behavior (Cobe, 2007; Barbas, 2002; Wall & Berry, 2007; Han & Ryu, 2009; Kim & Moon, 2009; Liu & Jang, 2009; Pullman & Gross, 2004; Pullman & Robson,2007; Ryu & Jang, 2007).

H2a posits that a proper layout has a positive influence on the emotional experiences of the customers. The findings reveal a considerable correlation (β=0.239, *p*=0.001), and thus H2a is supported. The influence of the layout is also evaluated separately on each dimension of the emotions (pleasure, arousal, dominance). While the correlation between the layout and the pleasure is not considerable (β=0.132, *p*=0.108), the findings confirm that the layout is significantly and positively related to arousal (β=0.208, *p*=0.020) and dominance (β=0.172, *p*=0.019). In other words, the study reveals that layout has a positive impact on feelings of arousal and dominance.

This result is analogous to the work of Lin (2004), Wakefield and Blodgett (1994), and Ryu and Jang, (2008b) that found that effective layout can facilitate fulfillment of emotional needs. In addition, Wakefield and Blodgett (1994) stated that layout may have a direct effect on customer quality perceptions and excitement (arousal) levels. The findings of this study also confirm that layout significantly and positively influences arousal.

H3a posits that a proper table set up has a positive influence on the emotional experiences of the customers. The linkage between table set up and the emotional experiences of the customers is significant (β=0.202, *p*=0.013). Therefore, H3a is also supported. The study also evaluates the influence of table set up separately on each dimension of emotions (pleasure, arousal, dominance). The findings confirm that table set up is significantly and positively related to pleasure (β=0.254, *p*=0.006). The

study did not find a significant correlation between table set up and dominance (β=0.032, *p*=0.689) and also arousal (β=0.123, *p*=0.213).

This result is in line with previous findings which claim that the table setting affects customer's emotions, affective responses and influences customer's behavior (Ryu & Han 2011).

H4a proposes that a proper ambience has a positive influence on the emotional experiences of customers (β=0.393, *p*=0.00). The data provides support for H4a. The study also analyzes the influence of the ambience separately on each dimension of emotions (pleasure, arousal, dominance). The findings confirm that ambience is significantly and positively related to pleasure (β=0.398, *p*=0.000) and dominance (β=0.638, *p*=0.000). The study did not find a significant relation between ambience and arousal (β=-0.465, *p*=0.643).

This result is similar to the work of Harris and Ezeh (2008), and Liu and Jang (2009) who had presented that the ambient makes the experience more pleasant and gives raise to positive emotions.

5.5.2. On DINESCAPE and Behavioral Intentions

H1b, H2b, H3b and H4b propose that a proper facility aesthetic, layout, table set up and ambience have positive influences on a customer's behavioral intentions. The findings reveal that the influence of the facility aesthetic (β=0.060, *p*=0.395) and layout (β=-0.033, *p*=0.618) on behavioral intentions are not significant. On the other hand, the effect of table set up (β=0.425, *p*=0.00) and ambience (β=0.425, *p*=0.00) on behavior intentions are found to be significant. Therefore, it can be concluded that proper table set up and ambience have a significant influence on customers ' behavioral intentions (Ryu & Han 2011). This result is not in line with the previous findings that emphasized the role of the facility aesthetics as an important tool by affecting customer emotions, and behavior (Cobe, 2007; Barbas, 2002; Wall & Berry, 2007; Han & Ryu, 2009; Kim & Moon, 2009; Liu & Jang, 2009; Pullman & Gross, 2004; Pullman & Robson, 2007; Ryu & Jang, 2007).

5.5.3. On Emotional Experiences and Behavioral Intentions

Hc represents that a customer's emotional experiences (pleasure, arousal and dominance) have positive influences on his or her behavioral intentions. The findings reveal a significant correlation (β=0.556, *p*=0.00) and thus Hc is supported. The results show that pleasure (β=0.374, *p*=0.00) and dominance (β=0.436, *p*=0.00) influence behavioral intentions in a positive way. This means that pleasure and dominance have positive effects on customer's behavioral intentions. However, the

coefficient for the effect of arousal (β=-0.043, *p*=0.551) on behavioral intentions is not significant.

This result is similar to the work of Donovan and Rossiter (1982), and Donovan *et al.* (1994), that stated that pleasure is a powerful determinant of approach–avoidance behaviors. However, in the previous researches dominance was supposed to be ineffective emotional dimension on behavioral intentions (Chebat & Michon 2003; Mattila & Wirtz 2006). This study found that dominance can be an important feeling experienced by the customers of a restaurant and has a positive influence on their behavioral intentions.

5.5.4. On the Interactions of DINESCAPE and Emotional Experiences of Customers

Finally, Hd proposes that there will be some important factors of DINESCAPE and emotional experiences of the customers. Findings indicated that facility aesthetic, autonomous-guided (dominance) and contented (pleasure) as eligible items in describing the first and most important factor. In the second factor, there are only items of arousal (calm-excited, dull-Jittery, unaroused-aroused, and uninteresting-stimulated). The third factor has two items of arousal (wide awake, sluggish- wild) and two items of "DINESCAPE" (table set up and layout). The fourth factor includes two items of dominance (influential-influence, cared for) and one item of DINESCAPE (ambience).

Figure 24 and 25 show summary of the findings of the study and supported/not supported hypotheses. In addition, references with in-line and not in-line results are presented.

	Findings of the study	Relation of dimensions	Ref with In-line results	Ref with not in-line results
H1a ✗	No significant relation between *facility aesthetic* and emotional experiences **(β=0.138, p=0.071)**	**Facility aesthetics** pleasure arousal Dominance		Cobe, 2007; Barbas, 2002; Wall & Berry, 2007; Han & Ryu, 2009; Kim & Moon, 2009; Liu & Jang, 2009; Pullman & Gross, 2004; Pullman & Robson,2007; Ryu & Jang, 2007
H2a ✓	Significant positive relation between *layout* and emotional experiences **(β=0.239, p=0.001)**	**Layout** pleasure arousal dominance	Lin 2004, Wakefield & Blodgett 1994, Ryu & Jang, 2008b	Wakefield & Blodgett, 1994 Ryu & Jang, 2008
H3a ✓	Significant positive relation between *table set up* and emotional experiences **(β=0.202, p=0.013)**	**Table set up** pleasure arousal dominance	Ryu & Han, 2011	
H4a ✓	Significant positive relation between *ambience* and emotional experiences **(β=0.393, p=0.00)**	**Ambience** pleasure arousal dominance	Harris and Ezeh, 2008 Liu and Jang, 2009 Ryu & Jang, 2007 Kim & Moon 2009	

Figure 24: Summary of the findings of the study

	Findings	Supported Hyp /not	Ref with in-line results	Ref with not in-line results
H1 & **H2b**	*No significant positive relation* between **facility aesthetic**, **layout** and **behavioral intentions** are not significant	✗ (β=0.060, *p*=0.395) (β=-0.033, *p*=0.618)		Cobe, 2007; Barbas, 2002; Wall & Berry, 2007; Han & Ryu, 2009; Kim & Moon, 2009; Liu & Jang, 2009; Pullman & Gross, 2004; Pullman & Robson, 2007; Ryu & Jang, 2007
H3b & **H4b**	significant positive relation between **table set up, ambience** and **behavior intentions**	✓ (β=0.425, *p*=0.00) (β=0.425, *p*=0.00)	Ryu & Han 2011	
Hc	**Pleasure** and **dominance** influence on **behavioral intentions** in a positive way	✓ (β=0.374, *p*=0.00) (β=0.436, *p*=0.00)	Donovan and Rossiter (1982), and Donovan *et al.* (1994)	Chebat & Michon 2003; Mattila & Wirtz 2006
	The effect of **arousal** on **behavioral intentions** was not found significant	✗ (β=-0.043, *p*=0.551)		Baker et al., 1992

Figure 25: Summary of the findings of the study

CHAPTER VI

CONCLUSION

This study intended to evaluate the effect of DINESCAPE dimensions on customers' emotional experiences and behavioral intentions at an upscale restaurant. To achieve this aim, by adapting the M –R model, this study proposed a theoretical framework and tested it at an upscale restaurant setting. This study suggests that a favorable DINESCAPE could be an additional marketing tool for upscale restaurants to evoke customers' positive emotions and keeps being loyal to their restaurants and also presents specific aspects of each DINESCAPE dimension and its influence on emotions and behavioral intentions of customers.

The findings confirmed that facility aesthetic affect positively on the feeling of arousal at an upscale restaurant. Facility aesthetic (painting/pictures, color, and wall decor) can differentiate a restaurant from its competitors. Major renovation could be a good option to have influential facility aesthetics to evoke feelings of excitement and arousal in customers. In addition, less expensive options such as changing pictures and flowers can be effective, too.

It was also found that layout has a positive impact on the feelings of arousal and dominance. A proper layout provides customers to easy enter and exit to the restaurants and find what they are looking for. Layout should provide enough space to facilitate exploration and stimulation within the physical environment.

The findings presents that table set up is significantly and positively related to pleasure. Table set up decoration (e.g., an attractive candle or flowers on the table) can make customers of restaurants feel that they are in a distinguished environment. High quality flatware, china and glassware can play a significant role to influence customers' emotions of pleasure.

In addition, it was found that ambience significantly and positively related to pleasure and dominance emotional states. Ambient (temperature, scent, background music, noise level, adequate lighting) can make the experience more pleasant, leading to positive emotion (Harris & Ezeh, 2008; Liu & Jang, 2009). Therefore, adequate

temperature, pleasant scent, light and music may affect the feeling of pleasure and the behavior of dominance of the customers.

Findings presents that proper table set up and ambience have a significant influence on customers' behavioral intentions. However, the influences of facility aesthetic and layout on behavioral intentions were not found significant. Therefore, restaurateurs should pay attention to the importance of the physical environments (table set up and ambience) is in generating positive behavioral intentions in restaurants.

The results shows that pleasure and dominance influenced behavioral intentions in a positive way. Restaurateurs might also pay special attention to emotional impact when cognitive elements such as quality of food, food variety and price are considered. The results declared that the emotional responses elicited by the DINESCAPE dimensions determined that customers planned to come back, to recommend the restaurant to others and to stay more at restaurant environments. Despite of the previous studies, this study found dominance as a significant feeling that is experienced by customers of the restaurants and has a positive influence on their behavioral intentions.

Non-significant relationships between some DINESCAPE dimensions and emotions or behavioral intentions were also found in the study. The non-significant linkages could be assigned to the expectation of customers through their prior experiences. Customers might consider the high quality of physical environment at an upscale

restaurant to be natural based on their past experiences. Therefore, the high quality of some DINESCAPE dimensions mayt not evokes customers' positive emotions or affect on their behavioral intentions.

6.1. Limitations of the Study

This study has some limitations. The data was collected from only two branches of Midpoint chain restaurants located in Ankara, Turkey. Thus, we may not be able to generalize the results. Nevertheless, this study uniquely contributes to the literature by modeling DINESCAPE dimensions, emotional states, and behavioral intentions, based on the proposed adopted version of the M –R model.

6.2. Future Research Areas

There are some suggestions for future research. More research is needed to examine the effects of DINESCAPE dimensions on emotions and behavioral intentions across various service industries. Future researches could use proposed framework of this study to across a variety of different DINESCAPE settings. Adopting the scales of DINESCAPE in other restaurant settings such as fast-food restaurants and casual restaurants could be considered. In addition, there are many challenging opportunities available for qualitative and quantitative researches on this field, since measuring emotion is a complex process.

It is also recommended to do longitudinal researches for a specific restaurant. Researchers would watch how customers' perceptions of DINESCAPE dimensions changes over time and how those perceptions can evoke customer emotions and subsequently influence their behaviors.

By using the developed scale of M-R Model suggested in this study, full-service restaurant marketers could benefit from evaluating more accurately their customers' emotional responses. They can also consider valuable strategies to keep customers, improve their willingness to pay more and increase positive word-of-mouth; therefore enhancing their profit level of restaurants.

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APPENDICES

A. DEFINITION OF TERMS

Arousal: The degree that individuals feel stimulated or excited (Mehrabian & Russell, 1974).

Atmospherics: "Atmosphere is the effort to design, buying environments to produce specific emotional effects in the consumer that enhance his/her purchase probability" (Kotler, 1973, p. 50).

Behavioral Intentions: Customer's tendency to say positive word of mouth, to come back to the restaurant, to stay longer than expected plan in the future (Zeithaml et al., 1996).

Dominance: Dominance dimension refers to the extent that individuals feel in control and influential (Mehrabian & Russell, 1974).

DINESCAPE: Man-made physical and human surroundings at the dining area of upscale restaurants (Ryu & Jang, 2008).

Hedonic consumption: The facets of customers' behavior that relate to the emotive features of her/his experience (Hirschman & Holbrook, 1982).

Pleasure: Pleasure stand for the extent that a person feels good, pleased or happy in a situation (Mehrabian & Russell, 1974).

Service encounter: A period of time that consumers directly interact with a service (Shostack, 1985).

SERVICESCAPE: "The man-made, physical surroundings as opposed to natural or social environment" (Bitner, 1992. p. 58).

Upscale restaurant: The upscale restaurant provides customers with a full menu, full table service, good food, and personalized service (Goldman, 1993; Gordon & Brezinski, 1999; Muller & Woods, 1994; Siguaw, Mattila, & Austin, 1999).

B. ANKET

Anket no:…….

Değerli Cevaplayıcı:

Bu anket, Bilkent Üniversitesi, İç Mimarlık ve Çevre Tasarımı Bölümü'nde hazırlanan bir yüksek lisans tez çalışmasında kullanılacaktır. Ankete vereceğiniz doğru ve sizi yansıtan cevaplar, sadece akademik amaçlarla kullanılacak ve verilen bilgiler kesinlikle gizli tutulacaktır.Lütfen anketteki tüm soruları, size en uygun olan seçeneğe denk gelen kutucuğu işaretleyerek cevaplayınız.

Gösterdiğinizilgiye teşekkür ederiz.

Table 12: The questionnaire of the study in Turkish

A	RESTORAN ALGI DEĞERLENDİRME ANKETİ Aşağıdaki ifadelere ne derecede katılıyorsunuz?					
		Hiç katılmıyorum	Kısmen katılmıyorum	Emin değilim	Kısmen katılıyorum	Tamamen katılıyorum
1	Restoranın iç mekan tasarımı çekici.					
2	Restoranda kullanılan mobilyalar çekici.					
3	Restoranın iç mekan tasarımı ve mobilyalar birbirine uygun.					
4	Restoranın duvarındaki fotoğraflar görsel olarak ilgi çekici.					
5	Restoranın içindeki zemin ve duvarların rengi göze hoş gelmekte.					
6	Restoranın düzeni girişten masaya ulaşmak için uygun.					
7	Restoranın düzeni masadan lavaboya ulaşmak için uygun.					
8	Restoranın masa düzeni kişiye özel alan sağlıyor.					
9	Restoranın masa düzeni grup görüşmeleri için yeterli.					
10	Restoranın yemek masa ve sandalyeleri görsel olarak çekici.					
11	Restoranın yemek masa ve sandalyeleri konforlu.					
12	Restorandaki sandalyelere rahatça oturup kalkabiliyorum.					
13	Restoran alanında ısıtma/soğutma yeterli.					
14	Restorandaki ses seviyesi uygun.					
15	Restorandaki fon müziği hoş.					
16	Restoranın içinde hoş bir koku var.					
17	Restoranın hava kalitesi iyi.					
18	Restoranın ışıklandırması yeterli.					
19	Restoran ışıklandırması ile iyi karşılanma hissi veriyor.					

Table 12 (cont'd)

B	Bu restoranla ilgili duygularınızı ve düşüncelerinizi değerlendiriniz.						
Burestoranda, memnuniyet ile ilgili, hangi duyguları hissediyorsunuz?							
	Memnuniyet	Son derece Olumsuz	Olumsuz	Kararsız	Olumlu	Son derece Olumlu	
1	Sıkıcı						Eğlenceli
2	Umutsuz						Umutlu
3	Mutsuz						Mutlu
4	Üzüntülü						Memnun
5	Rahatsız						Rahat
6	Keyifsiz						Keyifli
Bu restoranda, hangi duygularınızın harekete geçtiğini düşünüyorsunuz?							
	Herekete geçme hissi	Son derece Olumsuz	Olumsuz	Kararsız	Olumlu	Son direct Olumlu	
7	Sakin						Heyecanlı
8	Hissiz						Aşırı Hisli
9	Donuk						Gergin
10	Uyuşuk						Uyarılmış
11	Uykulu						Canlı
12	Tembel						Coşkulu
Bu restoranın, hareket ve ya davranışlarınızı nasıl etkilediğini düşünüyorsunuz?							
	Baskınlık	Son derece Olumsuz	Olumsuz	Kararsız	Olumlu	Son derece Olumlu	
13	Baskı altında						Rahat
14	Denetim altında						İlgilenilmiş
15	Özgür						Yönlendirilmiş
16	Etkilenen						Etkileyen

Table 12 (cont'd)

C	**Davranış eğilimi**					
		Hiç katılmıyorum	Kısmen katılmıyorum	Emin değilim	Kısmen katılıyorum	Tamamen katılıyorum
1	Bu restoranda daha fazla harcama yapacağım.					
2	Bu restoran benim ilk tercihim olacak.					
3	Bu restoranı diğerlerine önereceğim.					
4	Bu restoranla ilgili olumlu yorumlar yapacağım.					
D	**Demografik bilgiler**					
1	Cinsiyet	Erkek ☐		Kadın ☐		
2	Yaş	☐				
3	Eğitim seviyesi	İlkokul ☐	Lise ☐	Üniversite terk ☐	Lisans ☐	Lisansüstü ☐
4	Bir ayda, bu restoranı ne sıklıkla ziyaret ediyorsunuz?	Bir kere ☐	İki kere ☐	Üç kere ☐	Dört kere ☐	İlk ☐

C. STATISTICAL RESULTS

Table 13: All the correlations among the DINESCAPE items, emotional experiences and behavioral intentions (significant at the 0.05 level, 2-tailed)

	FA	L	TS	A	B-E	D-H	U-H	M-C	A-P	D-S	C-E	U-A	D-J	R-S	SI-W	S-W	D-S	I-C	A-G	I-I	BI
Facility Aesthetic	1																				
Layout	0.364**	1																			
Table set up	0.461**	0.429**	1																		
Ambient	0.145	0.204*	0.214*	1																	
Bored-Entertained	-0.091	0.274**	0.247**	0.478**	1																
Despair-Hopeful	0.073	0.165	0.351**	0.423**	0.327**	1															
Unhappy-Happy	0.409**	0.532**	0.526**	0.437**	0.372**	0.316**	1			.											
Melancholic-Contented	0.134	0.711	0.241**	0.259**	0.273**	0.171	0.048	1													
Annoyed-Pleased	0.243**	0.431**	0.350**	0.250**	0.491**	0.153	0.457**	0.313**	1												
Dissatisfied-Satisfied	0.338**	0.114	0.019	0.095	-0.103	0.112	0.030	0.076	-0.056	1											
Calm-Excited	0.263**	0.120	0.079	-0.007	-0.126	0.083	0.108	-0.052	0.134	0.500**	1										
Unaroused-Aroused	0.345**	-0.038	-0.071	-0.055	-0.244**	-0.040	-0.122	0.146	-0.032	0.623**	0.415**	1									
Dull-Jittery	0.105*	-0.027	0.086	-0.204*	0.019	-0.057	-0.091	0.196**	-0.049	0.366**	0.119	0.587**	1								
Relaxed-Stimulated	0.119	0.418**	0.244**	0.120	0.207*	0.306**	0.232**	0.209*	0.155	0.283**	0.150	0.135	0.315**	1							
Sleepy-Wide awake	0.334**	0.571**	0.360**	0.006	0.100	0.062	0.334**	0.275**	0.202*	0.128	0.139	.0155	0.259**	0.555**	1						
Sluggish-Wild	0.283**	0.113	0.274**	-0.031	-0.054	0.057	0.071	0.459**	0.102	0.149	0.124	0.316**	0.276**	0.261**	0.217*	1					
Dominant-Submissive	0.127*	0.398**	0.548**	0.031	0.295**	.222*	0.281**	0.392**	0.413**	-0.126	0.161	-0.203*	-0.034	0.318**	0.393**	0.334**	1				
In control-Cared for	0.481**	0.291**	0.362**	0.248**	0.142	.334**	0.499**	-0.261**	0.219*	0.267**	0.204*	0.057	-0.025	0.223*	0.181*	-0.124	0.151	1			
Autonomous-Guided	-0.196*	0.019	0.351**	0.073	0.093	.217*	-0.175	0.193*	-0.008	0.058	0.131	-0.059	0.092	0.132	0.049	0.122	0.421**	-0.132	1		
Influential-Influenced	0.407**	0.616**	0.631**	0.237**	0.399**	.261**	0.512**	0.247**	0.503**	0.005	0.141	-0.107	-0.106	0.258**	0.363**	0.175	0.570**	0.418**	0.146	1	.
Behavioral Intention	0.134	0.400**	0.140	0.192*	0.151	.215*	0.122	0.357**	0.106	0.190*	0.087	0.082	0.126	0.374**	0.283**	0.212*	0.198*	0.083	0.175	0.204*	1

Table 14: Regression analysis between DINESCAPE dimensions as independent and pleasure as dependent variables

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Ambience, Layout, Aesthetic, Table set up[b]	.	Enter

a. Dependent Variable: pleasure

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.576[a]	.331	.309	.41059

a. Predictors: (Constant), Ambience, Layout, Aesthetic, Table set up

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.929	.331		5.820	.000
	Aesthetic	-.063	.074	-.073	-.847	.399
	Layout	.070	.043	.132	1.620	.108
	Table set up	.202	.072	.254	2.795	.006
	Ambience	.332	.074	.398	4.483	.000

a. Dependent Variable: pleasure

Table 15: Regression analysis between DINESCAPE dimensions as independent and arousal as dependent variables

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Ambience, Layout, Aesthetic, Table set up[b]	.	Enter

a. Dependent Variable: arousal

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.467[a]	.219	.192	.50025

a. Predictors: (Constant), Ambience, Layout, Aesthetic, Table set up

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.710	.404		4.235	.000
	Aesthetic	.323	.090	.332	3.570	.001
	Layout	.124	.053	.208	2.361	.020
	Table set up	.110	.088	.123	1.253	.213
	Ambience	-.042	.090	-.045	-.465	.643

a. Dependent Variable: arousal

Table 16: Regression analysis between DINESCAPE dimensions as independent and dominance as dependent variables

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Ambience, Layout, Aesthetic, Table set up[b]	.	Enter

a. Dependent Variable: dominance

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.689[a]	.475	.458	.39662

a. Predictors: (Constant), Ambience, Layout, Aesthetic, Table set up

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.157	.320		3.615	.000
	Aesthetic	-.023	.072	-.025	-.322	.748
	Layout	.100	.042	.172	2.386	.019
	Table set up	.028	.070	.032	.401	.689
	Ambience	.581	.072	.638	8.119	.000

a. Dependent Variable: dominance

Table 17: Regression analysis between DINESCAPE dimensions as independent and emotional experiences as dependent variables

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Ambience, Layout, Aesthetic, Table set up[b]	.	Enter

a. Dependent Variable: Emotions

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695[a]	.483	.466	.27893

a. Predictors: (Constant), Ambience, Layout, Aesthetic, Table set up

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.655	.225		7.350	.000
	Aesthetic	.092	.050	.138	1.823	.071
	Layout	.098	.029	.239	3.336	.001
	Table set up	.124	.049	.202	2.519	.013
	Ambience	.254	.050	.393	5.045	.000

a. Dependent Variable: Emotions

Table 18: Regression analysis between emotional experiences dimensions as independent and behavioral intentions as dependent variables

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	dominance, arousal, pleasure[b]	.	Enter

a. Dependent Variable: Behavioral Intention

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.674[a]	.455	.441	.57267

a. Predictors: (Constant), dominance, arousal, pleasure

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.576	.540		-1.067	.288
	pleasure	.579	.115	.374	5.030	.000
	arousal	-.059	.098	-.043	-.598	.551
	dominance	.620	.111	.436	5.584	.000

a. Dependent Variable: Behavioral Intention

Table 19: Regression analysis between total emotional experiences as independent and behavioral intentions as dependent variables

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Emotions[b]	.	Enter

a. Dependent Variable: Behavioral Intention

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.556[a]	.309	.303	.63929

a. Predictors: (Constant), Emotions

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.365	.597		-.612	.541
	Emotions	1.115	.150	.556	7.416	.000

a. Dependent Variable: Behavioral Intention

Table 20: Regression analysis between DINESCAPE dimensions as independent and behavioral intentions as dependent variables

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Ambience, Layout, Aesthetic, Table set up[b]	.	Enter

a. Dependent Variable: Behavioral Intention

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.740[a]	.548	.533	.52365

a. Predictors: (Constant), Ambience, Layout, Aesthetic, Table set up

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.590	.423		-1.397	.165
	Aesthetic	.081	.095	.060	.853	.395
	Layout	-.028	.055	-.033	-.499	.618
	Table set up	.523	.092	.425	5.677	.000
	Ambience	.550	.094	.425	5.826	.000

a. Dependent Variable: Behavioral Intention

Table 21: Factor analysis, Correlation Matrix

		Calm-Excited	Unaroused-Aroused	Dull-Jittery	Autonomous-Guided	Aesthetic	Layout	Ambience	Table set up	Melancholic-Contented	Uninteresting-Stimulated	Sleepy-Wide awake	Sluggish-Wild	In control-Cared for	Influential-Influenced
Correlation	Calm-Excited	1.000	.547	.694	.268	.313	.187	-.068	.110	.000	.428	.351	.181	-.196	-.006
	Unaroused-Aroused	.547	1.000	.378	.185	.196	.008	.019	.107	.118	.043	.155	.136	.104	.061
	Dull-Jittery	.694	.378	1.000	-.001	.276	-.005	-.202	-.114	-.150	.579	.103	.092	-.307	-.167
	Autonomous-Guided	.268	.185	-.001	1.000	.520	.073	.370	.345	.522	-.079	.230	.199	.147	-.175
	Aesthetic	.313	.196	.276	.520	1.000	.059	.449	.347	.447	.047	.092	.310	.062	-.319
	Layout	.187	.008	-.005	.073	.059	1.000	.111	.421	.148	.079	.362	.300	.162	.143
	Ambience	-.068	.019	-.202	.370	.449	.111	1.000	.431	.541	.011	.267	.361	.566	.357
	Table set up	.110	.107	-.114	.345	.347	.421	.431	1.000	.549	-.029	.443	.594	.422	-.016
	Melancholic-Contented	.000	.118	-.150	.522	.447	.148	.541	.549	1.000	-.080	.262	.373	.296	-.201
	Uninteresting-Stimulated	.428	.043	.579	-.079	.047	.079	.011	-.029	-.080	1.000	.333	.255	-.086	.084
	Sleepy-Wide awake	.351	.155	.103	.230	.092	.362	.267	.443	.262	.333	1.000	.554	.307	.114
	Sluggish-Wild	.181	.136	.092	.199	.310	.300	.361	.594	.373	.255	.554	1.000	.393	.003
	In control-Cared for	-.196	.104	-.307	.147	.062	.162	.566	.422	.296	-.086	.307	.393	1.000	.401
	Influential-Influenced	-.006	.061	-.167	-.175	-.319	.143	.357	-.016	-.201	.084	.114	.003	.401	1.000

Table 22: Factor analysis, Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.903	27.876	27.876	3.903	27.876	27.876	2.785	19.894	19.894
2	2.668	19.056	46.932	2.668	19.056	46.932	2.542	18.154	38.048
3	1.838	13.127	60.058	1.838	13.127	60.058	2.389	17.064	55.112
4	1.215	8.679	68.737	1.215	8.679	68.737	1.908	13.625	68.737
5	.986	7.041	75.779						
6	.757	5.408	81.187						
7	.643	4.596	85.783						
8	.459	3.277	89.060						
9	.371	2.649	91.709						
10	.349	2.494	94.203						
11	.307	2.190	96.393						
12	.214	1.531	97.924						
13	.165	1.175	99.099						
14	.126	.901	100.000						

Table 23: Factor Analysis, Rotated Component Matrix

	Component			
	1	2	3	4
Aesthetic	.791	.255	.059	-.109
Autonomous-Guided	.776	.110	.048	.032
Melancholic-Contented	.769	-.155	.284	.081
Calm-Excited	.145	.877	.157	-.071
Dull-Jittery	-.025	.861	.030	-.271
Unaroused-Aroused	.265	.648	-.145	.273
Uninteresting-Stimulated	-.239	.603	.382	-.061
Sleepy-Wide awake	.101	.251	.737	.188
Sluggish-Wild	.299	.118	.727	.144
Layout	-.033	-.002	.692	.023
Table set up	.498	-.106	.654	.154
Influential-Influenced	-.369	.062	.040	.837
In control-Cared for	.213	-.205	.296	.745
Ambience	.536	-.104	.207	.629

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.