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## Araştırma Makalesi • Research Article

# Restaurant Atmosphere and Behavioral Intention<sup>1</sup>

*Restoran Atmosferi ve Davranışsal Niyet*

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### ABSTRACT

The concept of atmosphere, which refers to the design of the purchasing environment, aims to create certain emotions that increase the consumer's purchase intention. The atmosphere of any business in question can be effective in consumers' restaurant preferences. In order to gain an advantage in a competitive environment, businesses can provide customer satisfaction by conducting studies on the atmosphere. Therefore, controlling consumer behavior has become extremely important. At this point, the concept of behavioral intention formation, which is the output of consumers' purchasing process, emerges. Behavioral intention can be estimated by consumer behavior, consumers' attitudes towards behavior, subjective norms regarding behavior, and perceived control over performing the behavior. Examining the effect of restaurant atmosphere on behavioral intention after purchase is one of the factors of strategic importance for businesses. In this context, the purpose of the research is to reveal the effect of restaurant atmosphere on behavioral intention after purchasing the service. The survey form, which was created as a result of the literature review, was used as the data collection tool in the research. The research population consists of customers of Tourism Operation Certificated Restaurants operating in Ankara. Descriptive statistics CFA (Confirmatory Factor Analysis) and SEM (Structural Equation Model) analyses were used in the evaluation of data and hypotheses. According to the findings obtained as a result of the analysis, all hypotheses created for the restaurant atmosphere dimensions (facility aesthetics, ambiance, lighting, layout and employees/personnel) were supported according to the research results. When the effect coefficients of the sub-dimensions of the restaurant atmosphere scale are examined, it is seen that the highest effect is in the "layout" dimension and the lowest effect is in the "facility aesthetics" dimension. It was determined that the restaurant atmosphere has a significant and positive effect on behavioral intention.

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### ÖZ

Satın alma ortamının tasarımını ifade eden atmosfer kavramı, tüketicide satın alma niyetini artıran belirli duyguları oluşturmayı amaçlamaktadır. Söz konusu herhangi bir işletmenin atmosferi, tüketicilerin restoran tercihlerinde etkili hâle gelebilmektedir. Rekabet ortamında üstünlük elde etmek için işletmeler atmosferle ilgili çalışmalar yaparak müşteri memnuniyetini sağlayabilmektedir. Dolayısıyla tüketici davranışlarını kontrol etmek son derece önemli hâle gelmiştir. Tam bu noktada tüketicilerin satın alma süreci çıktısı olan davranışsal niyet oluşumu kavramı ortaya çıkmaktadır. Davranışsal niyet; tüketici davranışı, tüketicilerin davranışa yönelik tutumları, davranışa ilişkin öznel normlar ve davranışı gerçekleştirme üzerindeki algılanan kontrol tarafından tahmin edilebilir. Restoran atmosferinin satın alma sonrasında davranışsal niyet üzerindeki etkisini incelemek, işletmeler açısından stratejik önem arz eden faktörlerden biridir. Bu kapsamda araştırmanın amacı, restoran atmosferinin hizmeti satın alma sonrasında davranışsal niyet üzerindeki etkisini ortaya koymaktır. Araştırmada veri toplama aracı olarak alanyazın taraması sonucunda oluşturulan anket formu kullanılmıştır. Araştırma evrenini ise Ankara ilinde faaliyet gösteren Turizm İşletme Belgeli Restoranların müşterileri oluşturmaktadır. Verilerin ve hipotezlerin değerlendirilmesinde DFA (Doğrulayıcı Faktör Analizi) ve YEM (Yapısal Eşitlik Modeli) analizleri kullanılmıştır. Ölçeklerin güvenilirlik analizi Cronbach's Alpha katsayısıyla yapısal geçerliliği de DFA ile incelenmiştir. Analizler sonucunda elde edilen bulgulara göre restoran atmosferi boyutlarına yönelik (tesis estetiği, ambiyans, aydınlatma, yerleşim ve çalışan/personel) oluşturulan hipotezlerin hepsi araştırma sonuçlarına göre desteklenmiştir. Restoran atmosferi ölçeğinin alt boyutlarının etki katsayıları incelendiğinde en yüksek etki "yerleşim" boyutunda, en düşük etki ise "tesis estetiği" boyutunda olduğu görülmektedir. Restoran atmosferinin davranışsal niyet üzerinde anlamlı ve pozitif olarak etkisi olduğu tespit edilmiştir.

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## Introduction

Food and Beverage Businesses, where production and consumption are simultaneous, where producer and consumer are together and mutual interaction is intense, come to the fore as an important part of the service sector. All the elements that make up the service have a significant impact on the consumer's behavior and purchase intention. Therefore, there are many factors that affect the purchasing behavior of consumers in food and beverage businesses. The most important of these is the atmosphere of the business (Özata Şahin, 2022). The first study on the concept of atmosphere in the literature has been conducted by Kotler (1973). The aim of this study is to reveal the effect of consciously designed spaces on consumer behavior. Kotler defines atmosphere as *“purchasing environment designed to increase the probability of purchase, to be effective on the consumer and to evoke certain emotional impulses”* (Kotler, 1973). As for the other definitions made in literature regarding the atmosphere, Heung and Gu (2012) defined atmosphere as *“the conscious design of space”*, Milliman (1986) expressed it as *“an all-encompassing term used to describe an experience that is felt but not always seen”*, Ha and Jang (2012) defined atmosphere as *“an important factor in influencing customer satisfaction”* (as cited in Petzer and Mackay, 2014); Francioni, Savelli, and Cioppi (2018) defined it as *“all physical and non-physical elements that can affect the customer's behavior towards the business”* and finally, Turley and Bolton (1999) used the phrase *“shaping a marketing environment to both encourage certain behaviors and evaluations from consumers and to appeal to a specific target market”*.

Kotler argues that the atmosphere is formed by a combination of various factors. He expresses these factors as sight, sound, hearing, and touch (Ariffin, Bibon, and Abdullah, 2012). Bitner (1992), on the other hand, defined the atmosphere in three dimensions as “environmental conditions”, “spatial order and functionality” and “signs, symbols and objects”. Ambient conditions refer to the abstract background features of the environment such as lighting, temperature, music, and smell. Spatial layout and functionality refer to the ease with which machinery, equipment and goods in an environment achieve the set goals. Signs, symbols, and objects are open or closed signals that are used to communicate with customers about the environment (Liu and Jang, 2009).

In addition to these, atmosphere is used to meet various different terms in the literature. These can be listed as follows: “physical environment” (Baker, 1986; Han and Ryu, 2009; Hendriyani, 2018; Helmfalk and Hulten, 2017); “service extensions” (Bitner, 1992); “ambience” (Bschaden et al., 2020; Chiguvi, 2015; Stroebele and Castro, 2004); “physical evidence” (Sherry, 1998), “marketing environment” (Turley and Milliman, 2000); “economic environment” (Arnold, Handelman, and Tigert, 1996); “interactive space” (Mathwick, Malhotra and Rigdon, 2001); “environmental psychology” (Weinrach, 2000; Horng, Chou, Liu, and Tsai, 2013); “social work domain” (Tombs and McColl-Kennedy, 2003). Of these concepts, while the physical environment, physical evidence and service extensions express abstract background features, ambience represents abstract background features that tend to affect non-visual senses (Ryu and Jang, 2008<sub>a</sub>). The physical environment can affect behavior and has the feature of characterizing the restaurant environment within the context of atmosphere (Helmfalk and Hulten, 2017).

It is possible to see many prominent studies on the evaluations of restaurant atmosphere in the literature (Bitner, 1992; Baker and Cameron, 1996; Kivela, Inbakaran, and Reece, 2000; Raajpoot, 2002; Sulek and Hensley, 2004; Wall and Berry, 2007; Ryu and Jang, 2008<sub>a</sub>; Liu and Jang, 2009; Kim and Moon, 2009; Voon, 2011; Ryu and Han, 2011; Ariffin, Bibon and Abdullah, 2012). In our study, the DINESCAPE model (Ryu and Jang, 2008<sub>a</sub>), which is frequently used in the literature, was used. The basic approach of this model is to determine the

effect of physical environments (including only the physical environment where food is eaten, external places are not included, parking lot, etc.) on customer perception. It is thought that this study, in which it is suggested that the restaurant atmosphere can affect the purchasing behavior of customers, may provide an advantage for business managers, and make it possible to make a difference in the competitive environment by concentrating on the atmosphere in the restaurant.

There are many measurement models for restaurant atmosphere in the literature. These models are DINESCAPE Model, Servicescape Model, TANGSERV Model, Flynn Model and Mehrabian-Russel (S-O-R) Model. These dimensions, which are considered as interior and exterior, provide the opportunity to evaluate the physical conditions of restaurants. In the current study, the DINESCAPE scale, which covers these physical conditions in detail and includes only the interior, is the DINESCAPE scale. These dimensions are; ambiance, aesthetics, lighting, table arrangement and layout, and staff/employees. Conceptually, DINESCAPE is defined as “the man-made physical and human environment in the dining areas of restaurants” (Ryu and Jang, 2008b). While this scale focuses on the interior of restaurants, it does not include the exterior (park, etc.) and areas outside the point of purchase (restrooms and customer waiting areas, etc.). In short, this scale addresses the physical environment within the restaurant. This model, developed by Ryu and Jang (2005), examines the restaurant atmosphere in 6 dimensions. The DINESCAPE model addresses features specific to the service sector such as facility aesthetics, ambiance, lighting, table arrangement, area arrangement, and employees (Choi, Yang, and Tabari, 2020). DINESCAPE is similar to the Servicescape concept, which describes the characteristics of the physical environment, but the difference is that it is limited to dining areas only (Ryu, 2005).

### **Literature Review**

Restaurant managers need to determine which aspects of the restaurant need to be invested in to increase customer satisfaction and encourage repeat visits. In addition to the quality of food in a restaurant, the physical environment of the restaurant, that is, the atmosphere variables, can affect customer satisfaction and repeat visits. Factors such as decor, sound, temperature, cleanliness, smell, lighting, color and music can be counted among the factors that can affect it. While these factors allow the restaurant to have a better image, they can also contribute greatly to the creation of the customer's expectation of a better dining experience (Sulek and Hensley, 2004).

There are different opinions in the literature regarding the dimensions of the atmosphere. According to Rosenbaum and Massiah (2011), the atmosphere consists of four dimensions. These are physical, social, social symbolic and natural dimensions. Bitner (1992) considers the dimensions of the atmosphere as environmental conditions, spatial order and functionality. Ambient conditions; While it covers the background features of the environment such as temperature, lighting, noise, music and smell, spatial layout shows the ways in which equipment and furniture are arranged, and functionality shows the performance of these elements and the ability to facilitate the achievement of goals. According to Ryu and Jang (2008<sub>a</sub>), the atmosphere dimension consists of six dimensions. These are facility aesthetics, ambiance, lighting, table layout, layout and employees.

Similar to the views of Ryu and Jang (2008<sub>a</sub>), Heung and Gu (2012) examined the restaurant atmosphere in four dimensions, including facility aesthetics, ambiance, spatial layout and employee factors. But then they added scenic appeal as the fifth dimension. They stated that the reason for this is that although the view is not physically a part of the restaurant, it is an integral part of the atmosphere. A good view can be a good selling factor for the restaurant's

marketing. Lucas (2003) examined the atmosphere in five dimensions and these dimensions are; cleanliness, seating comfort, interior decor, ambience and cleanliness.

Contrary to these views that focus on the interior, Berman and Evans (1995) divided the atmosphere into four categories: outdoor, indoor, design variables and point-of-purchase-decoration variables (as cited in Heung and Gu, 2012). Again, Turley and Milliman (2000) examined the restaurant atmosphere in five dimensions by including external factors. These dimensions are external variables, internal variables, layout variables, purchasing and decoration variables and human variables. Turley and Milliman added an “interior” dimension to the restaurant atmosphere, including music, sound, lighting, scent, color, temperature and visual design that had not been grouped before.

As can be seen, in the literature, atmosphere is defined by many researchers in different dimensions (decor, sound, temperature, music, color, spatial layout, functionality, noise, equipment, furniture, ambience, employees, facility aesthetics, scenic attractiveness, interior, exterior, design variables). , human variables and purchase note, etc.) are discussed. What these dimensions have in common is that they can affect the consumer positively or negatively in the purchasing environment. Managers who want to gain competitive advantage or differentiate themselves need to make improvements or updates on these dimensions in the purchasing environment in order to create a positive impact on the consumer.

The atmosphere of the restaurant has been discussed in many dimensions in the literature. These dimensions, considered indoor and outdoor, provide the opportunity to evaluate the physical conditions of restaurants. In the current research, the scaling that covers these physical conditions in detail and only includes the interior space is the DINESCAPE scale. These dimensions; ambience, aesthetics, lighting, table layout and layout and personnel/employees. Conceptually, DINESCAPE is defined as “the man-made physical and human environment in restaurant dining areas” (Ryu and Jang, 2008<sub>b</sub>). While this scale focuses on the interior of restaurants, it does not include outdoor areas (parks, etc.) and areas outside the point of purchase (toilets and customer waiting areas, etc.). In summary, this scale addresses the physical environment within the restaurant.

One of the most important factors that make up the restaurant atmosphere is ambience (Şahin, 2019; Şahin and Yazıcıoğlu, 2020). It is stated that ambience, which refers to environmental factors such as smell, sound, lighting, heat, music, etc. that affect the subconscious through the senses, has an effect on consumption behavior (Ryu and Jang, 2005). It refers to abstract background features that tend to affect non-visual senses and can affect the subconscious on customers. These background conditions mainly refer to music, smell, and temperature (Ryu and Jang, 2008<sub>a</sub>).

Physical environments are one of the influential factors in a customer's psychological state and behavior in service industries. Facility aesthetics is the dimension that includes architectural design along with interior design and decor that contribute to the attractiveness of the environment. After entering a restaurant's dining area, customers consciously or unconsciously observe elements that may affect their attitudes towards the restaurant (Ryu and Jang, 2008<sub>a</sub>). Horng, Hong, and Lin (2011) stated that facility aesthetics greatly affect the overall atmosphere. Wakefield and Blodgett (1996) think that customers are affected by the arrangements (walls, colors, floor, tables and chairs, etc.) in the restaurant. Different architectural designs can lead to different moods, emotions, and feelings. Interior design factors such as furniture, pictures, plants, and wall decorations can serve to increase the perceived quality of dining environments and create feelings such as pleasure or arousal in the customer (Ryu and Jang, 2008<sub>a</sub>).

Lighting, which is included in the restaurant atmosphere dimensions, is also included in the dimensions of ambiance. There is a view in the literature that lighting can be a part of ambiance. The reasoning of those who argue the opposite of this view is that if a dimension is important for customers, that dimension can be considered as a single dimension. Therefore, lighting was removed from the ambiance dimension and considered as a separate dimension (Ryu and Jang, 2008a). Lighting is considered an important component of the restaurant atmosphere and is stated to visually affect everything in the restaurant, including the products purchased by customers (Summers and Hebert, 2001). There are limited studies on lighting in the literature (Gardner and Siomkos, 1986; Baker et al., 1992; Areni and Kim, 1994; Cuttle and Brandston, 1995; Boyce et al., 1996).

In restaurants, various objects (tables, seats, etc.) are designed and arranged to improve service. Effective design of a physical environment or spatial layout is very important in ensuring customer satisfaction because it gives customers a sense of comfort. Table arrangement and layout refers to the arrangement of objects such as machinery, equipment, and furniture, the size, shape of objects, and the relationship between these objects (Hyun and Kang, 2014). Staff professionalism is one of the restaurant atmosphere dimensions. However, this variable made it difficult to distinguish the effect of service quality from the elements of atmosphere, so this dimension was removed. The main difference between atmosphere and service quality is that atmosphere occurs without a service encounter, while service quality requires a service. The human variable is not as easily controllable as other elements of atmosphere. Therefore, service quality is not included as a dimension in the restaurant atmosphere (Heung and Gu, 2012).

### Methodology

The aim of this study is revealing the effect of restaurant atmosphere on behavioral intention. The main and sub-hypotheses developed for the purposes of the research are as follows:

H<sub>1</sub> expresses the hypothesis that "The restaurant atmosphere has a significant effect on behavioral intention". The sub-hypotheses formed in line with the main hypothesis are; H<sub>1a</sub> expresses the hypothesis that "Restaurant atmosphere 'facility aesthetics' dimension has a significant effect on behavioral intention". H<sub>1b</sub> expresses the hypothesis that "Restaurant atmosphere 'ambiance' dimension has a significant effect on behavioral intention". H<sub>1c</sub> "Restaurant atmosphere 'lighting' dimension has a significant effect on behavioral intention". H<sub>1d</sub> expresses the hypothesis that "Restaurant atmosphere 'layout' dimension has a significant effect on behavioral intention". H<sub>1e</sub> expresses the hypothesis that "The restaurant atmosphere 'employees/staff' dimension has a significant effect on behavioral intention". The research population consists of the customers of the 'Restaurants with Tourism Operation Certificate' operating in Ankara, the capital city of Türkiye.

The research universe consists of customers of 'Tourism Operation Licensed Restaurants' operating in Ankara. The list of relevant restaurants is in ANNEX-2 (The list was last updated as of 05.08.2021, YİGM, 2021). Ankara was preferred because it is the second largest city in Turkey, the researcher is close to this city and there are many restaurants with tourism operation licenses in this city. The reason for choosing tourism operation licensed restaurants is that they are required to comply with the provisions regarding management, personnel and business characteristics, physical conditions and business principles. In addition, these businesses are affiliated with the provincial tourism directorates and the facility numbers are updated on the provincial directorates' websites. Therefore, the number of businesses also consists of up-to-date data.

In scientific research, determining the sample size - volume that will represent the universe is one of the basic factors that enable the generalization of research results to the universe (Ural and Kılıç, 2006: 46). Sensitivity, confidence level and the number of units in the sample to be selected are evaluated in relation to each other. The sample diameter that provides the desired level of sensitivity and reliability is given in the formula below, depending on the number of units in the population.

$$n = \frac{N(zs)^2}{Nd^2 + (zs)^2} \tag{1}$$

Here N is the number of units in the population, z is the critical value in the standard normal distribution for the desired reliability level, d is the sensitivity, and s is the standard deviation. If the sampling study is on the proportion in the population; the variance related to the proportion

$$s^2 = p.q \quad (q = 1 - p)$$

since the above formula is

$$n = \frac{Nz^2 pq}{Nd^2 + z^2 pq} \tag{2}$$

It is expressed as.

The number of samples to be selected from the population is obtained by applying the formula given in (2) above. Considering the nature of the study, the number of samples was determined with 95% reliability and 5% sensitivity. In this case, the required number of samples was determined to be approximately 384 according to the calculation made based on the formula (Yamane, 2001). The data collection process began with the determination of the number of samples.

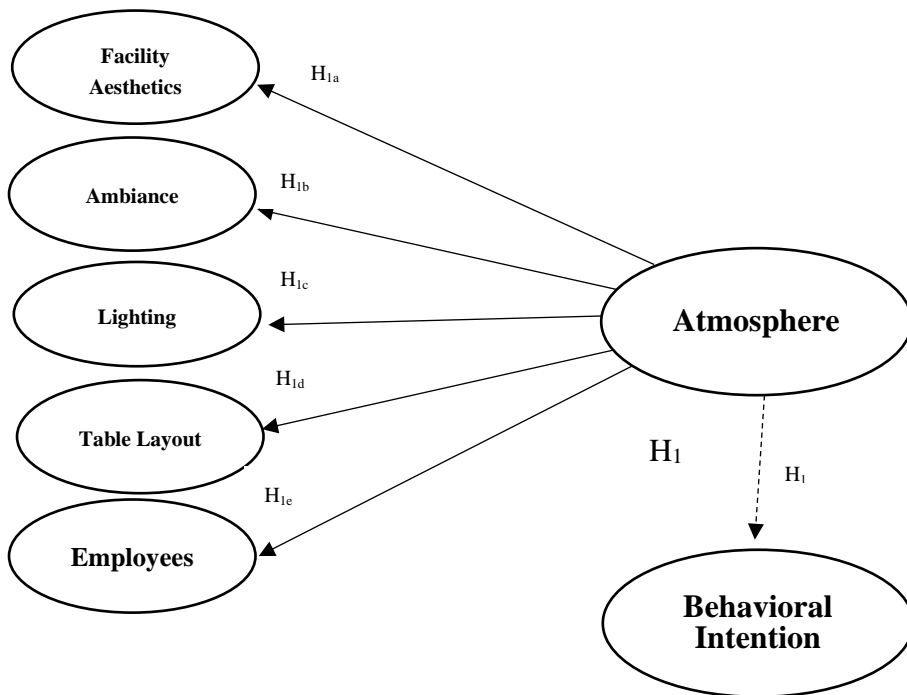


Figure 1: Research Model

## Data Collection

In this study, a questionnaire consisting of three parts has been used to collect primary data. In the first part of the questionnaire, there are six questions to determine the demographic characteristics of the participants. These questions are; participants' gender (1: Male, 2: Female), age (1: 18-24, 2: 25:34, 3: 35-44, 4: 45-54, 5: 55-64, 6: 65 and above), education level (1 : primary education, 2: High school, 3: Associate Degree, 4: Undergraduate, 5: Graduate), marital status (1: married, 2: single), monthly household income (1: 2800 TL and below, 2: 2800-4999 TL, 3: 4999- 6999 TL, 4: 6999-8999 TL, 5: 8999 TL and above), and frequency of eating out 1: almost daily, 2: several times a week, 3: once a week, 4: every fortnight, 5: once or twice a month ).

In the second part of the questionnaire, 21 statements about the restaurant atmosphere have been included. The statements in questionnaire have been adapted from the DINESCAPE scale used by Ryu and Jang (2008<sub>a</sub>) to measure restaurant atmosphere and have been graded as a five-point Likert scale (1- Strongly Disagree, 2- Disagree, 3- Undecided, 4- Agree, 5- Strongly Agree). This scale consists of six dimensions: facility aesthetics, ambiance, lighting, table setting, layout and employee/staff.

In the third part of the questionnaire, 4 statements have been included to determine the behavioral intentions of the participants. The aforementioned expressions have been used and adapted to the study by using the behavioral intention scale used by Yazdanpanah and Forouzani (2015) and adapted by Çekiç (2021). The behavioral intention scale is graded as a five-point Likert scale (1- Strongly Disagree, 2- Disagree, 3- Undecided, 4- Agree, 5- Strongly Agree). The data used in the research have been collected in Ankara between 25 September and 10 December 2021. 600 questionnaires have been applied, after removing the missing and incorrectly filled questionnaires, 564 usable questionnaires have been analyzed.

## Population Sampling

For this purpose, as the second largest city in Türkiye, Ankara has been chosen, hence the researcher's reachability to this city and the high number of restaurants with tourism operation certificates in this city. The reason for choosing the restaurants with tourism operation certificate is that they are obliged to comply with the provisions regarding management, personnel and business characteristics, physical conditions, and operating principles. In addition, these businesses are affiliated to the provincial directorates of tourism and the number of facilities is updated on the website of the provincial directorates. For this reason, the number of businesses also consists of up-to-date data. There are 78 enterprises with Tourism Operation Certificate on the website of the Ministry of Culture and Tourism. The list was last updated as of 05.08.2021 (YİGM, 2021).

## Reliability and Validity

In this context, the validity and reliability analysis findings for the scales used in the questionnaire are given below. The Cronbach's Alpha coefficient findings for the scales and sub-dimensions used in the questionnaire are given in Table 1.

**Table 1:** Cronbach's alpha coefficients for the scales and sub-dimensions used in the research

Scale/Dimension	Scale Item	Cronbach's Alpha
<i>Restaurant Atmosphere Scale</i>	18	0,929
Aesthetic	5	0,862
Ambiance	4	0,782

Lighting	3	0,741
Positioning	3	0,627
Employee	3	0,871
<i>Behavioral Intention Scale</i>	4	0,921

In general, confidence intervals are evaluated as; 0.80-1.00: the developed scale/test has high reliability; 0.60-0.79: the developed test is highly reliable; 0.40-0.59: the reliability of the developed test is low; 0.00-0.39: the developed test is not reliable according to Cronbach's alpha coefficients (Alpar, 2013). According to the findings obtained in our study, the reliability of the scales and sub-dimensions used in the research are as follows: Restaurant Atmosphere scale, aesthetics and personnel sub-dimensions, and other scales and sub-dimensions have been determined to have "high reliability". The ambience, lighting and layout dimensions of the Restaurant Atmosphere scale have been determined to be "quite reliable".

**Table 2:** Consistency coefficients of the scales used in the research

Index	Restaurant Atmosphere D1	Restaurant Atmosphere D2	Behavioral Intention
<b>CMIN/DF</b>	4,135	4,152	0,661
<b>GFI</b>	0,903	0,9	0,999
<b>CFI</b>	0,871	0,856	1
<b>RMSEA</b>	0,075	0,075	0

The consistency statistics values for the validity of the structural models of the scales used in the research are presented in Table 2. According to the findings, it is seen that the fit index values for the impact model of the scales are within the acceptable range.

### Research Findings

The survey included 21 statements to evaluate restaurant atmosphere. The statements in question were adapted from the DINESCAPE scale used by Ryu and Jang (2008a) to measure restaurant atmosphere and were rated on a five-point Likert scale (1- Strongly Disagree, 2- Disagree, 3- Undecided, 4- Agree, 5- Strongly Agree). This scale consists of six dimensions: facility aesthetics, ambience, lighting, table arrangement, layout and employees/staff.

**Table 3:** The effect coefficients regarding the "Facility Aesthetics" sub-dimension items on the Restaurant Atmosphere Scale

Expressions aesthetics	for Estimation	Standard Estimation	Standard Error	Critical Value	P
<b>A1</b>	<b>1</b>	<b>0,824</b>			
<b>A2</b>	0,901	0,839	0,039	22,937	0,000
<b>A3</b>	0,871	0,734	0,046	19,073	0,000
<b>A4</b>	0,689	0,619	0,045	15,408	0,000



<b>A5</b>	0,809	0,681	0,047	17,304	0,000
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When the effect coefficients of the items of the "Facility Aesthetics" Sub-Dimension of the Restaurant Atmosphere Scale presented in Table 3 are examined, it is seen that the effects of all items are statistically significant. According to the standard estimation values, it is seen that the highest effect was in the item "A2" (Wall decorations were visually interesting), and the lowest effect was in the item "A4" (The colors used created a warm atmosphere). Based on this result, the hypothesis that *"restaurant atmosphere 'facility aesthetics' dimension has a significant effect on behavioral intention"* (H<sub>1a</sub>) has been supported. In accordance with the results of the research conducted by Ünal, Akkuş and Akkuş (2014), it was stated that "When customers evaluate the aesthetics of the facility, they give priority to wall decorations. What's more, they considered paintings, colors, plants, and music as a part of aesthetics". According to the results of the research carried out by Keskin, Solunoğlu, and Aktaş (2020), it was determined that "the aesthetics of the facility, which is one of the dimensions of atmosphere, has a positive ( $\beta=1.496$ ,  $p<0.05$ ) and significant effect on the revisit intention of guests".

**Table 4:** The effect coefficients regarding the "Ambience" sub-dimension items on the Restaurant Atmosphere Scale

Expressions for aesthetics	Estimation	Standard Estimation	Standard Error	Critical Value	P
<b>A6</b>	<b>1</b>	<b>0,803</b>			
<b>A9</b>	1,086	0,831	0,048	22,707	0,000

When the effect coefficients of the items of the "Ambience" Sub-Dimension of the Restaurant Atmosphere Scale are examined in Table 4, it is seen that the effects of all items are statistically significant. Since the coefficients of the items A7 and A8 were insignificant during the analysis phase, they were excluded from the model. According to the standard estimation values for the remaining items, the highest effect was seen in the item "A9" (The restaurant has a pleasant smell), and the lowest effect was in the item "A6" (Background music relaxed me). Smell, sound, lighting, heat, music, etc. that affect the subconscious through the senses. It is stated that ambience, which refers to environmental factors, has an impact on consumption behavior (Ryu and Jang, 2005). Based on this result, the hypothesis that *"restaurant atmosphere 'ambience' dimension has a significant effect on behavioral intention"* (H<sub>1b</sub>) has been supported.

**Table 5:** The effect coefficients regarding the "Lightning" sub-dimension items on the Restaurant Atmosphere Scale

Lightning	Estimation	Standard Estimation	Standard Error	Critical Value	P
<b>A10</b>	1	0,847			
<b>A11</b>	0,585	0,496	0,048	12,165	0,000
<b>A12</b>	0,941	0,806	0,042	22,625	0,000

In Table 5, when the effect coefficients regarding the "Lighting" Sub-Dimension items of the Restaurant Atmosphere Scale have been examined, it is observed that the effects of all items are statistically significant. According to the standard estimation values, it is understood that the highest effect is in the item "A10" (*Lighting provided a friendly atmosphere*), and the lowest effect is in the item "A11" (*Lighting created a feeling of welcome*). In a previous study,

it was stated that lighting in restaurants may affect many elements related to the atmosphere. According to the results of this study, while lighting can both increase and decrease the perception of space width, it can also make the atmosphere of the restaurant more attractive and create contrast by emphasizing the shape of the objects in ambiance (Özkul, Bilgili and Koç, 2020). According to another study, it was alleged that the intensity and wavelengths (color and tone) of light affected the time spent in the restaurants (Helmefalk and Hulten, 2017). Based on this result, the hypothesis that “*the 'lighting' dimension of restaurant atmosphere has a significant effect on behavioral intention*” (H<sub>1c</sub>) has been supported.

**Table 6:** The effect coefficients regarding the 'Layout' sub-dimension items on the Restaurant Atmosphere Scale

Layout	Estimation	Standard Estimation	Standard Error	Critical Value	P
A16	1	0,838			
A17	-0,268	-0,178	0,066	-4,052	0,000
A18	0,952	0,839	0,039	24,52	0,000

In Table 6, when the effect coefficients concerning the "Settlement" Sub-Dimension items of the Restaurant Atmosphere Scale have been examined, it is clear that the effects of all items are statistically significant. According to the standard estimation values, it is seen that the highest effect is in the item "A18" (*The layout allows me to move comfortably*), the lowest effect is in the item "A17" (*The sitting arrangement makes me feel cramped*). Layout refers to the way objects (equipment, furniture, etc.) are arranged within the environment. Layout can have a direct impact on customers' perception of quality, their level of pleasure and excitement, and their desire to revisit (Ryu and Jang, 2008<sub>a</sub>). Based on this result, the hypothesis that "the 'settlement' dimension of restaurant atmosphere has a significant effect on behavioral intention" (H<sub>1d</sub>) has been supported.

**Table 7:** The effect coefficients of the 'Personnel' sub-dimension items on the Restaurant Atmosphere Scale

Personnel	Estimation	Standard Estimation	Standard Error	Critical Value	P
A19	1	0,834			
A20	0,961	0,844	0,039	24,578	0,000
A21	0,942	0,82	0,04	23,473	0,000

In Table 7, when the effect coefficients regarding the items in the sub-dimension "Personnel" of the Restaurant Atmosphere Scale have been examined, it is seen that the effects of all items are statistically significant. According to the standard estimation values, it is clear that the highest effect is in the item “A20” (*Sympathetic employees make me feel good*), and the lowest effect is in the item “A21” (*Employees are clean and well dressed*). According to Turley and Milliman (2000), employee factors include employees (employee characteristics, employee uniforms), customers (customer characteristics, customer density, etc.) and privacy. According to Ryu and Jang (2008<sub>a</sub>), personnel/employees; It refers to the appearance and number of employees. Although the physical appearance of customers should also be evaluated among these factors, only the number of employees and their appearance were evaluated due to the difficulty of controlling this situation (Ryu and Jang, 2008<sub>a</sub>). Based on this result, the hypothesis

that "restaurant atmosphere 'personnel/employee dimension has a significant effect on behavioral intention" (H<sub>1e</sub>) has been supported.

**Table 8:** The effect coefficients regarding sub-dimensions of the on the total scale

Atmosphere	Estimation	Standard Estimation	Standard Error	Critical Value	P
Facility Aesthetics	1	0,767			
Ambiance	1,056	0,989	0,063	16,66	0,000
Lightning	1,081	0,948	0,064	16,866	0,000
Layout	1,134	0,996	0,065	17,343	0,000
Personnel	1,103	0,97	0,065	16,953	0,000

In Table 8, when the effect coefficients of the sub-dimensions on the restaurant atmosphere scale have been examined it is observed that the effects of all dimensions are statistically significant. According to the standard estimation values, it is seen that the highest effect is in the "layout" dimension and the lowest effect is in the "facility aesthetics" dimension. Based on this result, the hypothesis that "restaurant atmosphere has a significant effect on behavioral intention" (H<sub>1</sub>) has been supported. In a study, it is stated that tourists who experience local food in a restaurant with a local food concept have a strong effect on their intention to revisit the restaurant (Gupta and Duggal, 2021). The result obtained supports the literature.

**Table 9:** The correlation coefficients for the relations between the sub-dimensions of the according to the CFA model

Dimensions	Aesthetics	Ambiance	Lightning	Layout	Personnel
Aesthetics	1				
Ambiance	0,805	1			
Lightning	0,657	0,725	1		
Layout	0,603	0,667	0,662	1	
Personnel	0,651	0,740	0,784	0,727	1

The correlation coefficients regarding the relations between the sub-dimensions of the have been given in Table 9. The fact that all correlation coefficients are positive can be interpreted that there is a positive relationship between these variables. This is all to say that, when one of the variables increases, it is expected that the other variables will increase.

**Table 10:** The correlation coefficients for the relationship between restaurant atmosphere and behavioral intention according to the CFA model

Dimension	Restaurant Atmosphere	Behavioral Intention
Restaurant Atmosphere	1	
Behavioral Intention	0,537	1

The correlation coefficients including the relationships between restaurant atmosphere, service quality and behavioral intention have been presented in Table 10. The fact that all correlation coefficients are positive can be interpreted as a positive relationship between these variables. In other words, when one of the variables increases, it is expected that the other variables will increase, as well. The restaurant is considered more than just a place to eat, but a place where customers can spend quality time, relax, have fun and socialize (Welton, Jonsson and Walter, 2018). Therefore, any improvement made in the restaurant will also positively affect the customer.

## Conclusions

### Theoretical Contributions

The main objective of this research, which was carried out in Ankara specifically for the customers of the restaurants with Tourism Establishment Certificate, was to reveal the effect of restaurant atmosphere on behavioral intention in the post-purchase period. In the light of the findings obtained, it has been determined that the restaurant atmosphere has a significant and positive effect on behavioral intention. Therefore, any positive development in each dimension of the restaurant atmosphere positively affects behavioral intention, which is considered to be the output of the purchasing process.

In the previous studies conducted in literature, it was stated that the aesthetics of the facility greatly affected the general atmosphere (Horng, Hong, and Lin, 2011). According to another study, it was stated that customers were affected by the interior designs (walls, colors, floors, tables, and chairs, etc.) of the restaurant (Wakefield and Blodgett, 1996). Different architectural designs may lead to different moods, emotions, and feelings. The interior design factors such as furniture, paintings, plants, and wall decorations can serve to increase the perceived quality of dining environments, creating feelings such as pleasure or arousal in a customer (Ryu and Jang, 2008<sub>a</sub>). In accordance with the results of the research conducted by Ünal, Akkuş and Akkuş (2014), it was stated that “When customers evaluate the aesthetics of the facility, they give priority to wall decorations. What’s more, they considered paintings, colors, plants, and music as a part of aesthetics”.

According to the results of the research carried out by Keskin, Solunoğlu, and Aktaş (2020), it was determined that “the aesthetics of the facility, which is one of the dimensions of atmosphere, has a positive ( $\beta=1.496$ ,  $p<0.05$ ) and significant effect on the revisit intention of guests”. In a previous study, it was stated that lighting in restaurants may affect many elements related to the atmosphere. According to the results of this study, while lighting can both increase and decrease the perception of space width, it can also make the atmosphere of the restaurant more attractive and create contrast by emphasizing the shape of the objects in ambiance (Özkul, Bilgili and Koç, 2020). According to another study, it was alleged that the intensity and wavelengths (color and tone) of light affected the time spent in the restaurants (Helmefalk and Hulten, 2017).

According to the research findings obtained as a consequence of the analyzes, it has been determined that there is a significant and positive effect between the atmosphere and behavioral intention ( $p<0.05$ ). The more accurately the restaurant atmosphere is designed and planned with all its dimensions, the higher customer satisfaction and gratulation will be ensured. This subject has been extensively discussed in literature and studies have presented consequences supporting the findings obtained. In these studies, the dimensions that make up the restaurant atmosphere were examined one by one. Therefore, the findings of this study are important in terms of providing integrity.

It is of great importance for businesses to develop innovative and effective sales activities in a competitive environment. It is believed that the results obtained from this study will help businesses develop various strategies concerning the atmosphere. Through this study, it is thought that the effect of restaurant atmosphere on behavioral intention will be an important resource for both scientific and food & beverage businesses with the results obtained by supporting it by means of statistical analysis.

### **Practical Implications**

Factors such as facility aesthetics, ambience, lighting, layout and personnel affect the perception of the restaurant atmosphere. Therefore, it is very important to develop these elements in order to positively affect customers' emotions, thoughts and physical actions towards the restaurant. Customer satisfaction will be achieved when restaurants work meticulously on each factor and make successful improvements.

When the dimensions regarding the restaurant atmosphere are examined, business managers can work on related dimensions to increase customer satisfaction. This study has focused on “interior aspects” of restaurant atmosphere; however, the size of the research can be expanded by focusing on the “external aspects” in future studies. According to research results, it has been observed that, while the highest effect in the is in the layout dimension, the lowest effect is in the facility aesthetics dimension. Accordingly, a number of adjustments could be made according to the expressions in the layout dimension of the businesses in order to ensure customer satisfaction.

Each aspect of the restaurant atmosphere (facility aesthetics, ambience, lighting, table setting, layout, and workers/staff) can actually be studied as a research topic and by including environmental factors; the data obtained may provide the opportunity to make comparisons for both situations. As the “DINESCAPE” scale was used. However; by using other scales in literature, another dimension of the subject can be analyzed. The scope of the study can be expanded by including the variables concerning the theory of planned behavior (attitude towards behavior, subjective norm, and perceived behavioral control). Similar studies could be conducted in different cities or countries by expanding the scope of the research and the results can offer comparison opportunities. The ability of businesses to gain superiority in the competitive market and achieve their goals and objectives is directly related to the purchasing behavior of consumers. Therefore, studies on this subject can play an important role in determining the sales and post-sales marketing strategies of businesses.

### **Suggestions**

When the dimensions of the restaurant atmosphere are examined, business managers can conduct studies on the relevant dimensions to increase customer satisfaction.

This study focused on the “interior” for the restaurant atmosphere, and the dimension of the study can be expanded by focusing future studies on the “exterior”.

According to the research results, it is observed that the highest effect in the restaurant atmosphere scale is in the layout dimension, while the lowest effect is in the facility aesthetics dimension. Accordingly, businesses can make arrangements according to the expressions in the layout dimension and provide customer satisfaction.

Each dimension of the restaurant atmosphere (facility aesthetics, ambience, lighting, table arrangement, layout and employees/personnel) can actually be studied as a research topic, and by including environmental factors, the data of both situations can be compared.

The DINESCAPE scale was used as the restaurant atmosphere scale. Other scales in the literature can be used to examine another dimension of the subject.

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The scope of the research can be expanded and applications can be made in different cities and comparisons can be made.

The ability of businesses to gain superiority in the competitive market and to achieve their goals and objectives is directly related to the purchasing behaviors of consumers. Therefore, studies to be conducted on this subject can play an important role in determining the sales and after-sales marketing strategies of businesses.

### **Limitations**

This study is limited to 564 participants who were in Ankara between September and December 2021. Additionally, these participants are limited to being customers of 78 Restaurants with Tourism Operation Certificates. Different results may be obtained in another study conducted on customers of other companies.

### **Future research**

Along with the results of this research, future studies can focus on the relationship between restaurant atmosphere and service quality and business performance.

### **Disclosure Statement**

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### **Ethics Committee Approval**

Ankara Hacı Bayram Veli University Ethics Commission, in its article E-11054618-302.08.01-62144 and titled "Scientific and Educational Purposes"; ,The issue regarding the thesis study titled "The Effects of Restaurant Atmosphere and Service Quality on Behavioral Intention", was discussed at the meeting of our Commission dated 08.12.2021 and numbered 10, and the relevant person's work, approved by the Ethics Commission, cannot be carried out ethically, provided that permission is obtained from the places where it is planned to be carried out. It was unanimously decided that there was no harm (Research Code No: 2020/258).

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