

Servicescape and Customer Satisfaction in a Fine-dining Restaurant Setting

Abstract

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This study examined the effect of servicescape – ambience, spatial layout, social dimension and information dimension on customer satisfaction in fine-dining restaurants. Guided by a cross-sectional research design, we obtained primary data from 280 customers using a structured questionnaire. Descriptive statistics sufficed for data analysis, while regression analysis was instrumental in hypotheses testing. The findings revealed that ambience, spatial layout and information dimension had significant positive effects on customer satisfaction in restaurants, while social dimension had a negative and non-significant effect on customer satisfaction. This study demonstrates the predictive power of restaurant servicescape to influence customers' experiences. The insights generated provide definitive empirical evidence that confirms that customer satisfaction could be improved through deliberate design of restaurant servicescape. As such, the study provides a strategic blueprint for restaurant operators in servicescape design for maximum customer satisfaction. With these insights, this study contributes to restaurant service marketing in African countries by providing empirically-verifiable evidence that a key strategy to improving customer satisfaction is deliberate and strategic servicescape design. It also contributes to the stimulus-organism-response theory by confirming that its basic premise holds true in the restaurant context, thereby furthering the applicability of the theoretical framework in restaurant-based research.

Keywords Servicescape, customer satisfaction, ambience, spatial layout, restaurants

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Introduction

The imperatives of servicescape in services marketing have been brought to the fore as several studies have revealed that a service-provider's marketing effort is strengthened and more effective under an appropriate and well-designed service environment (Ahmad et al., 2019). According to Ariffin et al. (2014), the increasingly crucial roles played by servicescape in improving the service-provider's effectiveness, customer satisfaction and retention have prompted service-oriented firms around the world such as airlines, banks, retailers, hotels, restaurants, among others to pay more attention to the elements of servicescape, with a view to determining the most appropriate way of designing a service environment for maximum impact on consumers. Bekele and Singh (2016) maintain that designing an appropriate servicescape requires an understanding of certain components of the service environment (including ambience, spatial layout, social dimension, signs, symbols and artifacts), which overlap and supplement each other to create impressive experiences and desired emotional responses from service consumers. Using these servicescape dimensions, Dan-Jumbo (2019) argued that service-providers have been able to craft out effective and efficient service environments to improve their capacity to offer superior-quality services to consumers thereby gaining customer satisfaction and improving the prospects of obtaining customer loyalty. Consequently, service-oriented organizations are increasingly designing creative and impressionable service environment concepts in the hopes of attracting customer patronage, and retention in the face of intense competition and emerging industry trends (Adiele & Nwaeke, 2015; Onuoha & Doris, 2017).

Ambience conditions such as colourful lighting, pleasant scents or fragrances, nice music, and cool temperatures are being put in place in restaurants around the world (Onuoha & Doris, 2017). Interior designs (such as wallpapers, colourful painting, floral design, and exotic furniture), exterior design (such as signage, artifacts, parking space, and natural landscape) as well as social dimension (such as employees' uniform, employees' politeness, and employees' attitude) are also deliberately incorporated into the servicescape of restaurants. However, even though some well-established fine-dining restaurants are designing their service environments to attract and satisfy customers' requirements, other restaurant categories, particularly small-scale fast-food restaurants appear to be neglecting their environments by paying insufficient attention to the cleanliness and conduciveness of service delivery sites. This may be due to the fact that designing and maintaining a topnotch servicescape costs huge amounts of money that some restaurants may not afford; a lack of awareness and understanding of the effect of servicescape on consumer buying behavior; and lack of effective management which fails to keep pace with emerging trends in the service industry. To address these challenges, researchers around the world (such as Shashikala & Suresh, 2013; Harjit, 2018; Rai & Anirvinna, 2019, among others) have conducted various studies to determine the impact of servicescape on customer satisfaction in various industries, including tourism and hospitality. However, in some of these studies, the focus has been on case studies (such as fuel stations, shopping malls, educational institutions, banks and hotels) rather than restaurants (Weerasinghege & Dilhani, 2017; Akhmad et al., 2018; Dan-Jumbo, 2019; Artuğer, 2020; Hamzah et al., 2020). This reveals the need for empirical studies particularly in the restaurant setting to bridge this research gap. Even existing researchers have acknowledged the need for further studies to explore how servicescape influences customer satisfaction in order to strengthen



the applicability of their findings and to fill possible gaps in those studies (Shashikala & Suresh, 2013; Ariffin et al., 2014; Kamau, 2017; Harjit, 2018; Türker et al., 2019). Therefore, this research was initiated to explore the effect of servicescape (ambience, spatial layout, social dimension and information dimension) on customer satisfaction in a fine-dining restaurant setting.

Literature review and hypotheses

Servicescape

Servicescape is the encompasses the display and design of tangible, perceptive or experiential elements that customers meet in the service provider's outlet or store. The design of servicescape to elicit desired responses from customers is a meticulous task which may prove to be expensive to maintain as well (Wirtz, 2017). Servicescape generally entails the design and creation of service spaces where service-providers meet with consumers to perform desired services for the purpose of ensuring service consumers' satisfaction. It consists of physical and perceptive impulses that can affect and shape customers' emotions and general interactions with the service provider (Bitner, 1992). Given that services basically do not have a physical form, consumers pay attention to tangible elements or facilities which may provide insight into the quality of service to expect from a service provider before actual patronage. Servicescape enables consumers to not only create service expectations, but also to evaluate service perceptions. Booms and Bitner (1981) view servicescape as the surroundings encompassing the physical location where service providers and consumers converge to effect exchange, as well as the physical facilities which accelerate the delivery or communication of services. This entails that servicescape encompasses the design of items, space or facilities within or outside the service environment with which customers encounter or interact.

Theoretical framework

This research is underpinned by the stimulus-organism-response (S-O-R.) theory as propounded by Mehrabian and Russell (1974). This theory provides a framework for understanding the complex relationships between stimuli, organisms, and their subsequent responses. In the context of fast-food restaurants, the S-O-R theory offers valuable insights into the factors that shape customer experiences, satisfaction, and subsequent behaviors. The core assumption of this theory is that the environment comprises of stimuli (S), which trigger emotions and reactions within an individual (O) in order to generate desired responses (R) (Mehrabian & Russell, 1974). When exposed to a service environment, the organism (O) consciously or unconsciously evaluates stimuli (S) released by the environment in order to respond (R) either by approaching or avoiding the environment (Patrick, 1991). Essentially, the stimulus-organism-response theory assumes that a person responds to external environmental impulses or cues as a result of their personal inner assessments. This personal inner assessment could either be deliberate or unintentional. It also maintains that people's deliberate and unintentional impressions and assessments of service environments exert influences on their emotions (Jacoby, 2002). In the context of this study, the relevance of the stimulus-organism-response theory is that the theory postulates that restaurants' environment is a stimulus (S), which comprises certain factors (such as ambience, spatial layout, social dimension and information dimension) that trigger an internal evaluation of consumers (O) and then generates a response (R) (such as customer patronage, satisfaction and retention). By this, the theory asserts that when consumers are exposed to the servicescape of restaurants, they consciously or unconsciously evaluate the environmental stimuli and if favourable, they will display an approach behaviour (in terms of satisfaction and loyalty). However, if the stimuli from the environment of restaurants are not favourable, pleasant or capable of arousing positive responses, then consumers will display an avoidance behaviour (in terms of dissatisfaction and brand switch).

Ambience and customer satisfaction

Ambience is the fundamental components of an environment. It comprises features including music, lighting, temperature, and fragrance or smell which primarily relate to the five senses of a human being (Bekele & Singh, 2016). Ambient factors consist of background elements including temperature, sound, aroma/smell, and lighting situation all of which influences the non-visual senses (Çetinsöz, 2019). Bitner (1992) perceived ambience as the totality of the basic components of a service location, including temperature, lighting and music. This is a component of the service environment that concerns the five (5) senses of the human being, including: sight, smell, touch, hearing and taste. Ambience entails the character, mood, or atmosphere of the service environment. In a service-oriented business firm, the elements of ambience may include inside decoration, wall/building design, type of decoration colour, temperature, and neatness. Additionally, air quality and temperature could contribute in forming a comprehensive aura in a service environment. Comfortable room temperatures at service outlets are soothing to consumers and are capable of influencing them to spend long hours patronizing the service provider's facility. On the contrary service environments with hot temperatures may lead to customer dissatisfaction (Lap-Kwong, 2017). The foregoing views imply that ambience could significantly contribute to customer satisfaction and retention in a service establishment. These viewpoints are supported by the study of Shashikala and Suresh (2013), which revealed that ambient factor had a significant positive impact on consumer satisfaction and loyalty in Indian shopping malls. Similarly, the viewpoints are corroborated by the study of Kamau (2017), which revealed that ambience had significant positive influences on customer satisfaction in restaurants within classified hotels in Kenya. Finally, the viewpoints are reinforced by the study of Artuğer (2020), which revealed that ambience had a significant positive effect on customer satisfaction in Turkey. Therefore, we present the following hypothesis to guide the investigation:

H₁: Ambience has a significant effect on customer satisfaction in a fine-dining restaurant setting.



Spatial layout and customer satisfaction

Spatial layout entails the manner in which service equipment and facilities are designed and arranged in a service firm. A firm's style of spatial layout determines how easy it is for customers to navigate through the space in search of required service (Onuoha & Doris, 2017). The way the inner and outer space of a service environment is designed determines the extent to which customers will be comfortable navigating through the facility. According to Preetam & Khan (2018), spatial layout is the manner in which a service provider's accessory equipment, facilities, seats, tables, and service units are configured and situated in a service delivery site. These elements are of utmost significance in several service enterprises (including grocery stores, cinemas, performance arts, and premium dining) considering the fact that they exert substantial influence on consumers' comfort. Furthermore, Rai & Anirvinna (2019) perceive spatial layout as the "way machinery, equipment, and furnishings are organized, their size, shape and associations among them. It is the way products or items are arranged that will make it easy for customers to access them without any hindrance". As an essential component of the service environment, spatial layout enhances the service provider's ability to deliver services required to satisfy customers' needs; hence spatial layout enhances customer satisfaction. This assertion is backed by the study of Kamau (2017), which revealed that spatial layout had significant positive influences on customer satisfaction in restaurants within classified hotels in Kenya. The assertion is also in alignment with the study of Weerasinghege and Dilhani (2017), which revealed that spatial layout had significant impacts on customer satisfaction in banking industry. Finally, the assertion is in concert with the study of Akhmad et al. (2018), which found that spatial layout had significant positive impacts on customer satisfaction in Indonesian shopping malls. Therefore, we present the following hypothesis to guide the investigation:

H₂: Spatial layout has a significant effect on customer satisfaction in a fine-dining restaurant setting.

Social dimension and customer satisfaction

Social dimension deals with the social aspect of the service environment. It comprises three attributes, namely: social density, personnel social servicescape and customer social servicescape (Mangirdas & Rudiene, 2020). According to Shashikala & Suresh (2013), social servicescape includes the stimuli of consumers, workers, social denseness and obvious emotions of other people at the service delivery site. Simpeh, et al. (2011) maintain that social factors in the servicescape includes elements such as staff attitude, quality of interaction between service employees and customers, appearance of staff, friendliness of staff, and crowd level (social density). Just as importantly, the degree of friendliness of service personnel and crowd level (or social density) at the service delivery site are crucial aspects of social servicescape (Akhmad et al., 2018). The crowd level may also discourage customer patronage because the speed and responsiveness of the service provider may be undermined by long queues and disorderly customer demands. Consequently, service consumers will rather choose to patronize and maintain loyalty to a service provider that caters to a less crowded and more organized customer base (Kamau, 2017). The views above imply that the social aspect of servicescape enhances customer satisfaction and retention. These viewpoints are supported by the study of Akhmad et al. (2018), which revealed that social dimension had significant positive impacts on customer satisfaction in Indonesian shopping malls. The viewpoints are also corroborated by the study of Ahmad et al. (2019), which revealed that social dimension had significant positive impacts on customer satisfaction. Finally, the viewpoints are reinforced by the study of Preetam & Khan (2018), which revealed that employee attitude (social dimension) had a significant influence on customer satisfaction. Therefore, we present the following hypothesis to guide the investigation:

H₃: Social dimension has a significant effect on customer satisfaction in a fine-dining restaurant setting.

Information dimension and customer satisfaction

Information dimension of servicescape comprises three elements, namely: signs, symbols, and artifacts (Hamzah et al., 2020). These include signages, artworks, and decorations that provide clear directions to consumers in locating service units and acceptable conducts permissible in the service location (Lap-Kwong, 2017). Information dimension variables such as artwork, signage, markings, hints, signals, icons and logos are crucial to direct customers to safely and appropriately navigate the service delivery site and clearly understand the acceptable behaviours permissible in the delivery site, such as, the "no smoking" policy of the service provider (Türker et al., 2019). Given the importance of symbols, signs and artefacts in servicescape, Weerasinghege & Dilhani (2017) caution that there is need for these items to be installed in every service delivery site to help customers navigate through the site to enjoy service. Studies have shown that the presence of high-quality and conspicuously placed signs, symbols and artifacts has the capacity to enhance customer satisfaction by serving as guides to customers as they navigate to and within the service delivery site in a safe and secure manner. This premise is supported by the study of Shashikala & Suresh (2013), which revealed that signs, symbols and artifacts had significant positive impacts on consumer satisfaction and loyalty in Indian shopping malls. The premise is also supported by the study of Kamau (2017), which revealed that signs, symbols and artifacts had significant positive influences on customer satisfaction in restaurants within classified hotels in Kenya. Also, the premise is reinforced and corroborated by the study of Weerasinghege & Dilhani (2017), which revealed that signs, symbols and artifacts had significant impacts on customer satisfaction in the banking industry. Therefore, we present the following hypothesis to guide the investigation:

H₄: Information dimension has a significant effect on customer satisfaction in a fine-dining restaurant setting.



Empirical review of extant studies

The subject “servicescape and customer satisfaction” has received tremendous research attention by scholars around the world. In various countries and service sectors, researchers have conducted a series of studies aimed at determining the association between servicescape attributes and customer satisfaction. Eighteen (18) relevant empirical studies have been summarized in Table 1 to explore the findings and generalizations of existing researchers. Like other service-oriented sectors, studies have been conducted on servicescape in the restaurant industry across countries. From the empirical review table, it can be seen that majority of existing researchers posit that servicescape significantly influences customer satisfaction in a fine-dining restaurant setting (Simeh et al., 2011; Shashikala & Suresh, 2013; Onuoha & Doris, 2017; Rai & Anirvinna, 2019; Kamau, 2017; Türker et al., 2019; Lap-Kwong, 2017; Ahmad et al., 2019). However, there are still contradictory scholarly findings that maintain that customer satisfaction is not mainly a function of servicescape of an enterprise. As such, some scholars believe that not all servicescape dimensions are capable of significantly influencing customer satisfaction in the restaurant context (Harjit, 2018; Bekele & Singh, 2016; Artuğer, 2020). Against this backdrop, this study was conducted to verify whether or not customer satisfaction in a fine-dining restaurant setting could significantly be enhanced through servicescape dimensions.

Table 1. Empirical review of servicescape and customer satisfaction

SN	Author/Year	Findings
1	Onuoha and Doris (2017)	Ambient conditions, spatial layout and staff attitude had positive significant impacts on customer patronage in Abia State, Nigeria
2	Rai and Anirvinna (2019)	There is a significant positive correlation between servicescape and customer’s loyalty. Servicescape has a significant effect on customer loyalty
3	Shashikala and Suresh (2013)	All seven servicescape dimensions considered (ambient factor, aesthetic factor, layout, variety, cleanliness, signs, symbols & artifacts, and social factor) are relevant in shopping mall context and capable of inducing significant variations in consumer loyalty
4	Harjit (2018)	Facility exterior and facility interior had significant effects on customer satisfaction while employee aesthetics had no significant effect in this regard
5	Kamau (2017)	Ambient conditions, spatial layout and functionality, signs, symbols and artifacts, and facility cleanliness had significant positive influences on customer satisfaction in restaurants within classified hotels in Kenya
6	Türker, Gökkaya and Acar (2019)	Results indicate that both direct/indirect external servicescape influences and physical environment: external presentation had the highest scores that significantly positively affect the loyalty of customers
7	Ariffin, Abu Hasan and Rashid (2014)	Ambient factors, design factors, employee displayed emotion, and customer climate had significant positive influences on customer satisfaction
8	Simeh, Simeh, Abdul-Nasiru and Amponsah-Tawiah (2011)	Ambient conditions, spatial layout and functionality, and signs, symbols and artifacts had a significant positive relationship with customer patronage of hotels in Ghana
9	Bekele and Singh (2016)	Ambient factors and design had positive and significant effects on customer loyalty, while social factors had no significant effect in this regard
10	Weerasinghege and Dilhani (2017)	Ambient conditions, spatial layout and functionality; and signs, symbols and artifacts had significant impacts on customer satisfaction in banking industry
11	Akhmad, Calmila and Iskandar (2018)	Ambient conditions; spatial layout and functionality; signs, symbols and artifacts; and social factors had significant positive impacts on customer satisfaction in Indonesian shopping malls
12	Lap-Kwong (2017)	All dimensions of servicescapes tested (ambient conditions; spatial layout and functionality; spatial signs, symbols and artifacts; and cleanliness) had a positive effect on customer satisfaction
13	Ahmad, Ashraf and Imran (2019)	Ambient conditions; spatial layout and functionality; spatial signs, symbols and artifacts; and social factors had significant positive impacts on customer satisfaction
14	Preetam and Khan (2018)	Signs, symbols and artifacts; ambient condition; spatial layout and functionality; and employee attitude had significant influences on customer satisfaction
15	Dan-Jumbo (2019)	Servicescape attributes (ambience condition, spatial layout and cleanliness) had a significant relationship with tourists’ satisfaction
16	Çetinsöz (2019)	Servicing staff; facility aesthetics; layout; ambience; dinning equipment; and lighting had significant positive effects on customer satisfaction and loyalty in upscale restaurants
17	Artuğer (2020)	Ambient conditions, décor, signs and symbols had a significant positive effect on customer satisfaction in Turkey, while spatial layout had no significant effect on customer satisfaction
18	Hamzah, Abd Rashid, Mansor and Shobri (2020)	Ambient conditions, spatial layout/functionality, signs, symbols and artifacts and cleanliness significantly improved customer satisfaction and positive emotion among shopping mall patrons in Malaysia

Source: Prepared by Authors (2023)

Conceptual framework

This study examined servicescape and customer satisfaction in a fine-dining restaurant setting. Its purpose was to empirically demonstrate the influence of restaurants’ servicescape and customer satisfaction. From a similar study by Çetinsöz (2019) on upscale restaurants, we have adapted a conceptual model to graphically demonstrate the proposed causality between the study variables. The indicators and statements measuring ambience (temperature, aroma and background music), spatial layout (parking space, dining space, dining seats/tables), social dimension (staff cleanliness, friendliness and responsiveness) and information dimension (meal menu, interior signages and exterior signages) were adapted from the study of Çetinsöz (2019) to suit the present research context. Therefore, the independent variable “servicescape” was disintegrated into four (4) specific dimensions, namely: ambience, spatial layout, social dimension, and information dimension; whereas, the dependent variable “customer satisfaction” was measured using customer repeat patronage, customer comfortability and positive word-of-mouth communications by customers. In the context of this study, ambience constitutes background factors such as temperature, aroma and music found at restaurants. Spatial layout comprises factors such as the parking space, dining space and dining seats/tables of restaurants. Social dimension also includes staff cleanliness, staff friendliness and staff responsiveness of restaurants. Whereas, information dimension includes the meal menu, interior signages and exterior signages at restaurants. Based on empirical review of existing studies, the study hypothesized that these dimensions of servicescape are related with customer satisfaction of restaurants as shown on the conceptual model (See FIG. 1) adapted for the study.

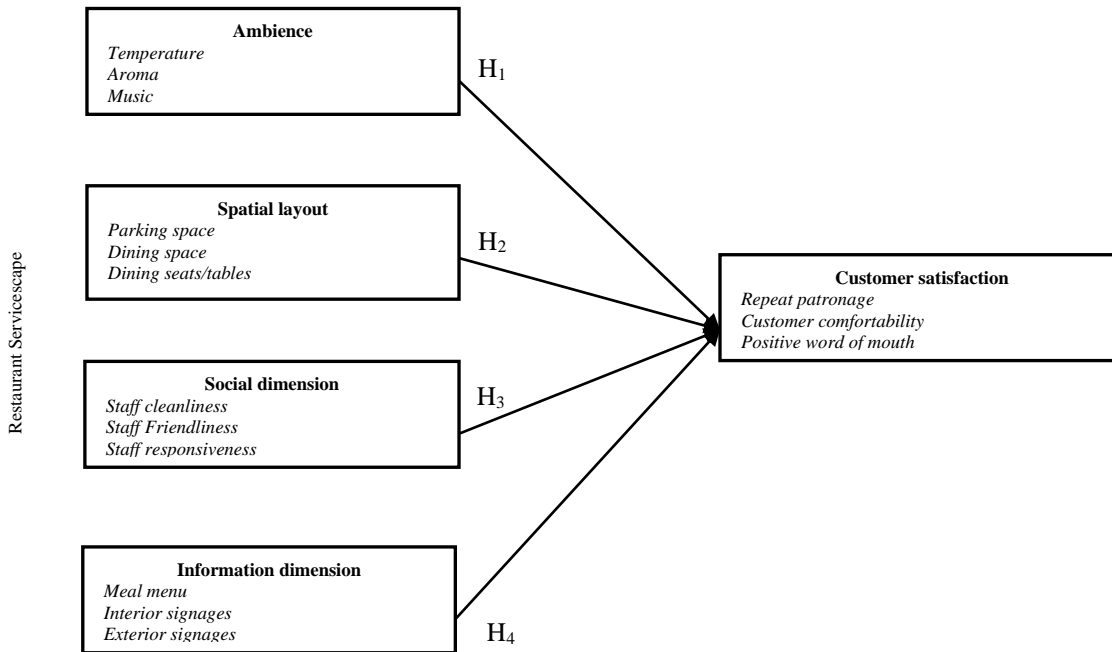


Figure 1: Conceptual model of the study
 Source: Parameters of independent variable adapted from Çetinsöz (2019). Parameters of dependent variable adapted from Khadim and Islam (2022)

Research method

The research designed we adopted for this study was cross-sectional survey design. In the process, we used a structured questionnaire to collect data from customers of restaurants at a single period of time. Hence, cross-sectional research design enabled the researcher to obtain data from target respondents at a single period of time, thereby minimizing the time and effort spent in data collection (Olsen & George, 2004). The research design also enabled the researcher to collect data that provided a current snapshot of how the study variables (servicescape and customer satisfaction) are associated. The sample size, obtained by applying the Topman sample size estimation procedure, comprised 280 customers of ten (10) selected fine-dining restaurants in Calabar, Nigeria. In this study, a sample size of 280 respondents is statistically relevant as it provides a sufficiently large and representative dataset to draw meaningful conclusions about the population, ensuring a reasonable level of precision and generalizability. This is because one common rule of thumb is to have at least 10 to 20 observations per predictor variable. Therefore, for a multiple linear regression study with four predictor variables, a minimum sample size of 50 to 100 observations is recommended (Riley et al., 2019). Calabar is a central tourist hub located in Cross River State, Nigeria. It plays host to several tourism and hospitality businesses including hotels, parks, bars, recreation spots and fine-dining restaurants. To include respondents to participate in the questionnaire survey in Calabar, we applied convenience sampling technique.

To that end, we targeted ten (10) most popular fine-dining restaurants in Calabar with high customer traffic, where we administered copies of the questionnaire to customers entering or exiting the facilities. However, only customers who were readily available, willing and easily accessible were given the questionnaire as authorized by the management of the restaurants. This implies that we sought and obtained prior authorization from the restaurant management through formal letters before selecting those restaurants to be included in the survey. The instrument of data collection was a 5-point Likert scale questionnaire adapted from the scholarly works of Çetinsöz (2019); Khadim & Islam (2022). The research instrument was checked and confirmed for reliability using the Cronbach's alpha method. This was facilitated by a pilot survey, where draft copies of the questionnaire were administered to 40 customers of a single fast-food restaurant in Calabar to obtain data for the reliability test. The data obtained were subjected to reliability test on the SPSS 25 software. The reliability coefficients, presented in Table 2, reveal that the instrument was internally consistent; therefore, it was adopted for field administration to obtain data for the study. To generate findings for the study, the proposed hypotheses of the study were statistically tested with the aid of multiple linear regression with the following model:

$$Y = a + \beta_1AMB + \beta_2SPALAY + \beta_3SOCDIM + \beta_4INFODIM + e$$

Where:

- Y = Dependent variable (customer satisfaction)
- a = The intercept
- β_1AMB = Coefficients of ambience
- $\beta_2SPALAY$ = Coefficients of spatial layout
- $\beta_3SOCDIM$ = Coefficients of social dimension



β_4 INFODIM = Coefficients of information dimension
 e = Error margin (5%)

Table 2: Cronbach's Alpha coefficients

S/N	Research constructs	No of measures	Coefficients
1.	Ambience	3	0.842
2.	Spatial layout	3	0.721
3.	Social dimension	3	0.742
4.	Information dimension	3	0.820
5.	Customer satisfaction	3	0.738
		15	

Source: Authors' Analysis via SPSS, 2023

Result and discussion

Data analysis and interpretation

We distributed 280 questionnaire copies to customers of ten (10) selected fine-dining restaurants, out of which 268 copies (or 95.7 percent) were retrieved and usable while 12 copies (or 4.3 percent) could not be retrieved as some respondents inadvertently damaged or misplaced their questionnaire copies. Hence, data analysis was based on the 268 questionnaire copies retrieved from restaurants' customers.

Multicollinearity test

Table 3: Result for multicollinearity using tolerance and VIF

Variables	Tolerance	Collinearity Statistics	
		VIF	
Ambience	.546	1.830	
Spatial layout	.565	1.770	
Social dimension	.696	1.436	
Information dimension	.435	2.299	

Source: Authors' Analysis via SPSS, 2023

A multicollinearity test using tolerance value and Variance Inflation Factor (VIF) was performed to assess whether there were extraordinarily high intercorrelations or inter-associations among the variables that were used as predictors. Tolerance entails the proportion of the variability in an independent variable which is unexplainable by other independent variables. If tolerance levels are near 0, it implies the presence of higher degrees of multicollinearity which will inflate the regression coefficients standard error. The general rule is that tolerance should not be less than 0.1 and VIF should not be greater than 5 (Ringle *et al.*, 2015). The result on Table 3 revealed that there was no multicollinearity among the variables because the tolerance values are above 0.1 and Variance Inflation Factors are less than the acceptable value of 5.

Table 4: Correlation matrix results for multicollinearity

		Ambience	Spatial layout	Social dimension	Information dimension
Ambience	Pearson Correlation	1	0.213**	-0.059	0.168**
	Sig. (2-tailed)		0.000	0.334	0.000
	N	268	268	268	268
Spatial layout	Pearson Correlation	0.213**	1	0.473**	.427**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	268	268	268	268
Social dimension	Pearson Correlation	-0.059	0.473**	1	-0.053
	Sig. (2-tailed)	0.334	0.000		0.388
	N	268	268	268	268
Information dimension	Pearson Correlation	0.168**	0.427**	-0.053	1
	Sig. (2-tailed)	0.000	0.000	0.388	
	N	268	268	268	268

** . Correlation is significant at the 0.01 level (2-tailed)

Source: Authors' Analysis via SPSS, 2023

To enhance the assessment of VIF and tolerance values, a Pearson Correlation Matrix was calculated for the independent variable dimensions. This analysis, presented in Table 4, examines the intercorrelation among these variables. Following Sekaran's (2003) guideline, a correlation value of 0.70 or higher indicates strong correlation. However, all values in Table 4 are below 0.70, indicating a lack of significant correlation among the variables. Consequently, these results affirm the absence of multicollinearity concerns.

Test of hypotheses

Hypothesis one

Ho: Ambience has no significant effect on customer satisfaction in a fine-dining restaurant setting

Hypothesis two

Ho: Spatial layout has no significant effect on customer satisfaction in a fine-dining restaurant setting

Hypothesis three

Ho: Social dimension has no significant effect on customer satisfaction in a fine-dining restaurant setting

Hypothesis four

Ho: Information dimension has no significant effect on customer satisfaction in a fine-dining restaurant setting



Decision criteria: Accept the alternative hypothesis if ($P < .05$) and reject the null hypothesis, if otherwise.

Table 5: Model summary of the effect of servicescape on customer satisfaction in a fine-dining restaurant setting

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.523 ^a	0.274	0.263	0.711

a. Predictors: (Constant), Ambience, spatial layout, social dimension, information dimension

Source: Authors' Analysis via SPSS, 2023

Table 6: ANOVA^a of the effect of servicescape on customer satisfaction in a fine-dining restaurant setting

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	50.122	4	12.531	24.780	0.000 ^b
	Residual	132.993	263	0.506		
	Total	183.116	267			

a. Dependent Variable: Customer satisfaction

b. Predictors: (Constant), Ambience, Spatial layout, Social dimension, Information dimension

Source: Authors' Analysis via SPSS, 2023

Table 7: Coefficients^a of the effect of servicescape on customer satisfaction in a fine-dining restaurant setting

Model		Unstandardized Coefficients		Standardized Coefficients		T	Sig.
		B		Beta			
1	(Constant)	1.393	0.372			3.748	0.000
	Ambience	0.120	0.165	0.432		1.851	0.002
	Spatial layout	0.353	0.195	0.259		3.697	0.000
	Social dimension	0.006	0.086	-0.005		-0.074	0.941
	Information dimension	0.453	0.184	0.318		5.408	0.000

a. Dependent Variable: Customer satisfaction

Source: Authors' Analysis via SPSS, 2023

Tables 5, 6, and 7 display the outcomes of the multiple regression analysis carried out on the connection between servicescape and customer satisfaction within the context of a high-end dining establishment. The model summary depicted in Table 5 reveals a robust correlation between servicescape and customer satisfaction, with an association of 52.3%. The R^2 value of 0.274 signifies that nearly 27.4% of the variance in customer satisfaction can be anticipated based on the restaurant's servicescape. The statistical results in Table 6, indicated by the F-test (24.780, $P < 0.05$), demonstrate that the independent variable effectively predicts changes in the dependent variable. This confirms that servicescape significantly influences customer satisfaction in the fine-dining restaurant environment. Table 7 reveals that three of the four servicescape dimensions tested (ambience, spatial layout, and information dimension) exhibit significant predictive power for customer satisfaction in the fine-dining restaurant context [ambience ($t = 1.851$; p -value = $0.002 < 0.05$), spatial layout ($t = 3.697$; p -value = $0.000 < 0.05$), and information dimension ($t = 5.408$; p -value = $0.000 < 0.05$)]. The result also entails that the association between these servicescape variables (ambience, spatial layout and information dimension) and customer satisfaction in restaurants, is a direct and positive one. However, one servicescape dimension tested (social dimension) did not significantly predict or explain customer satisfaction in a fine-dining restaurant setting, because its p -value [social dimension (p -value = 0.941)] was greater than the error margin of 0.05. Hence, the regression results are summarized as follows:

- (i) Ambience has a significant positive effect on customer satisfaction in a fine-dining restaurant setting.
- (ii) Spatial layout has a significant positive effect on customer satisfaction in a fine-dining restaurant setting.
- (iii) Information dimension has a significant positive effect on customer satisfaction in a fine-dining restaurant setting.
- (iv) Social dimension has a negative and non-significant effect on customer satisfaction in a fine-dining restaurant setting.

Discussion

The first outcome of analysing hypothesis one unveiled that the ambience significantly predicted customer satisfaction within a fine-dining restaurant environment. This prediction held true due to the p -value associated with ambience (p -value = 0.002), which fell below the 0.05 error threshold. A positive t -test value further indicated a direct and positive connection between ambience and customer satisfaction. This indicates that ambience, with a substantial beta coefficient of 0.432 (43.2%), emerged as the most influential aspect of the servicescape within the model. This finding is consistent with the findings of Shashikala and Suresh (2013); Kamau (2017); Ariffin et al. (2014), which all revealed that ambience had significant relationships with customer satisfaction. Collectively, these findings suggest that ambience, a major servicescape dimension, has been consistently demonstrated to significantly enhance customer satisfaction across various service establishments, including restaurants.

The second outcome stemming from hypothesis two showed that spatial layout significantly forecasted customer satisfaction in fine-dining restaurant settings. The evidence for this assertion lies in the p -value associated with spatial layout (p -value = 0.000), which fell below the 0.05 error threshold, and a positive t -test value indicating a direct and positive connection between spatial layout and customer satisfaction. This reveals that spatial layout contributes significantly with a beta coefficient of 0.259 (25.9%). This finding is supported by Weerasinghege & Dilhani (2017); Akhmad et al. (2018); and Lap-Kwong (2017), which revealed that spatial layout had significant relationships with customer satisfaction. In essence, these findings emphasize that spatial layout, a fundamental servicescape dimension, consistently plays a significant role in elevating customer satisfaction across various service contexts, including restaurants.

The third finding from hypothesis three indicated that the social dimension did not significantly predict customer satisfaction in fine-dining restaurant settings. The basis for this conclusion is the p -value related to the social dimension (p -value = 0.941), which exceeded the 0.05 error threshold. Moreover, a negative t -test value highlighted a negative relationship



between the social dimension and customer satisfaction. This indicates that social dimension had a minimal and negative contribution to the model with a beta coefficient of -0.005 (-0.5%). This result contradicts studies by Ahmad et al. (2019), Preetam & Khan (2018), and Çetinsöz (2019), which collectively demonstrated a significant positive effect of the social dimension on customer satisfaction. This discrepancy suggests that, unlike prior research, the social dimension, encompassing staff cleanliness, friendliness, and responsiveness, did not positively impact overall customer satisfaction in this study. Therefore, it can be inferred that customers expressed dissatisfaction with the social dimension of the surveyed restaurants, as this factor was both non-significant and negatively contributed to their overall satisfaction.

The fourth finding from hypothesis four highlighted that the information dimension significantly predicted customer satisfaction within fine-dining restaurant settings. This prediction is supported by the p-value linked to the information dimension (p-value = 0.000), which fell below the 0.05 error threshold, along with a positive t-test value suggesting a direct and positive relationship between the information dimension and customer satisfaction. This finding aligns with studies by Shashikala & Suresh (2013), Artuğer (2020), Weerasinghe & Dilhani (2017), which revealed that information dimension is significantly related with customer satisfaction. In essence, these findings collectively reinforce that the information dimension, a pivotal element of the servicescape, consistently contributes to enhancing customer satisfaction across various service establishments, including restaurants.

Conclusion and practical implications

This study was conducted to verify whether or not customer satisfaction in a fine-dining restaurant setting could significantly be enhanced through servicescape dimensions. After appropriate inferential statistical analyses, the study found that ambience, spatial layout and information dimension had significant positive effects on customer satisfaction in a fine-dining restaurant setting, while social dimension had a negative and non-significant effect on customer satisfaction in a fine-dining restaurant setting. These findings imply that through effective management of servicescape dimensions such as ambience, spatial layout and information dimension, restaurants can substantially enhance customer satisfaction. However, the findings also imply that customers were not satisfied with the social dimension (staff cleanliness, staff friendliness and staff responsiveness) of restaurants, as this variable was non-significant and negatively affected customers' satisfaction. Therefore, the study concludes that in a fine-dining restaurant setting, the major servicescape dimensions capable of enhancing customers' satisfaction are ambience, spatial layout and information dimension. This implies that servicescape largely influences customers' satisfaction in a fine-dining restaurant setting.

From the findings of the study, certain practical implications could be drawn for restaurant managers and industry practitioners. Firstly, restaurants should effectively manage their ambiance by ensuring their temperature levels are comfortable, food aroma is enticing and background music is pleasurable. Secondly, it is imperative for restaurants to maintain good spatial layout by providing adequate parking space, comfortable dining space for customers, and arranging the dining space to facilitate free movement of customers. Thirdly, to enhance customer satisfaction, restaurants should improve their social servicescape by ensuring employees are clean, customer-friendly and deliver customers' orders in time. Finally, restaurants should consistently use meal menu, in-store and exterior signages to provide information to customers to enable them make orders, locate service units and properly exit their premises after patronage. Furthermore, this study provides pertinent theoretical implications for intending researchers. This study suggests the need for further studies on servicescape and customer satisfaction to provide support for its findings and enhance its generalizability. Specifically, since this study was exclusively based on restaurants, it is suggested that future studies should explore the effects of servicescape on customer satisfaction in other service enterprises such as road transportation services, aviation services, banking services, hotel services, hospital services and educational institutions. Finally, it would also be interesting to see how servicescape influences not just customer satisfaction; but also, customer loyalty intentions. Therefore, this study suggests for need for further studies on servicescape and customer loyalty to service enterprises around the world to contribute to existing literature and empirical discourse.

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