AN EXAMINATION OF THE RELATIONSHIPS BETWEEN PHYSICAL ENVIRONMENT AND CUSTOMER SATISFACTION IN RESTAURANTS

Dr. AFAF D. ALMOALLEM [1]*, HUSSAM HABIS [2], SHAHAD HABIS [3] and SAEED QUTUB [4]

[1] PhD, Assistant Professor, Department of Industrial Engineering, University of Business and Technology, Jeddah, Saudi Arabia. * Corresponding Author Email: a.almoallem@ubt.edu.sa

[2, 3, 4] Department of Industrial Engineering, University of Business and Technology, Jeddah, Saudi Arabia.

Abstract

This paper studies the main factors affecting restaurants' customer satisfaction by examining the combination of the effects of physical environments in Saudi Arabia. Therefore, the present study raises interesting conclusions with significant theoretical and practical implications. By using a well-designed questionnaire as a measurement tool for this work, the sampling space is the casual dining restaurant community in Jeddah, Saudi Arabia. Twenty questions were listed in the questionnaire asking about the restaurants' physical environmental factors such as lighting, facility aesthetics, table setting, and layout on customer satisfaction. Six different styles of restaurants were selected to conduct the survey. The results have been analysed and compared using different statistical software packages. The study found that Lighting is the essential factor for customer satisfaction by 76.1%, besides the importance of facility aesthetics, table setting, and layout, respectively. At the same time, the background music was the least important factor by 65.8%.

Keywords: Restaurants' Physical Environment, Customer Satisfaction, Facility Aesthetics, Table Setting, Layout.

1. INTRODUCTION

In line with the rapid pace of modern life, including fast-paced environments, longer working hours, and more complicated work-related residency conditions, eating out market is witnessing remarkably rapid growth of about 4.8% with the total amount of related transactions of USD 80.3 billion in 2016, which is equivalent to USD 102.4 billion in 2017 (Bukhari, S., 2015).

In Saudi Arabia, the food industry sector is considered one of the most important and vital sectors in Saudi Arabia itself and in the world, because Saudi Arabia is one of the fastest growing economies, and the fourth in terms since domestic tourism is considered a major public option, where the occupancy level usually reaches significantly high rates in hotels and restaurants (Bukhari, S., 2015).

Local chains, international franchisees, and independent owners are the main investors in the food industry sector in Saudi Arabia, which includes several branches: full-service restaurants, fast food outlets, home delivery services, street kiosks as well and cafes. There is intense competition in the restaurant sector due to the increasing number of restaurants. Thus, the physical environment is an important and essential factor in the overall client's dining experience. Restaurant stakeholders and decision makers such as owners, managers, investors,

and designers should distinguish between restaurants through the physical environment as well as the overall vibe to innovate a unique experience for individuals. Since many customers prefer the aesthetics and the appearance of the environment more than the food or service, the physical environment of a restaurant is essential for current customer satisfaction as well as attracting new customers (Bukhari, S., 2015).

Despite the growing importance of the physical environment of eating-out outlets and its noticeable effect over time on customer satisfaction in Saudi Arabia, there is a real and profound poverty dearth in both scientific and economic research literature dealing with such aspects. Few studies that were conducted to address the factors of food industry success, surprisingly, omit any mention of the physical environment factors. For example, Gadelrab and Ekiz in their study have limited factors of success and supporting customer satisfaction to strategy, marketing, and staffing issues (Gadelrab and Ekiz, 2019).

However, some researchers around the world have been discussing the effects of physical environment and interior design such as: In 2018, Özdemir-Güzel, S. and Dinçer, M. Z. mentioned that Global competition in the 21st century has made it essential for firms to differentiate from their competitors. Physical environment elements in this needed differentiation have a significant role. The physical environment, either in the differentiation of the atmosphere, changing the total perception of the product or creating the first impression to provide preferred, has become a strategic factor preferred by restaurants which will affect customer satisfaction and loyalty in the context (Özdemir-Güzel, and Dinçer, 2018).

The results of the study by Tuzunkan, D. and Albayrak, A. indicate that effective factor groups regarding restaurant physical environment were determined respectively as (first) service staff, (second) facility aesthetics, (third) layout, (fourth) ambiance, (fifth) table setting and (sixth) lighting (Chua, Karim, Lee, and Han, 2020). Our research tries to analyze how restaurants can succeed in distinguishing between their physical environments as well as its effects on customer satisfaction and loyalty. For what reasons do customers prefer a restaurant with a good physical environment? How does the physical environment of a restaurant affect the individual? Does the physical environment really make a customer loyal and satisfied? How do the factors of physical environment in restaurants: facility aesthetics, ambient factors, lighting, layout, and table setting, measure the degree of their effectiveness on customers' numbers in casual restaurants? What physical environmental factors affect customers more?

In this context, the purpose of this study is to find out how the physical environment is perceived by customers in the casual dining restaurants in the city of Jeddah. In addition, another objective is to reveal the extent to which the physical environment shapes the customer's satisfaction and loyalty trends through the perceived value.

2. THEORETICAL FRAMEWORK

2.1 Customer Satisfaction

Customer satisfaction can be defined as "a dynamic condition associated with fulfilling customer expectations of the service experience rendered" (Ivkov, 2014). Customer satisfaction

is the main trigger for everything that a restaurant needs to be "a successful business," i.e., more spending, more visits, and good publicity by sharing positive experiences whether within the circles of relatives, friends, and acquaintances, or even strangers through social media. This means that the intrinsic mission of any restaurant is to provide more and more amenities to gain the admiration and satisfaction of customers. In fact, a restaurant may have multiple strength points such as location, societal formation, and food quality, however, its failure to achieve customer satisfaction is enough to nullify all these strengths.

Common features prevailing in developing countries play a fundamental role in determining audience preferences towards several life aspects including preferences towards restaurants. Identical cultures, similar values, norms, and social behaviors are usually some of the common features that societies in developing cultures enjoy, which lead to less individuality and more collective. Therefore, the criteria for success and excellence are almost the same in such societies (Bukhari, S., 2015).

In the context of the public's preferences in the field of the food industry, some countries that have several commonalities with the Kingdom of Saudi Arabia, in terms of societal and cultural formation, have a common view of the factors affecting customer satisfaction and loyalty (Bukhari, S., 2015). For Malaysia, the factors are product quality, customer satisfaction, and brand trust (Nezakati and Asgari, 2011).

2.2 Physical Environment

Several studies indicate that interior design and the physical environment have a great impact on the psychological state of customers, whether enforcing or suppressing it. Being attractive or alienating is another feature of interior design to be a reason for a change in the customer's decision to have the service at an exact restaurant or to switch to another that has more psychological attractions. Thus, the interior design and physical environment are key factors in increasing sales, income, and market shares of restaurants (Tuzunkan and Albayrak, 2016).

Five human senses have been the focus of interior design for Kotler, one of the first scholars who studied the physical environment at restaurants: sight, sound, scent, touch, and taste, as he believed that these senses are deeply influenced by interior design and the atmosphere associated with it (Renata, C. 2021). However, Bitner identified three dimensions of surrounding factors: ambient factors such as temperature, lighting, noise, music, and scent, and spatial layouts such as machinery, equipment, and furnishings in terms of the adequacy of their physical characteristics and functionality. In addition to signs, containing symbols and artifacts (Renata, C. 2021). Later, Berman and Evan (1995) conducted the same study, and obtained the same results, with the difference of including the exterior factors in the atmospherics dimension. In the context of similar studies, Turley and Milliman (2000) added human variables to the factors affecting atmospheric perceptions. These human variables include three main aspects: customers; customer characteristics, crowding, and density. Employees; personnel characteristics and staff uniform, and finally: privacy.

One of the most important studies conducted in this regard, was by Ryo and Gang (2008), in which they created a measuring scale called DINESCAPE, representing the artificial physical and man-made surroundings in the dining area of upscale restaurants. The findings of the study included six dimensions, namely: facility aesthetics, lighting, ambiance factors, layout, table settings, and service staff.

Customers' feelings -which they acquire through their experience- form the core of their perceptions about the product. Three categories of surrounding factors contribute to the formation of such feelings, ambient factors, design, and social elements. Sound, smell, taste, touch, decoration, layout, and staff member's behaviour. According to Lim (2010), the combination of high-quality food and service, with a comfortable atmosphere is essential in creating customer satisfaction, which leads, in turn, to the desired subsequent sentiments and behaviour toward the business (Tuzunkan and Albayrak, 2016).

In Saudi Arabia, just like other countries all over the world, a group of key factors have a true impact on customer satisfaction, such as physical environment, appearance, food service, food quality, cleanliness, and surrounding ergonomics factors. Some of the most important physical environment factors are interior/exterior design, table/chair setup, height, lighting, noise, hygiene, and other environmental factors. The better these factors are, the greater the customer satisfaction and loyalty.

Based on the foregoing, it makes sense to believe that the physical environment, through its influence on customer's satisfaction, has a significant impact in reshaping customers' perceptions about an exact restaurant or any kind of service institution, hence, its brand image.

As an attempt to develop a deeper definition and understanding of the concept of the physical environment, Hanaysha (2016) stated that the physical environment of a restaurant includes all elements that exist inside or outside this restaurant whether they are tangible or intangible, such as lighting, music, scent, noise, temperature, and atmosphere. Believing in the importance and role of the physical environment, Hanaysha believes that the appropriate physical environment is necessary for strengthening the existing customer base, in preparation for expanding this base through positive customer reviews (Tuzunkan and Albayrak, 2016).

3. INDEPENDENT VARIABLES: FIVE PHYSICAL ENVIRONMENTAL FACTORS

3.1 Lighting

Lighting is an independent aspect of the physical environment (Tuzunkan, and Albayrak, 2016).

3.2 Aesthetics

The aesthetics of the facility include elements that can create positive feelings, such as architectural design /style, interior design, and décor. These items contribute to the success of restaurants and increase their revenues, as Ryu and Jang stated (Tuzunkan, and Albayrak, 2016). Other aspects may have a crucial impact on dining environments through the creation of pleasure and arousal emotions, such as furniture, pictures/paintings, plants/flowers, and wall

decorations. It is of utmost importance to consider the colours chosen in the décor, as these colors have an influence on the mental and emotional state of patrons, as different colors lead to different moods, feelings, and emotional associations (Tuzunkan, and Albayrak, 2016).

3.3 Table Setting

Besides the sensitivity of the way with which tables are arranged and organized, considering the concept of privacy and intimacy of customers, tables, and chairs as the most important pieces of furniture inside restaurants should have several characteristics of comfort, elegance, and functionality, as they must be inviting, durable and easy to keep clean.

3.4 Layout

The way with which things, such as machinery, equipment, and furnishings are arranged within the physical environment is known as "layout." Creativity and innovation are some of the most crucial considerations in this context because a constricted layout adversely influences the customer quality perceptions, excitement, and desire to return (Tuzunkan, and Albayrak, 2016).

3.5 Ambience

Four main elements are included in the ambience factor: temperature, noise, scent, and music (Tuzunkan, and Albayrak, 2016).

4. MATERIALS AND METHOD

The researchers have used a questionnaire with 20 questions as the measurement tool of this study, where the sample space here is the community of casual restaurants in Jeddah. A sample of (six well-known restaurants) was chosen to conduct the survey within, a group of customers in each restaurant who were chosen randomly and asked to participate and respond to the questionnaire during their mealtime. The restaurants have been identified as per the following interior design styles in addition to, the Signature dish it has been coded with a name to maintain the restaurant's privacy

(1) Restaurant A Style

Color palette: warm colors (red and yellow)

Layout: open space layout

Furniture: "Mix wood and metal" and red leather

Finishing: Different types of wood, plaster-painted walls and red leather.

Signature dish: country fried chicken.

(2) Restaurant B Style

Color palette: bold color combinations to create the Portuguese African look & feel.

Layout: open and closed table seating.

Furniture: comfortable furniture made of timber and leather with different patterns.

Finishing: playful ceramic tiles were used with finesse to create patterned and richly textured venues. Bold and dynamic lighting defines restaurant areas and strikingly illuminate the playfully designed interiors.

Signature dish: Chicken Espetada.

(3) Restaurant C Style

Color palette: neutral colors and shades

Layout: focus on making the space feel as open as possible. The design includes plenty of negative space. The function is the focus pathways to travel around space are wide. Limited pieces that pull double duty in terms of usage and aesthetic value.

Furniture: "Mix wood and metal", mixing the old and the new. Mixing different types of wood and metal throughout the design. Using vintage furniture that looks old and unfinished.

Finishing: brick walls. Variety of wood, stone, and metal pieces in the design.

Signature dish: Meat Steak "black rock steak."

(4) Restaurant D Style

Color palette: neutral colors with using art pieces.

Layout: open layout with different levels.

Furniture: unmovable furniture made of wood and leather.

Finishing: The main structure looks like a warehouse with an exposed ceiling, ducts, and beams. Using different types of wood.

Signature dish: Texas Steak and cinnamon butter bread.

(5) Restaurant E Style

Color palette: trendy colors

Layout: unique and focusing on the function over the form

Furniture: Mixing and matching different furniture design styles is realized. mixing the old, the new, the modern, and the classic.

Finishing: affordable luxury, French limestone floors, then we throw in some Egyptian columns, Victorian beadboard wood paneling — an eclectic mix

Signature dish: strawberry cheesecake and Fried Macaroni and Cheese.

(6) Restaurant F

Color palette: cold colors (blue hues),

Layout: open floor plan to create a breezy and airy atmosphere.

Furniture: suede and satin comfortable.

Finishing: Light wood floors and furniture and using natural-inspired materials.

Signature dish: Seafood

RESULTS AND DISCUSSION

The statistical data resulting from the conducted questionnaire refer to two key facts that have been mentioned previously in the context of this discussion. As shown in (Figure 1) 57% of casual restaurant visitors are males, while the number of female visitors was 43%, which is a significantly large percentage in relation to the societal restrictions imposed on females in such a conservative society. These statistics lead to strengthening the fact that Saudi families depend on restaurants as a primary means of entertainment and social gathering.
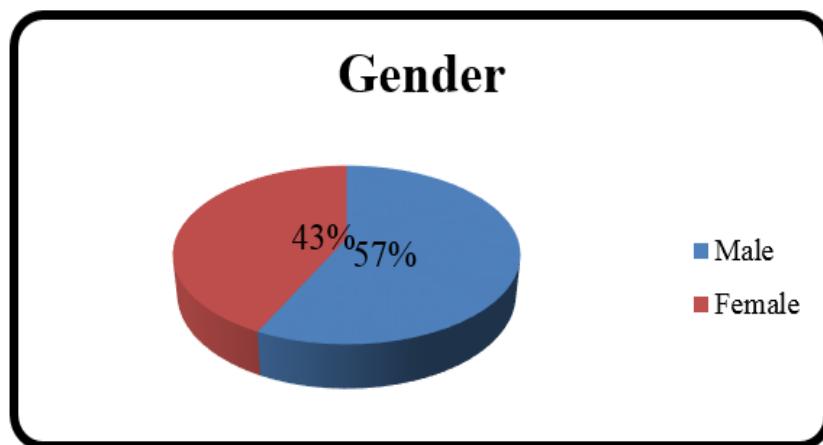
Figure 1: Casual Restaurant's Popularity, According to Gender

On the other hand, Statistics show that youth, within the working age group able to afford restaurant fees, are the largest group in terms of frequenting casual restaurants as shown in (Figure 2) where 54% of casual restaurant visitors are included within the age segment (25-39) years alone, while the rest of percentage were distributed among all other age groups, which confirms that the youth segment is the most important one for restaurants to be attracted.
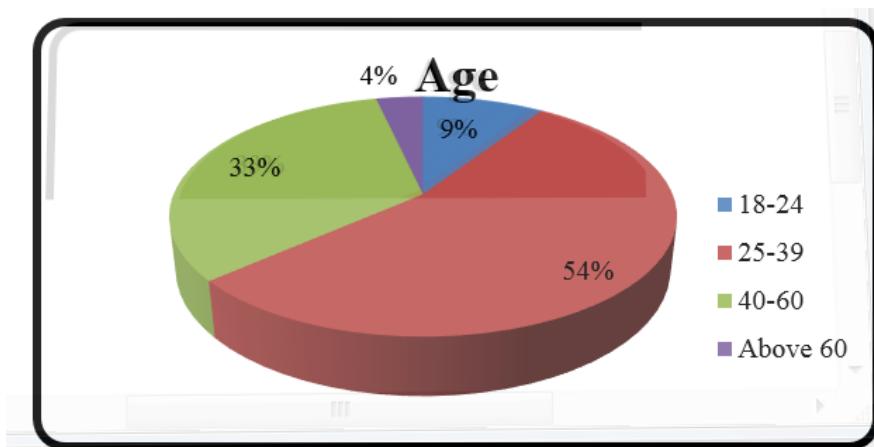
Figure 2: Casual Restaurant's Popularity, According to Age

For more detailed discussion, the researchers have used the SPSS (Statistical Package for the Social Sciences) program for the analysis of the questionnaire's data, and the findings were as follows:

Statistics show that all restaurants' average rating are above 3, which mean that the customers are satisfied with the restaurant's physical environment which in turn that there is a significant relationship between the customers satisfactions and the restaurant physical environment (Figure 3).
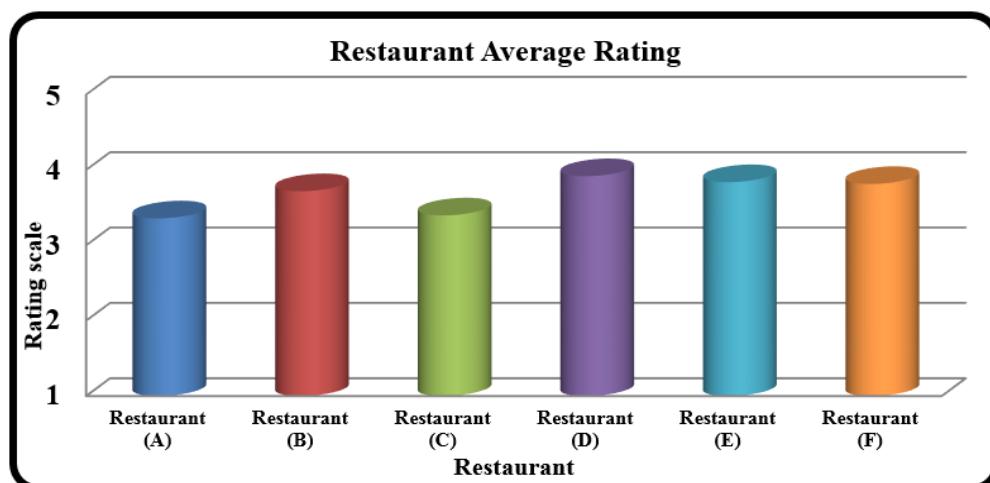
Figure 3: Restaurant Average Rating

After analyzing restaurant (A) collected data, the statistical analysis shows that the restaurant's average rating is (3.36) (Figure 4). All items below the average of the restaurant rating should be identified and improved.
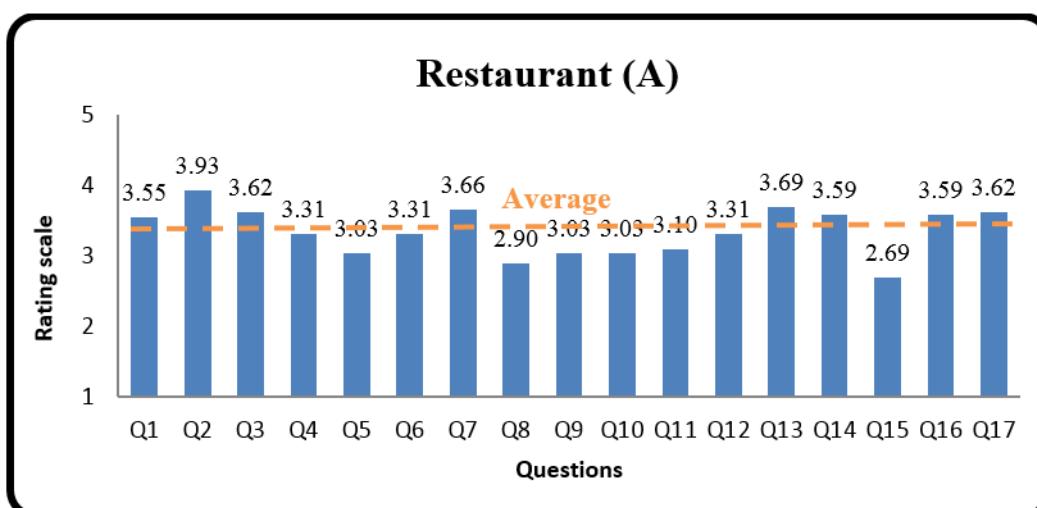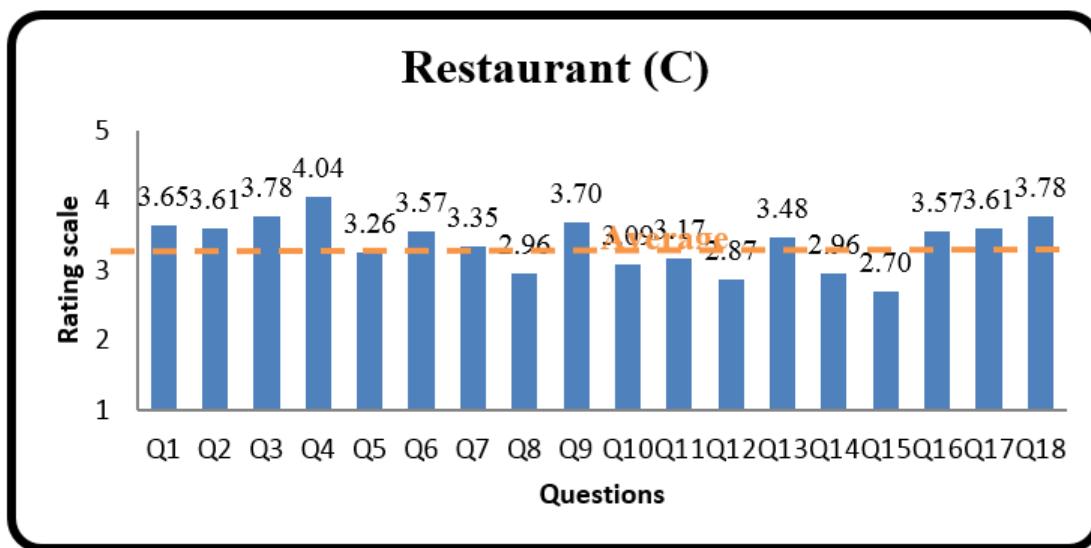

Figure 4: Restaurant (A) Rating

For Restaurant (A) the Factors Required Improvement

1. Layout makes it easy to move around.

2. Layout gives enough tangible privacy.

3. The interior design is visually attractive.

4. The linens (e.g., tablecloths, napkins) are attractive.

5. Colours used to create a warm atmosphere.

6. Wall decorations are visually appealing.

7. Paintings/pictures are visually catchy

8. Visual Appearance is not a concern; food taste is a concern.

9. Background music is pleasant.

After analyzing restaurant (B) collected data, the statistical analysis shows that the restaurant's average rating is (3.72) (Figure 5). All items below the average of the restaurant rating should be identified and improved.
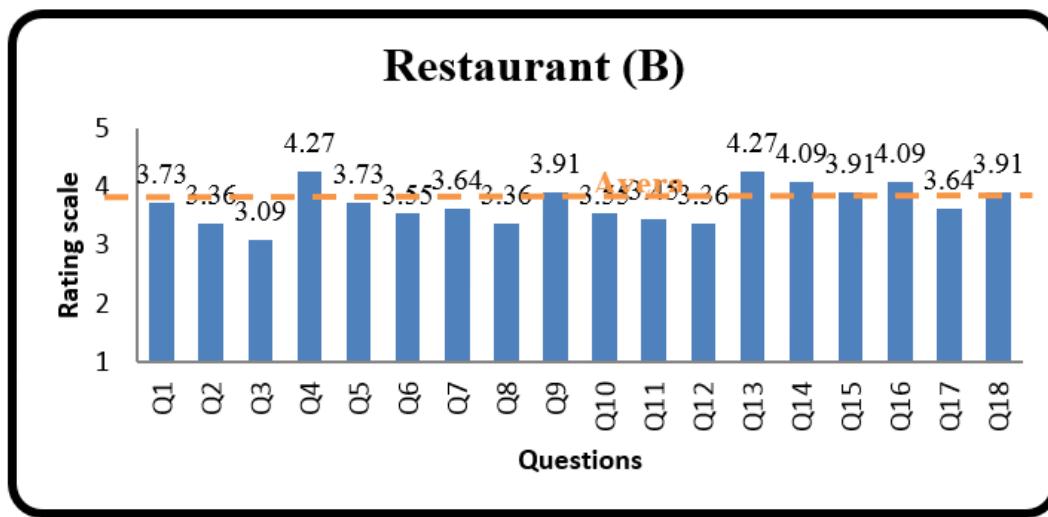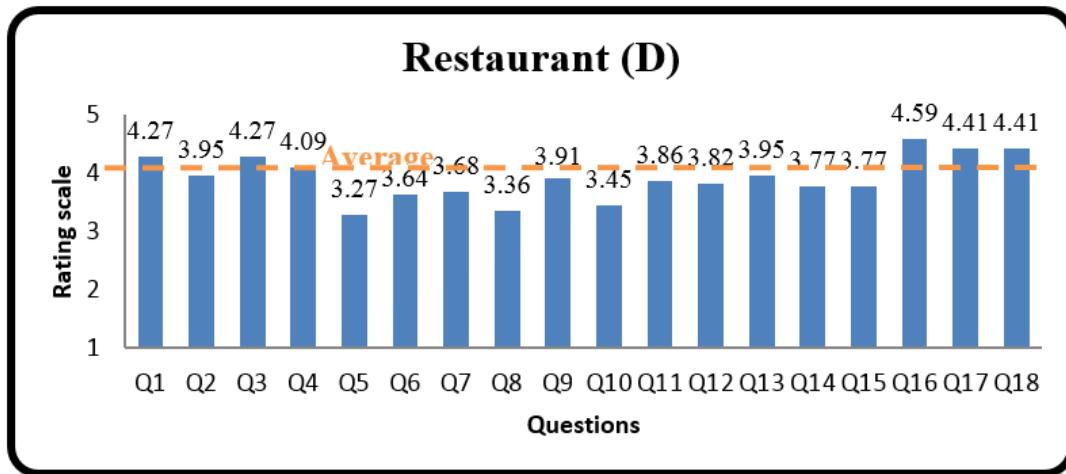

Figure 5: Restaurant (B) Rating

For restaurant (B) the factors required improvement:

1. The chair size is suitable (good quality).

2. Temperature is comfortable.

3. The interior design is visually attractive.

4. Menus are visually attractive.

5. The linens (e.g., tablecloths, napkins) are attractive.

6. Wall decorations are visually appealing.

7. Paintings/pictures are visually catchy

8. Visual Appearance is not a concern; food taste is a concern.

9. The restaurant meets my expectations.

After analysing restaurant (C) collected data, the statistical analysis shows that the restaurant's average rating is (3.72) (Figure 6). All items below the average of the restaurant rating should be identified and improved.
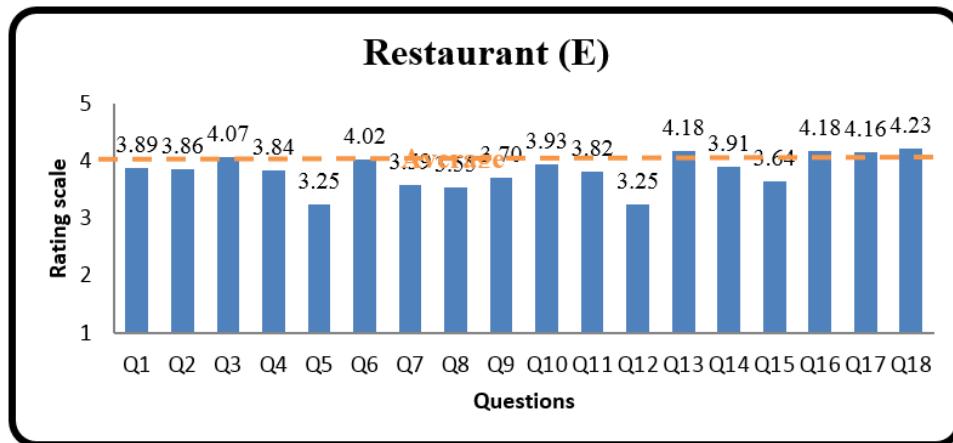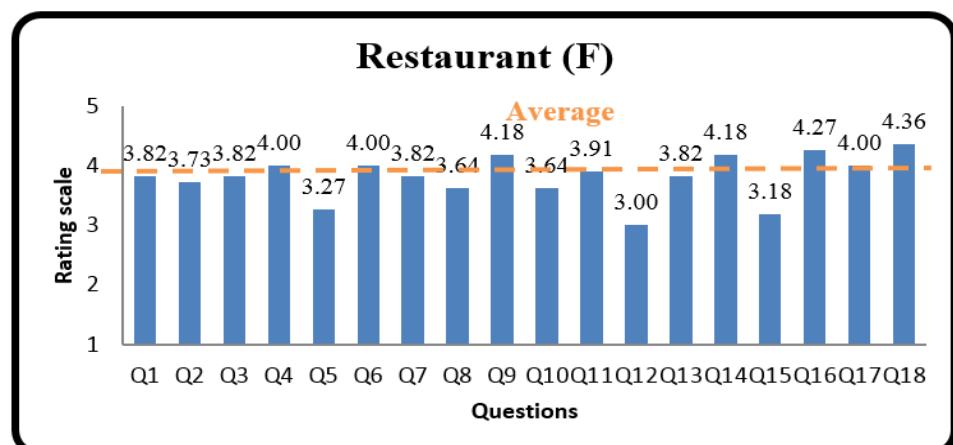

Figure 6: Restaurant (C) Rating

For restaurant (C) the factors required improvement:

1. Layout gives tangible privacy.

2. Menus are visually attractive.

3. The linens (e.g., tablecloths, napkins) are attractive.

4. Wall decorations are visually appealing.

5. Paintings/pictures are visually catchy

6. Visual Appearance is not a concern; food taste is a concern.

7. Lighting makes me feel welcome.

8. Background music is pleasant.

After analyzing restaurant (D) collected data, the statistical analysis shows that the restaurant's average rating is (3.92) (Figure 7). All items below the average of the restaurant rating should be identified and improved.

Figure 7: Restaurant (D) Rating

For restaurant (D) the factors required improvement:

1. Layout gives tangible privacy.

2. The interior design is visually attractive.

3. Menus are visually attractive.

4. The linens (e.g., tablecloths, napkins) are attractive.

5. Colours used to create a warm atmosphere.

6. Wall decorations are visually appealing.

7. Paintings/pictures are visually catchy

8. Visual Appearance is not a concern; food taste is a concern.

9. Lighting makes me feel welcome.

10. Background music is pleasant.

After analysing restaurant (E) collected data, the statistical analysis shows that the restaurant's average rating is (3.84) (Figure 8). All items below the average of the restaurant rating should be identified and improved.

Figure 8: Restaurant (E) Rating

For restaurant (E) the factors required improvement:

1. Layout gives tangible privacy.

2. Menus are visually attractive.

3. The linens (e.g., tablecloths, napkins) are attractive.

4. Colours used create a warm atmosphere.

5. Visual Appearance is not a concern; food taste is a concern.

6. Background music is pleasant.

After analysing restaurant (F) collected data, the statistical analysis shows that the restaurant's average rating is (3.81) (Figure 9). All items below the average of the restaurant rating should be identified and improved.

Figure 9: Restaurant (F) Rating

For restaurant (F) the factors required improvement:

1. The chair size is suitable (good quality).

2. Layout gives tangible privacy.

3. The linens (e.g., tablecloths, napkins) are attractive.

4. Wall decorations are visually appealing.

5. Visual Appearance is not a concern; food taste is a concern.

6. Background music is pleasant.

Ambience Statistical Analysis Results

Table 1: The Means and Standard Deviations for the Restaurant's Ambiance based on Clients' Opinions

Ambience	Mean	Standard Deviation	Percentage
Temperature is comfortable.	3.86	1.101	77.2%
Dining table is in comfortable height and stable	3.82	1.140	76.4%
Chair size is suitable	3.80	1.177	76%
Ambience Result	3.8286	1.01664	Agree

Table (1) shows the means and standard deviations for the restaurants ambiance based on clients' opinions. The result was sorted from the highest mean to the lowest one. As the table shows, the most important factor is temperature, table dining height and stability, and finally chair. The result also shows an agreement on the effect of restaurant ambiance on clients' opinions with a percentage of (76.57%).
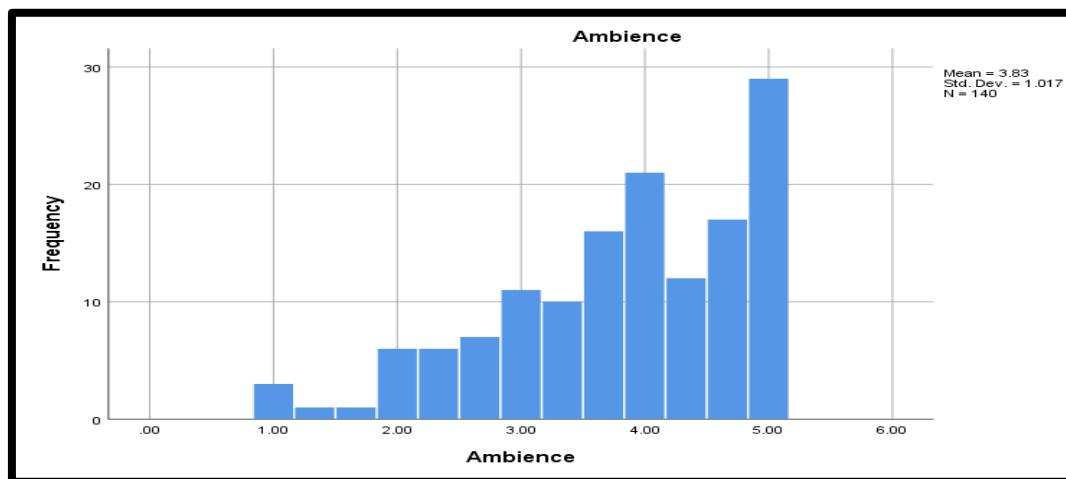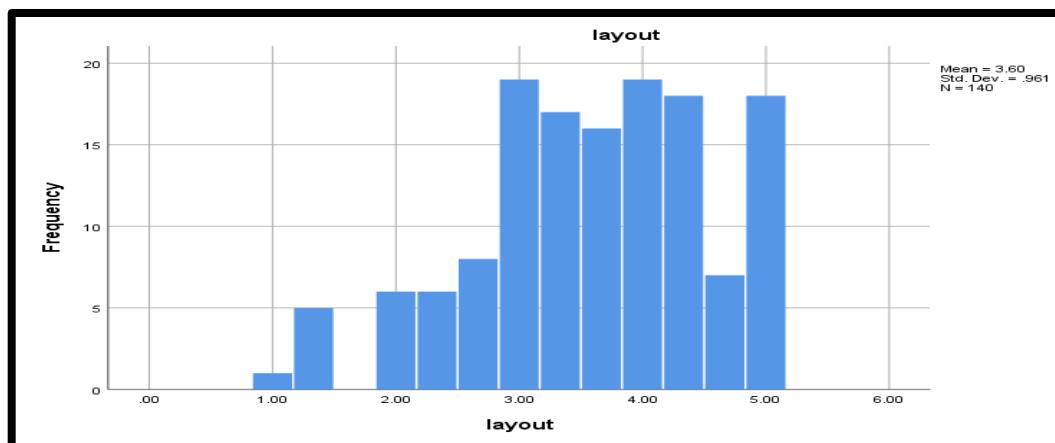

Figure 10: Ambience Frequency, Mean, and Standard Deviation

Layout Statistical Analysis results

Table 2: The Means and Standard Deviations for the Restaurant's Layout According to the Client's Point of View

Layout	Mean	Standard Deviation	Percentage
Layout makes it easy to move around.	3.85	1.1150	77%
The interior design is visually attractive.	3.70	1.091	74 %
Layout gives tangible privacy.	3.25	1.336	65%
Layout Result	3.60	0.96145	Agree

Table (2) shows the means and standard deviations for the restaurant's layout according to the client's point of view. The table shows an agreement on the importance of the layout with a percentage of (72%), and the most crucial factor in layout was easy movement around the restaurant.
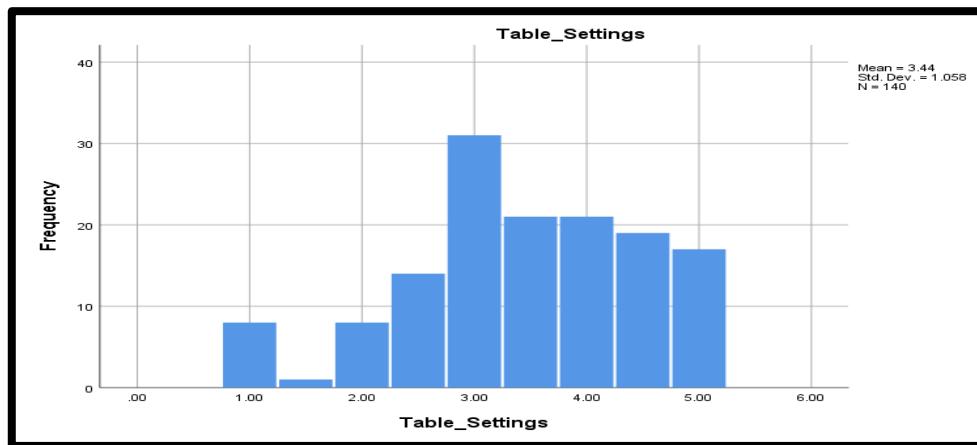

Figure 11: Layout Frequency, Mean and Standard Deviation

Table Settings Statistical Analysis Results

Table 3: The Means and Standard Deviations for the Client's Point of View of the Restaurant's Table Setting

Table Settings	Mean	Standard Deviation	Percentage
Menus are visually attractive.	3.6	1.149	72%
The linens (e.g., tablecloths, napkins) are attractive.	3.28	1.224	65.6%
Table Settings Result	**3.4393**	**1.05848**	**Agree**

Table (3) shows the means and standard deviations for the client's point of view of the restaurant's table setting. The table shows an agreement on the layout's importance with a percentage of (68.79%). It also shows a neutral agreement on the attractiveness of the lines.
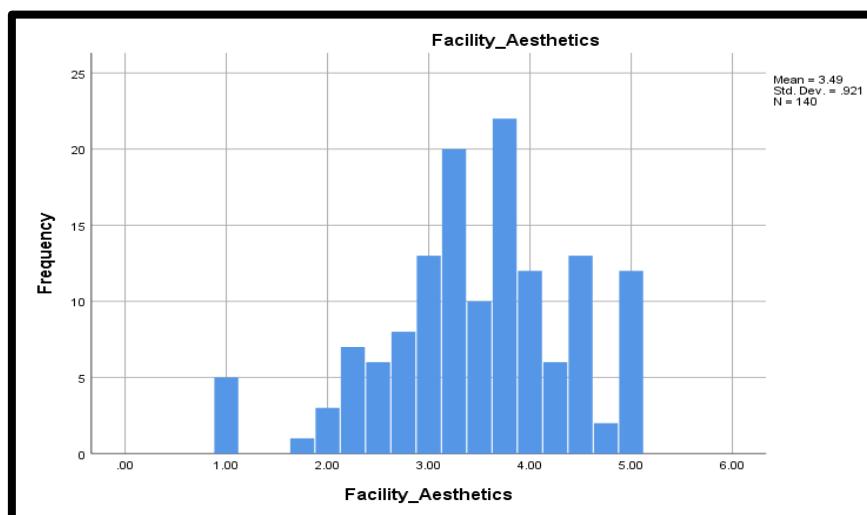
Figure 12: Table Settings Frequency, Mean, and Standard Deviation

Facility Aesthetics Statistical Analysis Results

Table 4: The Means and Standard Deviations for the Client's Perspective of the Restaurant's Aesthetics

Facility Aesthetics	Mean	Standard Deviation	Percentage
The colors used create a warm atmosphere.	3.65	1.211	73%
Paintings/pictures are visually catchy.	3.55	1.171	71%
Wall decorations are visually appealing.	3.48	1.115	69.6%
Visual Appearance is not a concern, food taste is a concern.	3.28	1.399	65.6%
Facility Aesthetics Result	3.4893	0.92082	Agree

Table (4) shows the means and standard deviations for the client's perspective of the restaurant's aesthetics. The table shows an agreement on the layout's importance with a percentage of (69.79%). The means are in descending order with the colours at the top.
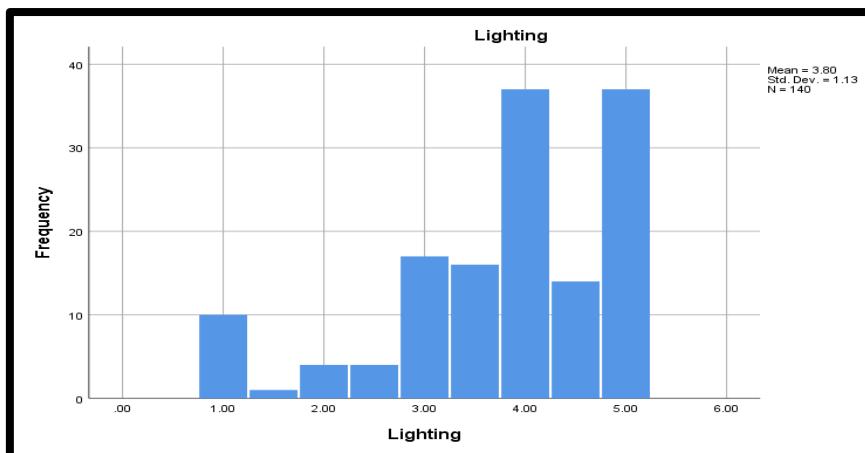

Figure 13: Facility Aesthetics Frequency, Mean, and Standard Deviation

Lighting Aesthetics Statistical Analysis Results

Table 5: The means and standard deviations for the client's perspective of the restaurant's lighting

Lighting	Mean	Standard Deviation	Percentage
Lighting creates a comfortable atmosphere.	3.91	1.211	78.2%
Lighting makes me feel welcome.	3.70	1.155	74%
Lighting Result	3.8036	1.12955	Agree

Table (5) shows the means and standard deviations for the client's perspective of the restaurant's lighting. The table shows an agreement on the layout's importance with a percentage of (76.1%). The results reflect the importance of lighting in the restaurant to create a comfortable atmosphere.
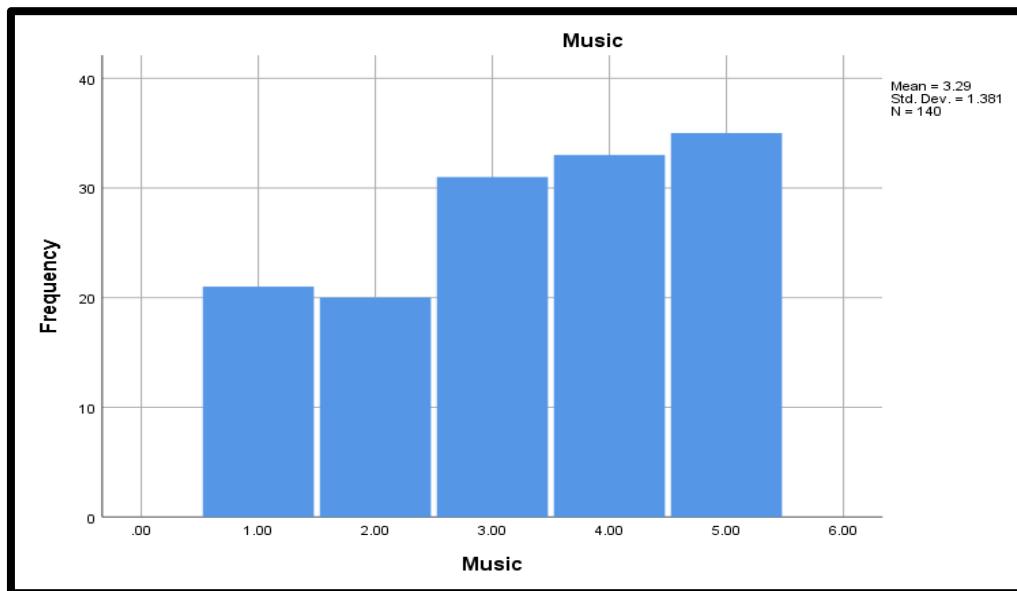

Figure 14: Lighting Frequency, Mean, and Standard Deviation

Music Statistical Analysis Results

Table 6: The Means, and Standard Deviations for the Client's Point of View towards Music Played in the Restaurants

Music	Mean	Standard Deviation	Percentage
Music	3.2929	1.38073	65.86%
Music Result	-	-	Neutral

Table (6) shows the means and standard deviations for the client's point of view towards music played in the restaurants. The table shows a neutral opinion about the played background music with a percentage of (65.8%).

Figure 15: Music Frequency, Mean, and Standard Deviation

Physical Environment Factors Statistical Analysis Results Summary

Table 7: The relation between the physical environment factors and customer satisfaction

Physical Environment Factors	Pearson Correlation Value
Ambience	0.644**
layout	0.647**
Table Settings	0.661**
Facility Aesthetics	0.674**
Lighting	0.706**
Music	0.528**

The results showed a relation between the physical environment factors and customer satisfaction, as all the correlations are positive and above zero. It also showed that the highest correlation to customer satisfaction is lighting with a value of (0.706), then Facility Aesthetics, Table Settings, layout, and Ambience. With values of (0.674, 0.661, 0.647, and 0.644) respectively. Furthermore, it showed that the least influential factor is background music; its correlation value was (0.528) Table (7).

The statistical analyses show a high correlative relation between lighting and customer satisfaction, according to the outcomes of the data analysis based on the used questionnaire as a measurement tool the correlative value of 0.706 which is considered the highest correlation factor among other physical environments factors; therefore, restaurants should pay more attention to the restaurant lighting to maintain the customer satisfaction and loyalty.

The correlative relationship between Facility Aesthetics and customer satisfaction value was 0.674 which is considered the second important physical environment factor that needs to be

considered carefully by the restaurant stakeholders to enhance the satisfaction and loyalty of clients.

The third important factor based on the statistical analysis of the questionnaire that was used as a measurement tool is Table Settings, as the result shows a strong correlation value of 0.661 between the Table Settings and customer satisfaction therefore, restaurant management should improve the Table Settings to improve the customer satisfaction and loyalty.

Respectively the fourth important factor according to the statistical analysis of the questionnaire that was used as a measurement tool is the restaurant Layout with a correlative value of 0.647 as most of the survey participants consider the restaurant Layout as an important factor to keep the customers satisfied for that reason, the restaurant designer and stakeholder should pay more attention to the restaurant Layout.

Sequentially, Ambience was ranked as the fifth important factor according to the statistical analysis of the questionnaire that was used as a measurement tool with a correlative value of 0.644 with customer satisfaction, consequently, the Ambience conditions of the restaurant should be considered by the restaurant owners to satisfy the customer needs.

In the end, Music was considered the sixth factor according to the statistical analysis of the questionnaire that was used as a measurement tool with a correlative value of 0.528 with customer satisfaction, accordingly, the restaurant stockholders can build on the customer satisfaction and loyalty.

According to the outcomes of the data analysis based on the questionnaire used as a measurement tool, restaurants in the Kingdom of Saudi Arabia should pay more attention to the factors at the top of the list, namely lighting, facility aesthetics, table setting, and layout, respectively.

Table 8: Independent T-Test, between Customer Satisfaction and Gender

t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
-0.092	138	0.927	-0.01667	0.18053

There were no statistically significant differences between group means as determined by independent sample t-test. The Significance value is 0.486, which is higher than 0.05 in Table (8).

Table 9: Results of One-way ANOVA Test between the Customer's Age and Customers Satisfaction

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.747	3	1.582	1.440	.234
Within Groups	149.463	136	1.099		
Total	154.210	139			

There were no statistically significant differences between group means as determined by one-way ANOVA regarding the customers' age. Significance value was 0.234 which is higher than 0.05 Table (9)

Table 10: Results of One-way ANOVA Test between the Restaurant and Customers Satisfaction

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.686	5	3.137	3.035	.013
Within Groups	138.524	134	1.034		
Total	154.210	139			

There were statistically significant differences between group means as determined by one-way ANOVA regarding the restaurant. The significance value was 0.013 which is lower than 0.05 Table (10), the following Table (11) shows the difference:

Table 11: Restaurants list According to Customers' Satisfaction

	N	Mean	Std. Deviation	Std. Error	Order
Restaurant A	29	3.5517	1.36938	.25429	6
Restaurant B	11	3.8788	1.09821	.33112	4
Restaurant C	23	3.6522	1.24510	.25962	5
Restaurant D	22	4.4697	.56959	.12144	1
Restaurant E	44	4.1894	.78222	.11792	3
Restaurant F	11	4.2121	.82020	.24730	2
Total	140	3.9905	1.05329	.08902	
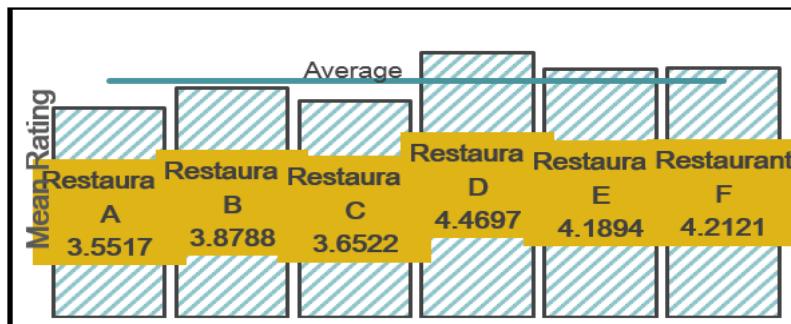
Figure 16: Restaurants Mean Customers' Satisfaction Rate

Based on the outcomes of the data analysis and the questionnaire that was used as a measurement tool, the ranks of restaurants that satisfy and fulfil the customer's desires and needs against the restaurant's physical environment factors (see Table 11 and Figure 16) are shown the mean satisfaction rating out of 5 for each restaurant as follow:

1. Restaurant (D) is 4.4697.

2. Restaurant (F) is 4.2121.

3. Restaurant (E) is 4.1894.

4. Restaurant (B) is 3.8788.

5. Restaurant (C) is 3.6522.

6. Restaurant (A) is 3.5517.

The six samples of casual dining restaurants had ratings on physical environment factors below the average rating and need to improve this factor to increase customer satisfaction and loyalty.

The 18 questions that were used in the questionnaire to measure the physical environment toward customer satisfaction rating had been identified as six main factors (Lighting, Facility Aesthetics, Table setting, Layout Ambience, and Music).

The results showed that if the restaurants MATCH in their physical environment consequently the customers will be satisfied.

If the restaurants fail to fulfil a SUITABLE physical environment, this will affect CUSTOMER satisfaction and thus losing their interest in the future. On the other hand, if the restaurants manage to reach customers' desires toward the physical environment this will make them satisfied and then, loyal over time.

CONCLUSION

This work explores the relationship between the physical environment and the degree of satisfaction of casual restaurant customers in Jeddah. This in turn, affects the reputation of these restaurants. It also measured the degree of physical environment factors' effectiveness on customers' perception. Saudi Arabia is a special and unique environment regarding restaurants, as they are one of the few outlets for entertainment, given the prevailing customs, norms, and laws regulating the nature of life in a conservative society. This grants these restaurants an additional advantage in attracting customers, which constitutes a challenge for them to pay more attention to the physical environment of their restaurant. Paradoxically, the recent intrinsic changes in social laws in the kingdom, which allowed for a multiplicity of entertainment sources, constituted an additional challenge for these restaurants. According to the outcomes of this study, restaurants in Saudi Arabia should pay more attention to the factors at the top of the list, namely lighting, aesthetics, table setting, and layout, respectively. This study makes an essential contribution to the literature by examining the combination of the effects of physical environments, customer satisfaction, and customer loyalty. Therefore, the present study raises interesting conclusions with significant theoretical and practical implications. Sample size was 273 and it was applied on 6 fine-restaurants within Jeddah and the result shows different level of satisfaction for each restaurant)

References

1) Bee-Lia Chua, Shahrim Karim, Sanghyeop Lee, and Heesup Han (2020). Customer Restaurant Choice: An Empirical Analysis of Restaurant Types and Eating-out Occasions.

2) *Int. J. Environ. Res. Public Health*, 17, 6276. http://doi.org/10.3390/ijerph17176276.

3) Bukhari, S. (2015). *Consumer Loyalty in Fast-Food Restaurants in Saudi Arabia*. A master's degree Thesis. Unpublished. Faculty of Engineering. University of Ottawa. Canada.

4) Canny, Ivyanno U., (2013). The Role of Food Quality, Service Quality, and Physical Environment on Customer Satisfaction and Future Behavioural Intentions in Casual Dining Restaurants. *The 7th National Research Management Conference, Srivijaya University - Palembang, Indonesia.* http://dx.doi.org/10.2139/ssrn.2363339

5) Drake, R. (2019). Home Interior Design Styles: What is Coastal Design. https://vevano.com/resource-center/home-interior-styles-coastal-design/

6) Gadelrab, R. and Ekiz, E. (2019). An investigation of key success factors for restaurant operations in Saudi Arabia. *Journal of Tourism, Heritage & Services Marketing*, *Tourlab, the International Hellenic University, 2019, 5(2)*, pp. 27 – 35. http://doi.org/10.5281/zenodo.3601673.

7) Ivkov, M; Blesic, I; Stefanovic, V. & Raljic, J. Managing customer satisfaction in the restaurant industry: A word from managers. *Economic Themes, 52*(3), pp. 369-378. https://doi.org/10.1515/ethemes-2014-0023.

8) Livermore, S. (2018). Everything you need to know about Coastal Design. https://www.housebeautiful.com/design-inspiration/a24276474/coastal-design-style/

9) Mastroeni, T. (2020). Defining a style series: Modern Coastal. https://www.mymove.com/home-inspiration/decoration-design-ideas/defining-style-series-modern-coastal/

10) Nezakati, H. and Asgari, O. (2011). Factors Influencing Customer's Loyalty Towards Fast Food Restaurants. *International Conference on Industrial Technology Economics, Mines Wellness Hotel, Kuala Lumpur, Malaysia, 10,*

11) Özdemir-Güzel, S. & Dinçer, M. Z. (2018). The Effect of Restaurant's Physical Environment on Perceived Value, Customer Satisfaction and Loyalty: Case of Istanbul, *Journal of Tourism and Gastronomy Studies, 6(4),* 626-643. http://doi.org/*10.21325/jotags.2018.327*

12) Tuzunkan, D. and Albayrak, A. (2016). The Importance of Restaurant Physical Environment for Turkish Customers. *Journal of Tourism Research & Hospitality, 5(1)* http://dx.doi.org/10.4172/2324-8807.1000154

13) Renata, C., Ronald, Amelia (2021). Analysis of influence of senses, interior design, signage, facilities, atmospherics, staff, other visitor's behaviour, the visitor himself / herself to customer loyalty through emotions and satisfaction of Watsons customers in Surabaya *International Journal of Research Publications* 70(1), 95-117
http://doi.org/10.47119/ijrp100701220211715

14) Voon, B. H. (2016). Service imperatives in the new economy: Service Excellence for sustainability. *Procedia - Social and Behavioural Sciences (224)*, pp.1 – 5. http://doi.org/10.1016/j.sbspro.2016.05.493