

The Role of Service Quality and Environmental Factors on Restaurant Customer Satisfaction

Narayan Prasad Aryal¹, Susma Rokaya², Kumar Khadka¹, and Sarita Kumari Sah^{3*}

¹Saraswati Multiple Campus, Faculty of Management, Tribhuvan University, Nepal

²Rajdhani Model College, Pokhara University, Kathmandu, Nepal

³Institute of Management Studies, Faculty of Management, Tribhuvan University, Nepal

ABSTRACT

Service quality and environmental factors are becoming more and more important in today's restaurant sector as major drivers of profitability and long-term success. Thus, the goal of this study is to ascertain how service quality dimensions, measured by assurance and empathy and similarly, environmental factor dimensions, measured by spatial layout, and interior design are related to customer satisfaction, with a focus in the restaurants of Koteswhor area. The study adopts a thorough methodological framework and uses a quantitative research design and deductive reasoning methodology based in expectancy-value theory. A mix of descriptive, relational, and causal research designs were used to gather information from 137 customers of Koteswhor area's restaurants. The study employed a non-probability sampling approach, specifically convenience sampling, due to its easy access to participants. A self-administered questionnaire was developed to evaluate how assurance, empathy, spatial layout, and interior design affect customer satisfaction. Several statistical tools, such as mean, median, frequency, standard deviation, independent sample t-tests, correlation, and regression analyses, were applied during the data analysis process. The study's conclusions showed that assurance, empathy, spatial layout and interior design have positive and significant impact on customer satisfaction. Moreover, the findings indicate that there are no gender-specific differences in the perception of assurance, empathy, or interior design, but there is a gender-specific difference in the perception of spatial layout.

Keywords: Assurance, customer satisfaction, empathy, interior design, spatial layout

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*Corresponding Author

shahsarita768@gmail.com

Introduction

The degree to which a person feels satisfied with a product is determined by comparing its perceived performance or outcome to their expectations (Kotler & Armstrong, 2016 and Tse & Wilton, 1988). It is the satisfaction or dissatisfaction that buyers feel when they contrast their expectations with how well they believe a good or service performs. Because it represents subjective consumer assessments of the attribute performance connected to the consumption experience, customer satisfaction is extremely important (Cronin & Taylor 1992). In a similar vein, Zeithaml and Bitner (2003) described satisfaction as the perception that a good or service offers a satisfying degree of fulfillment associated to consumption. Similarly, clients' assessment that the food or service they received was at least as good as expected was seen as satisfaction by (Choi & Chu, 2001). An analogous definition of customer satisfaction is a post-purchase evaluation of the purchase choice (Day, 1984). In addition, a number of variables, including as environmental factors, service quality, and product quality, affect consumer happiness

Dependability, assurance, responsiveness, empathy, and tangibles are just a few of the many aspects that make up service quality, which is crucial to the decision-making processes of consumers (Parsuraman, Zeithaml, & Berry, 1985). In the same way, in today's commercial environments, service quality is critical since it determines customer satisfaction, loyalty, and eventually the success of the firm (Gronroos, 1984). According to Parsuraman, Zeithaml, and Berry (1988),

customer retention and positive word-of-mouth are directly impacted by perceived service quality, highlighting the critical role that it plays in maintaining competitive advantage. Customers are more likely to be satisfied with their whole experience when they have a favorable interaction with customer service agents (Boulding, Kalra, Staelin, & Zeithaml, 1992 and Oliver, 1997). According to Cronin and Taylor (1992) the dynamic interaction of variables influencing customer perceptions, organizational strategies, and technical improvements is what is meant by service quality.

According to Smith, Johnson, and Williams (2018) environmental factors cover a wide range of components that can affect consumer happiness, from the physical surroundings to the social and psychological backdrop. Environmental variables encompass design aesthetics, cleanliness, and spatial arrangement in addition to ambient circumstances like temperature, lighting, noise levels, and air quality. Additionally, psychological elements like mood, emotions, and perceived comfort, in addition to social characteristics like congestion, social interactions, and service encounters, have a significant impact on how customers perceive and engage with a particular setting (Lee & Chang, 2020). A study conducted by Smith, Jhonson and Williams (2018) examined the relationship between improved consumer satisfaction in retail environments and pleasant surroundings. Additionally, congruence between environmental cues and service quality can increase positive experiences and customer satisfaction levels in hospitality settings, according to research by (Yoon & Uysal, 2005).

Recent studies have also found that environmental factors and service quality interact to influence customer perceptions and behaviors. Organizations looking to increase customer satisfaction and loyalty must understand how environmental elements and service quality interact. Despite numerous studies conducted to identify the effect of service quality and environmental factors on customer satisfaction, almost every research has discovered positive impact of service quality and environmental factors on customer satisfaction. Hence the research problem focuses on determining whether the concern is genuine or not. This study attempts to pursue the following research objectives:

- To examine the connection between environmental factors, service quality and customer satisfaction.
- To analyze the difference in the perception of environmental factors, service quality and customer satisfaction across male and female.
- To evaluate the impact of service quality and environmental factors on customer satisfaction.

The remainder section of this research contains the literature review, methods, results and discussion and conclusion.

Literature Review

Although there are several important theories regarding consumer satisfaction, the expectancy value theory stands out as being especially helpful for the current investigation. By (Atkinson, 1964), the expectancy value theory was discovered.

This theory describes how expectations and perceived value shape consumers' views toward goods and services. Customers assess goods and services by comparing the perceived value of the good or service to their expectations (Eccles & Wigfield, 2002). According to this theory, actual performance, perceived value, and expectations all have a significant impact on customer satisfaction. Consumer perceptions of a product's performance are known as expectations, and their assessment of the product's value in relation to its cost is known as perceived value. Actual Performance is what the customer actually experiences while the product or service performs.

Regarding the implications of this theory, it can be utilized to understand student motivation and academic accomplishment as well as to encourage healthy lifestyle choices and comprehend customer behavior. Comparably, the theory of customer satisfaction contends that consumers' expectations of the caliber of goods and services as well as their estimation of their worth impact how satisfied they are. By comprehending the expectations and preferences of their customers, businesses can enhance customer satisfaction and loyalty by promptly meeting or surpassing these expectations through their services.

Mother and Mahadevan (2019) investigated how Malaysian Arab restaurants' customer satisfaction levels were affected by service quality. Studying the effects of assurance and empathy on customer satisfaction was the goal of the research. The study found a strong correlation between customer satisfaction and the aspects of

service quality: assurance and empathy. The study discovered, clients were felt heard, appreciated, and at ease with staff members. Regarding the caliber of the food and services offered by the restaurants, the respondents were satisfied and confident. [Karmacharya \(2022\)](#) most likely looked into how aspects of service quality affected customers' satisfaction in Nepalese financial institutions. The study discovered that pleasant staff members and excellent customer service encouraged customers to visit the institution again and again, indicating a positive correlation between service quality and customer satisfaction. The following hypothesis are produced in light of these reviews:

H₁: Robust assurance does not elevate customer satisfaction.

H₂: Compassionate empathy does not enrich customer satisfaction.

H₃: There is no discernible difference in how men and women perceive the quality of the services they receive.

[Omar et al. \(2015\)](#) examined the impact of environmental factors on customer satisfaction in Shah Alam Arabic restaurants in Selangor. The study discovered that interior design and spatial layout had a positive effect on customer satisfaction because the restaurant's theme, colors, lighting, music, and artwork all drew in customers. In a similar vein, [Khan et al. \(2013\)](#) found a positive correlation between interior design and customer satisfaction in the Peshawar, Pakistan, fast food industry. Additionally,

[Sabir et al. \(2014\)](#) investigated the variables influencing customer satisfaction in Pakistan's restaurant sector. The study's findings demonstrated that environmental elements had a very favorable impact on consumer happiness, because a large number of respondents expressed concerns with the restaurant's hygienic, conditions and physical environment. These reviews lead to the formulation of the following hypothesis:

H₄: Having a visually appealing interior design does not strengthen customer satisfaction.

H₅: A well-thought-out spatial layout does not maximize customer satisfaction.

H₆: The perception of environmental factors does not differ considerably between male and female.

H₇: The perception of customer satisfaction does not differ remarkably between male and female.

Based on the literature review presented in *Figure 1*, the study conceptualizes the research framework. This paradigm explains how environmental factors and service quality affect customer satisfaction. Two main dimensions of service quality are assurance and empathy which have been taken from [Mother and Mahadevan \(2019\)](#) and [Karmacharya \(2022\)](#). Comparably, environmental factors are comprised of two main dimensions: interior design and spatial layout that are derived from [Khan, Hussain, and Yaqoob \(2013\)](#), [Sabir et al. \(2014\)](#), and [Omar, Ariffin, and Ahmad \(2015\)](#).

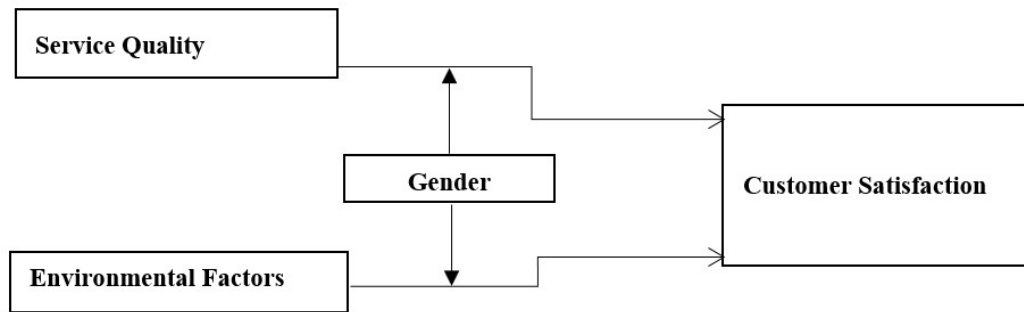


Figure 1. Research framework of the study

[Zeithaml et al. \(1990\)](#) defined assurance as the customers' faith and confidence in the whole experience, quality, and safety that a restaurant offers. It includes a number of things, such as the caliber of the cuisine, the level of service, cleanliness, and compliance with health and safety laws. In the context of this study, assurance refers to the restaurant's ability to reassure its customers about the caliber of its customer service.

According to [Decety and Lckes \(2009\)](#), empathy is the capacity to perceive and relate to the feelings and viewpoints of others. According to [Davis \(1996\)](#), empathy is the ability to comprehend or experience something from another person's point of view. The ability of restaurant employees to comprehend and relate to the emotions and experiences of consumers is referred as empathy in the current study.

Spatial layout is the intentional organization of physical objects in a place, taking into account their positioning, size, and relative relationships, in order to achieve both practical and aesthetic goals ([Lindh et al., 2009](#)). Spatial layout, as used in this study, refers to the appealing arrangement and organization of objects without

overcrowding the area. It covers the overall design of the dining area as well as the lighting and table placement.

According to [Pile \(2007\)](#), interior design is a broad field that encompasses a variety of activities such as research, research communication, space planning, construction management, site inspection, conceptual development, and design implementation. The process of organizing and arranging a space's design is known as interior design. The current study refers interior design as a pleasant and useful experience for customers by the intentional planning, arranging, and functional augmentation of the physical space of the restaurant. This calls for the thoughtful selection of components, including theme, decor, and color.

[Oliver \(1980\)](#) described customer satisfaction as the general sense of pleasure or contentment that consumers feel following their use of a good or service. Customer satisfaction is defined in this study as a multidimensional term that includes elements like service quality and environmental factors. The degree to which consumers are happy with the level of service, the surrounding conditions, or the

overall experience offered by the restaurants in the Koteshwor area is known as customer satisfaction.

Methods

The goal of the study was to investigate the variables that influence customer satisfaction in restaurants among the general public in the Koteshwor area based on aspects of service quality and environmental factors. Accordingly, the study used a quantitative research design from the standpoint of research methodologies, and it used a deductive reasoning approach based on the expectancy value theory from the perspective of reasonings employed. Descriptive, relational, and casual research designs have been chosen in the study because they will better address the overall goals and hypothesis. Defining the sample profile and discussing the state of customer satisfaction, assurance, empathy, spatial layout, and interior design were the main goals of descriptive study. The linkages or associations between assurance, empathy, spatial layout, interior design, and customer satisfaction were investigated using the relational research design. Additionally, a casual research design was employed in the study to examine the effects of assurance, empathy, interior design, and spatial layout on customer satisfaction.

The customers of each of the 14 restaurants in the Koteshwor region served as the targeted demographic. Approximately 300 customers visit one restaurant per day; of these, the total sample size of 119 is determined by using a sample size calculator that is calculated at a 95 percent confidence level with ± 9 percent margin error and 50 percent

estimates proportion (Cochran, 1977). Out of these, customers of six restaurants were considered as a sample, employing a non-probability sampling approach, specifically convenience sampling, due to its easy access to participants. 158 customers received the questionnaire. 145 of these questionnaires were returned. Once more, eight questionnaires were deemed invalid due to incomplete recording of details. Hence, 137 is the ultimate sample size.

The Burger House and Crunchy Fried Chicken, the first restaurant chosen, was asked for permission to gather data on November 28, 2023. Thirty questionnaires were issued to clients on the same day, and they were all collected on the same day. The second restaurant chosen, Portobello Cafe House, gave permission for data collection to take place on November 29 from 12:00 am to 3:00 pm. Only 22 of the 25 questionnaires that were given to respondents that day were collected. Thirty-two questionnaires were given out to customers of the third restaurant chosen, Royal Food Gallery, on December 1st. The questionnaires were all collected on the same day. The fourth restaurant that was chosen, New Quality Family Restaurant, was contacted on December 3rd to request permission to gather data. Twenty-five questionnaires were given out to clients that same day, however four were not there when they were collected. Just 24 of the 28 surveys that were given out to customers of the fifth restaurant chosen, on December 6th, were returned. The sixth restaurant to be chosen, Three Rose Restaurant, was approached for permission to collect data on December 10. That same day, 18

questionnaires were issued, two of which were missing when the data was collected.

The majority of the data for this study came from primary sources. A questionnaire was used as the study's research tool. The general population was given access to a standardized, self-administered questionnaire that included a 5-point Likert scale, which goes from strongly disagree to strongly agree. The terminology used in the Likert scale was somewhat altered, but the items were taken from earlier research. Three items were taken from the scale created by [Garcia and Martinez \(2019\)](#) in order to assess the assurance. Three items that were adopted by ([Smith & Johnson, 2021](#)) were used to evaluate empathy. Two items taken from ([Brown & Martinez, 2018](#)) and one item from ([Johnson & Martinez, 2018](#)) were used to measure the spatial layout. One item adopted by [Jones \(2019\)](#) and two items adopted by [Johnson \(2020\)](#) were used to examine interior design. Two items were taken from the scale created by [Smith & Johnson \(2020\)](#) and one item was taken from the scale created by [Garcia & Martinez \(2019\)](#) in order to analyze customer satisfaction.

The goal and confidentiality of the study are briefly summarized at the beginning of the questionnaire. In the section on general background, respondents were questioned about their gender, age, income, and visiting pattern. Similar to this, the section on basic and variable-related information included yes/no, multiple choice, rank order, and Likert scale questions to investigate how environmental factors and service quality affect customer satisfaction in restaurants. Of these, the ranking, multiple choice,

and yes/no questions were created by the individual. In addition, the current study reviewed the body of literature and created the questionnaire using secondary data from published articles, academic journals, and textbooks.

Numerous statistical and descriptive techniques were used to examine the data during the course of the study. These techniques allowed a thorough investigation of various aspects within the data set and included frequency and percentage calculations, bar diagram, cross-tabulations, and metrics like mean, median, and standard deviation. Additionally, inferential methods like regression analysis and correlation analysis were used to delve further into the relationships between the variables. Furthermore, an independent sample t-test was performed to identify differences in results between male and female participants. The Levene's test was employed in conjunction with the independent sample t-test to see if the gender variability was significantly divergent or consistent. Through the identification of any problems resulting from variation in variance among age groups, this diagnostic tool was important in guaranteeing the robustness and validity of the findings.

Results and Discussion

After being initially input into Microsoft Excel, the data was assessed using a number of statistical methods. Data processing, coding, and recording were all done with SPSS software. The goal of this study is to learn more about the variables influencing customer satisfaction in restaurants. Data were collected using

a questionnaire including multiple choice questions, ranking orders, yes/no questions, general background, and Likert scale ratings. A number of descriptive statistics, t-tests, correlations, and regression analyses were made possible by the painstaking organization, tabulation, and analysis of the gathered data. Customers' demographics were outlined in the survey questionnaire according to variables including gender, age group, income level, and frequency of visits. IBM SPSS software version 20 was used for data analysis. The tables that follow are produced from the data output that the SPSS software generates. To improve readability and clarity, Microsoft Excel is then used to modify and format the data. The study adopted simple regression

instead of multiple regression because it aimed to examine the direct impact of individual variables (such as spatial layout, interior design, assurance, or empathy) on customer satisfaction independently, rather than analyzing their combined effect. Using simple regression allows for a clearer interpretation of how each factor influences the dependent variable without potential multicollinearity issues that might arise in a multiple regression model.

The study's regression model is provided as follows:

$$Y_i = a_i + b_i x_i + e$$

where, Y = Customer satisfaction, a = intercept, x_i = Independent variables, b_i = beta coefficient, e = error term

Table 1

Gender of respondents

Demographic Variables	Characteristics	Frequency	Percentage
Gender	Male	41	29.90
	Female	96	70.10
	Total	137	100
Age	Below 20	3	2.20
	20-40	129	94.20
	Above 40	5	3.60
	Total	137	100
Income Level	Below Rs10000	50	36.50
	Rs10000-Rs30000	66	48.20
	Above Rs30000	21	15.30
	Total	137	100
	Total	137	100
Visiting Pattern	Regularly	30	21.90
	Weekly	42	30.70
	Monthly	65	47.40
	Total	137	100

Table 1 exhibits the profile of respondents. The participants' gender distribution is not evenly

distributed. Of the 137 respondents that participated in the survey, 41 were men and the remaining 96 were women. The results show that women participate at a larger rate than men do, with women making up 70.10 percent of the respondents and men making up the remaining 29.90 percent. Moreover, three of the total responses are younger than 20, 129 are between the ages of 20 and 40, and five are older than 40. According to the data, 2.20 percent of respondents are under 20, 94.20 percent are in the 20-40 age range, and 3.60 percent are over 40. Out of the total number of respondents, fifty earn less

than Rs.10,000, sixty-six make between Rs.10,000 - Rs. 30,000, and twenty-one earn more than Rs.30,000. According to the table, 36.50 percent of respondents are from below Rs.10,000, 48.20 percent are from between Rs.10,000 and Rs.30,000, and 15.30 percent are from beyond Rs.30,000. Next, the 30 respondents visit the restaurant on a regular basis, 42 visit once a week, and 65 visit once a month. According to the table, just 21.90 percent of all respondents visit frequently; the remaining 47.40 percent visit monthly, 30.70 percent visit weekly, and so on.

Table 2

Independent sample t test for equality of means across gender

Variables	Equal variance	Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference
Assurance	Equal variances assumed	0.874	0.352	-0.188	135	0.851	-0.023
	Equal variances not assumed			-0.199	86.9	0.842	-0.023
Empathy	Equal variances assumed	0.318	0.574	-1.445	135	0.151	-0.175
	Equal variances not assumed			-1.46	77.5	0.148	-0.175
Spatial layout	Equal variances assumed	0.667	0.415	-2.284	135	0.024	-0.253
	Equal variances not assumed			-2.203	69.9	0.031	-0.253
Interior design	Equal variances assumed	0.238	0.626	-1.376	135	0.171	-0.178
	Equal variances not assumed			-1.322	69.3	0.191	-0.178
Customer satisfaction	Equal variances assumed	0.822	0.366	-0.386	135	0.700	-0.051
	Equal variances not assumed			-0.423	94.2	0.674	-0.051

Table 2 displays the findings of tests conducted to ensure that the means and variances of the various variables are equal. According to Levene's test, the assumption of equal variances was met because all variables (assurance: $p = 0.874$, empathy: $p = 0.318$, spatial layout: $p = 0.667$, interior design: $p = 0.238$, customer satisfaction: $p = 0.822$) had non-significant findings. T-tests were used to assess the mean differences between male and female respondents for the following categories: assurance, empathy, spatial layout, interior design, and customer satisfaction. Upon assuming equal variances, the t-tests demonstrated non-significant mean differences across all variables ($p = 0.851$ for assurance, $p = 0.151$ for empathy, $p = 0.024$ for spatial

layout, $p = 0.171$ for interior design, and $p = 0.700$ for customer satisfaction). The t-tests revealed non-significant mean differences across Assurance, Empathy, Interior design, and Customer satisfaction (all p -values > 0.05) even when equal variances were not assumed. In contrast, the mean difference for the spatial layout remained statistically significant ($p = 0.024$) when equal variances were not assumed, suggesting a significant difference in averages between male and female respondents. With the exception of spatial layout, where a significant difference was noted, these results generally imply that there were no significant mean differences between male and female respondents for the most of the variables.

Table 3

Descriptive statistics

Variables	Mean	Median	Std. Deviation	Variance
Assurance	3.618	3.670	0.658	0.432
Empathy	3.465	3.670	0.654	0.427
Spatial layout	3.519	3.670	0.603	0.363
Interior design	3.523	3.670	0.697	0.486
Customer satisfaction	3.443	3.330	0.713	0.508

The descriptive statistics give a summary of the whole sample, as shown in *Table 3*. At 3.618, assurance has the highest mean value among the independent variables; it is followed by interior design at 3.523, spatial layout at 3.519, empathy at 3.465, and the dependent variable customer satisfaction at 3.443. In a similar vein, the greatest and equally distributed median values for assurance, empathy, spatial layout, interior design and customer satisfaction

are 3.670 and 3.330, respectively, while customer satisfaction comes in second. The dependent variable, customer satisfaction, has the most variability, with a standard deviation and variance of 0.713 and 0.508, respectively.

Table 4

Relationship between variables

Variables		Assurance	Empathy	Spatial layout	Interior design	Customer satisfaction
Assurance	Pearson Correlation	1				
	Sig. (2-tailed)					
Empathy	Pearson Correlation	.393**	1			
	Sig. (2-tailed)	(0.001)				
Spatial layout	Pearson Correlation	.304**	.393**	1		
	Sig. (2-tailed)	(0.001)	(0.001)			
Interior design	Pearson Correlation	.355**	.302**	.490**	1	
	Sig. (2-tailed)	(0.001)	(0.001)	(0.001)		
Customer satisfaction	Pearson Correlation	.530**	.421**	.396**	.388**	1
	Sig. (2-tailed)	(0.001)	(0.001)	(0.001)	(0.001)	

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

The correlation between the independent and dependent variables for the whole sample is summarized in Table 4. At a 99 percent confidence level, the link between assurance and customer satisfaction is positive and significant, with a correlation coefficient of 0.530. As a result, the null hypothesis is rejected at the 0.01 level, indicating that assurance has positive relation with employee performance. Likewise, over the entire sample, there is a positive and statistically significant connection (0.421 correlation coefficient) between empathy and customer satisfaction at a 99 percent confidence level, suggesting a meaningful association. Consequently, at the 0.01 significance level, the null hypothesis is rejected, indicating a significant correlation between empathy and customer satisfaction. Based on the study's findings, it can be

concluded that more empathy and higher levels of customer satisfaction are related.

Similarly, with a correlation coefficient of 0.396, the association between spatial layout and customer satisfaction is positive and significant at the 99 percent confidence level. Consequently, the null hypothesis is rejected at the 0.01 level, indicating that restaurant customer satisfaction may be influenced by spatial layout. Accordingly, with a correlation coefficient of 0.388, the association between interior design and customer satisfaction is positive and significant at the 99 percent confidence level. As a result, the null hypothesis is rejected at the 0.01 level, indicating that restaurants with attractive interior design can have satisfied consumers.

Table 5

Impact of assurance on customer satisfaction

Coefficients a	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	F	Sig	Adjusted R Square
	B	Std. Error	Beta					
(Constant)	1.363	0.291		4.684	0.001			
Assurance	0.575	0.079	0.53	7.269	0.001	52.832	.001	0.276

a Dependent Variable: Customer satisfaction

b Predictors: (Constant), Assurance

With a regression coefficient of 0.575, assurance has a positive effect on customer satisfaction, as seen in Table 5. The null hypothesis is rejected at the 0.01 level, and the impact is significant at the 99 percent confidence level. This indicates that a 57.5 percent improvement in customer satisfaction will result from every unit

increase in assurance. Similarly, the regression model is fit according to the F-value of 52.832 and the Sig-value of 0.001. Similarly, the table's adjusted R-squared value shows that assurance accounts for about 27.6 percent of the variation in customer satisfaction.

Table 6

Impact of empathy on customer satisfaction

Coefficients a	Unstandardized coefficient		Standardized Coefficients	t	Sig.	F	Sig.	Adjusted R Square
	B	Std. Error	Beta					
(Constant)	1.851	0.300		6.166	0.001			
Empathy	0.460	0.085	0.421	5.397	0.001	29.124	.001	0.171

a Dependent Variable: Customer satisfaction

b Predictors: (Constant), Empathy

The impact of empathy on customer satisfaction is seen in Table 6, where a regression coefficient of 0.460 is shown. At a 99 percent confidence level, the impact is considerable. At the 0.01 threshold, the null hypothesis is rejected. This indicates that a one-unit increase in empathy increases customer satisfaction by forty-six percent

which is 0.46 unit. The substantial Sig-value of 0.001 and the F-value of 29.124 indicate that the regression model is deemed fit. Furthermore, the table's adjusted R-squared value indicates that empathy may be responsible for about 17.1 percent of the variation in customer satisfaction.

Table 7

Impact of spatial layout on customer satisfaction

Coefficients a	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	F	Sig.	Adjusted R Square
	B	Std. Error	Beta					
(Constant)	1.796	0.334		5.382	0.001			
Spatial layout	0.468	0.093	0.396	5.009	0.001	25.09	.001	0.15

a Dependent Variable: Customer satisfaction

b Predictors: (Constant), Spatial layout

Table 7 presents evidence of a favorable relationship between spatial layout and customer satisfaction, with a regression coefficient of 0.468. At a 99 percent confidence level, this influence is considered substantial, which results in the null hypothesis being rejected at the 0.01 level. In essence, a 46.8 percent rise

in consumer satisfaction is correlated with every unit improvement in spatial layout. Additionally, an F-value of 25.09 and a substantial Sig-value of 0.001 confirm the regression model's fit. Furthermore, the table's adjusted R-squared value indicates that spatial layout may be responsible for about 15 percent of the variation in customer satisfaction.

Table 8

Impact of interior design on customer satisfaction

Coefficients a	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	F	Sig.	Adjusted R Square
	B	Std. Error	Beta					
(Constant)	2.043	0.291		7.013	0.001			
Interior design	0.397	0.081	0.388	4.898	0.001	23.986	.001	0.145

a Dependent Variable: Customer satisfaction

b Predictors: (Constant), Interior design

Regression coefficient of 0.468 in Table 8 results shows that interior design has a favorable effect on customer satisfaction. The impact has a statistical significance level of 99 percent, which means that the null hypothesis is rejected at the 0.01 level. In essence, there is a 39.7 percent increase in customer satisfaction intensity for every unit adjustment in interior design.

Additionally, an F-value of 23.986 and a substantial Sig-value of 0.001 confirm the regression model's fit. Furthermore, the table's s adjusted R-squared value indicates that interior design may be responsible for about 14.5 percent of the variation in customer satisfaction. The following is a summary of the findings:

- Negligible difference in the perception of assurance across gender is found, as the p-value is 0.851. In other words, both males and females perceive assurance similarly, and any disparities observed are not statistically meaningful. May be due to standardized service quality, similar expectations regarding food safety and reliability, and a culturally ingrained emphasis on hospitality that ensures consistent treatment of all customers.
- Perception on empathy has insignificant difference across gender as the p-value is 0.151, suggests that any observed variations in empathy perception between males and females are likely due to random variability rather than genuine gender-based differences. Due to a shared cultural expectation of hospitality, uniform staff training in customer service, and similar dining experiences for both male and female customers.
- Considerable difference in the perception of spatial layout across gender is discovered as the p-value is 0.024, indicates that the observed variations in perception of spatial layout between males and females are unlikely to have occurred by random chance alone. May be due to differing preferences, with males prioritizing functionality and convenience, while females may be more attentive to ambiance, seating comfort, and aesthetic appeal.
- The p-value is 0.171, which is greater than 0.05, indicating that there is negligible difference in perception of interior design across male and female, which means there is little to no difference in how males and females perceive interior design. Due to shared exposure to modern dining environments, similar cultural aesthetics, and a collective emphasis on cleanliness and ambiance over gender-specific design preferences.

Table 9

Result of hypothesis test

Hypothesis	Results
H_1 : Robust assurance does not elevate customer satisfaction.	Failed to reject
H_2 : Compassionate empathy does not enrich customer satisfaction.	Failed to reject
H_3 : There is no discernible difference in how men and women perceive the quality of the services they receive.	Failed to reject
H_4 : Having a visually appealing interior design does not strengthen customer satisfaction.	Failed to reject
H_5 : A well-thought-out spatial layout does not maximize customer satisfaction.	Failed to reject
H_6 : The perception of environmental factors does not differ considerably between male and female.	Failed to reject
H_7 : The perception of customer satisfaction does not differ remarkably between male and female.	Failed to reject

- The relationship of assurance, empathy, spatial layout, and interior design with customer satisfaction is found to be positive and significant. The finding implies that investing resources in enhancing assurance and empathy among staff, optimizing spatial layout, and improving interior design can yield tangible benefits in terms of customer satisfaction. Due to customers valuing a holistic dining experience, where trust in service, staff attentiveness, comfortable space arrangement, and appealing aesthetics collectively enhance their overall satisfaction.

Table 9 depicts the result of hypothesis test. Additionally, several factors that show a direct correlation with customer satisfaction have been systematically observed in the current study. The results of correlation and regression analyses show that assurance and empathy have a positive and significant relationship with customer satisfaction. The outcome is consistent with the findings of [Mother and Mahadevan \(2019\)](#) as well as [Karmacharya \(2022\)](#), who found that assurance and empathy had comparable, noteworthy, and beneficial effects on customer satisfaction. Notably, the sample size of the current study is similar to that of [Monther and Mahadevan's \(2019\)](#), whose use of replies from 135 individuals contributed to the consistency of findings. Additionally, [Karmacharya \(2022\)](#) conducted research in the same field as this study, which supports the consistency of the findings.

Correlation and regression evaluations of interior design and spatial arrangement also show a strong and positive relationship with customer satisfaction. This finding is

consistent with the research conducted by [Sabir et al. \(2014\)](#) as well as [Omar, Ariffin, and Ahmad \(2015\)](#). The results of both studies showed that environmental elements and consumer satisfaction are positively correlated. The relevance of spatial layout and interior design considerations in improving customer experiences is confirmed by the consistency of the findings, which highlights the significance of these elements in influencing consumer perceptions and overall satisfaction levels.

Conclusion

In order to assess the differences, investigate the relationships, and look into the effects of the independent variables: assurance, empathy, spatial layout, and interior design and the dependent variable: customer satisfaction in the restaurant located in the Koteswor area, the study was carried out. The results of this study demonstrate that, among the factors affecting customer satisfaction in restaurants in the Koteswor region, restaurant hygiene is the most important one. The answers to a ranking question that was asked to the respondents led to this conclusion. This implies that a restaurant's tidy and clean surroundings may encourage customers to come in more often. Taste and flavor were found to be the second most significant element influencing satisfaction, behind hygiene. According to respondents' preferences, the worth of money was put last while clear communication came in third place. This basically indicates that when it comes to evaluating their level of satisfaction, customer in the Koteswor area give higher priority to restaurant hygiene than to other aspects like flavor, communication, and value for money.

Additionally, the examination of regression and correlation revealed a favorable association between the independent and dependent variables. This implies that consumer pleasure tends to rise together with assurance, empathy, spatial layout quality, and interior design quality. Assurance pertains to the reliability and expertise exhibited by service providers, whereas empathy denotes their capacity to comprehend and cater to the demands of their clients. The physical setting in which services are rendered is the subject of spatial layout and interior design, which includes elements such as layout effectiveness, aesthetics, and comfort. Customers are more likely to see the service favorably and be more satisfied when these components are improved and optimized. This implies that making investments in areas like upgrading interior design and spatial layout, as well as personnel training for assurance and empathy, will help raise overall customer

satisfaction levels. Therefore, these results are encouraging for the Koteswor restaurant industry because they show that businesses are successfully meeting the needs and preferences of their consumers, which raises customer satisfaction and may encourage repeat business and positive word-of-mouth recommendations. Additionally, the results are said to be more helpful for restaurant owners in recognizing customer trends and preferences, improving the chain of operations, and focusing on specific clientele. These results can help researchers by providing guidance on demographic targeting, determining sample size, and choosing pertinent factors. The study also helps in formulating hypotheses, establishing objectives, and getting past roadblocks in the research process. The scope of applicability is not limited to the restaurant business; it also includes the retail, healthcare, technology, finance, and educational sectors.

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