Cafe politics

Asghar, Midhat

International Islamic University Islamabad

15 February 2023
Cafe Politics: How Food Service Operators Influence University Students’ Satisfaction and Dining Frequency

Midhat Asghar
https://doi.org/10.5281/zenodo.7747564

ABSTRACT

The study delves into the intricate relationship between cafe operations and politics and how it influences the overall dining experience of university students. This research aims to explore the influence of cafe operations on the satisfaction and behaviour of university students and its effect on their dining frequency. The data were gathered through a survey of 201 students, employing a convenient sampling technique. The results suggest that the quality of food, ambience, value for money, food and beverage options, and service quality significantly impact students’ overall satisfaction with the campus meal service operation and their dining frequency. These findings emphasize the importance of food service operators focusing on food quality, ambience, value for money, food and beverage options, and service quality to attain student satisfaction. These factors could positively impact the university’s reputation, student retention, and marketability to potential students. This study is significant for university food service operators as it provides valuable insights into the various elements of the food service experience that influence student satisfaction and dining frequency. This research contributes to the existing literature by filling the gap in knowledge regarding the impact of cafe operations on student behaviour and satisfaction. Ultimately, this study provides a robust framework for future research. This research aims to enhance university students’ dining experience, thereby improving their overall academic performance and well-being.

Keywords: Cafe politics; Student satisfaction; Dining frequency; Food quality; Service quality; University reputation.

1. INTRODUCTION

"Cafe politics" is a term that refers to the political influence on campus cafe operations and its effect on student satisfaction and behaviour (Jeaheng et al., 2023; Pal et al., 2022). This study aims to provide valuable insights into this complex phenomenon. University food service plays a crucial role in catering production globally due to the increasing number of food outlets university students utilize during their academic tenure (Kennedy et al., 2022). However, providing satisfactory food service has been challenging, given the growing enrollment, substandard conditions of student food service, and economic constraints. Despite these obstacles, there is an opportunity for cafe management to enhance student satisfaction by improving employee performance (Raihen et al., 2023).
It has become increasingly problematic for food service providers to cater to the heterogeneous dining habits of Millennials (generation Y), which make their needs complex (Barska et al., 2023). The university trend report indicates that only 28% of students were satisfied with the healthy menu provided on campus. At the same time, 34% expressed satisfaction with the food service, significantly impacting their dining frequency (Smith et al., 2020). Therefore, food service providers must understand consumer needs and behaviour to attract and retain their customers (Xin et al., 2023).

Based on the given discussion, the following are the key research questions of the study, i.e.,

I. What are the key factors that influence university students’ satisfaction with campus cafe operations?
II. How do these factors impact the dining frequency of university students?
III. What is the relationship between student satisfaction with cafe operations and their overall academic performance and well-being?

The stated research questions connected with the study’s objectives, i.e.,

1. To identify the key factors that significantly impact student satisfaction with campus cafe operations.
2. To explore the relationship between these factors and student dining frequency.
3. To investigate the potential impact of student satisfaction with cafe operations on their overall academic performance and well-being.

Extensive research has examined and evaluated various food parameters, including service quality, value for money, food quality, and ambience in campus food service (Burkov et al., 2023; Liu et al., 2023; Jeaheng et al., 2023). Limited research has been conducted to explore university students’ perceptions of on-campus dining services. This knowledge gap is significant as campus food service is a primary component of the catering industry worldwide, given the increasing number of food outlets university students use during their studies. Both residential and non-residential students rely on on-campus dining services, and their level of satisfaction can significantly impact their overall dining frequency. Thus, it is essential to understand students’ behaviour and viewpoints regarding campus food service. Previous research has emphasized the importance of meal and beverage quality attributes such as climate, appearance, optics, gloss, cleanliness, flavour, scent, appearance, and stability, which significantly influence student satisfaction (Nussinovitch & Hiroshima, 2023; Mathew & Radhakrishnan, 2022). However, there is also a need for more research on the relationship between residential students’ food plans and non-residential students’ food plans. Customer satisfaction is crucial for any business, and the lack of it can lead to frustration and social discomfort. This study aims to investigate students’ level of satisfaction with on-campus meal service and dining constancy related to different factors such as meal quality, quantity, value, and ambience. The research employs various measurement tools to enhance the quality of service in food performance, including consumers’ perceptions of price and quality, which are primary factors governing customer level and satisfaction and influencing consumers’ end-good behavioural intentions. Furthermore, the ambience is crucial in driving restaurant success, making it an essential factor to consider when examining campus dining services.

2. LITERATURE REVIEW

Globally, numerous studies have been conducted to investigate the level of satisfaction with on-campus food services, including services provided by contracted companies, limited food services, and multi-site restaurants and services (Tennant, 2018; Joung et al., 2014; El-Said & Fathy, 2015; Klassen et al., 2005). These studies have examined various attributes such as beverage options, location, meal quality, service quality, and cleanliness and have assessed price to determine satisfaction levels. The perception of quality, as embedded in service and food, reflects individuals’ overall satisfaction with the service and food provided and the discrepancies between their expectations and actual experiences (Zhong & Moon, 2020). While quality perception is subjective and depends on individual experiences, it is not analyzed quantitatively due to its complex and intangible nature, which requires a comprehensive understanding of the concept. Hence, it is crucial to evaluate and analyze previous research that addresses these essential characteristics that affect customer perception and, ultimately, their satisfaction levels with food services in highly developed educational institutions.

2.1. Customer Satisfaction

Customer satisfaction plays a vital role in the success of any business, and the lack thereof can lead to frustration, social discomfort, and a loss of business. In the food industry, contentment and discontentment can significantly influence customer behaviour and work ethic, ultimately impacting culinary success (Singh et al., 2023). Customers’ perceptions of food service, including their preparedness to spend and frequency of eating out, are critical indicators of the quality of service and its outcomes (Maschio et al., 2023). Previous investigations have highlighted the importance of customer satisfaction in determining the quality and outcome of food service. Earlier studies identified five practices that university food providers should follow to ensure customer satisfaction (Alnaim et al., 2023; Hsu & Lin, 2023). These include providing high-quality food courts with comfortable seating, actively seeking and acting on feedback from students, extending opening hours to accommodate student schedules, using data to make informed decisions, and offering a diverse mix of food options that cater to the unique design and culture of each campus (Rayuwati et al., 2022; Khanafer et al., 2022; Kubik et al., 2003; Davison et al., 2022). By implementing these practices, university food providers can ensure that their cafeteria services cater to the needs and preferences of their customers, ultimately enhancing overall customer satisfaction and success. The study’s first research hypothesis is as follows:

H1: The greater the satisfaction of university students with campus food service operations, the more likely they are to spend more money and dine out more frequently, leading to increased culinary success for the food service provider.
2.2. Food & Beverage Quality and Customer Satisfaction

Previous research has indicated that the quality of food and beverages is a critical factor in determining student satisfaction with campus dining services. The study identified various food and beverage quality attributes that impact customer satisfaction, such as colour, freshness, smell, texture, aroma, appearance, flavour, shape, consistency, gloss, and temperature (Bowen & Grygorczyk, 2022). Kim et al. (2006), involving 276 customers at Oklahoma State University’s food court, found that food quality was the most crucial factor in customer satisfaction. Customers gave positive feedback and referrals to food service providers who provided high-quality food. Further, food quality attributes such as appearance, taste, and freshness significantly impacted customer satisfaction and returned more than factors such as cleanliness, convenience, value, and price (Kin et al., 2009). Based on these findings, the study has the second research hypothesis, i.e.,

**H2: The quality of food and beverages significantly and positively impacts students’ satisfaction levels.**

It is crucial for campus dining services to prioritize food quality and ensure that it meets or exceeds student expectations. By doing so, they can enhance student satisfaction levels, leading to increased business success and positive word-of-mouth referrals.

2.3. Service Quality and Customer Satisfaction

Numerous studies have suggested various tools for measuring, evaluating, and improving food service quality (Qayyum et al., 2022; Jain & Gupta, 2004). For example, SERVQUAL has been developed to bridge the gap between customers’ expectations and the service provided by the company. This tool identifies five aspects, assurance, empathy, reliability, tangibles, and responsiveness, to help improve service quality (Ammar & Saleh, 2023). Similarly, Stevens et al. (1995) developed DINESERUE, which uses the five aspects of the SERVQUAL model to measure customer perceptions of service quality in the food industry. Although these service rating scales are commonly used, they still need to fully capture the concept of service quality in the restaurant industry. Previous research has found that service quality is essential in determining customer satisfaction and loyalty in food establishments (Song et al., 2022; Nizam et al., 2022). For instance, it was found that service quality factors ranked second after food quality, which affects students’ satisfaction with a food institution. Furthermore, this research indicates that students’ perception of the cleanliness of service features in the cafeteria is more significant than other service features, particularly the atmosphere and service. Results have shown a strong correlation between service quality and student satisfaction. Therefore, students’ perception of service quality is crucial in the food service industry and a necessary predictor of students’ behaviour and perception (Kwun, 2011). Based on the discussion, the study’s third hypothesis is as follows:

**H3. The quality of service has a significant and positive impact on the student’s level of satisfaction.**

Food and beverage and service quality are critical factors in determining customer satisfaction and loyalty in the food service industry. Various tools have been developed to measure and improve these factors, but they need to capture the concept of service quality fully. As such, it is essential to consider service and food and beverage quality to enhance customer satisfaction in food establishments.

2.4. Value for Money and Customer Satisfaction

Customers’ satisfaction is significantly influenced by their perception of the price and quality of products or services. These two elements also impact the intention of consumers to engage in good practices (Ahmed et al., 2023). Price is a crucial customer service concept that must be justifiable and fair compared to competitors (Kalyanaram et al., 2022). Customers are likely to return if prices are moderate; otherwise, if prices are too high or unfair, they may be displeased and not return to avail of the service. This is especially relevant for students with limited budgets and always looking for a balanced and inexpensive meal. The price of university meal services is the primary concern of every student since students have limited funds. Students prefer cheaper food options when university resources are inaccessible (Moya et al., 2023). The amount of food served should be commensurate with the price paid, allowing students to trust the worth or value obtained and providing them with contentment and nutrition (Fernando et al., 2022). The fourth hypothesis of this study is as follows:

**H4. The amount of money spent has a significant and positive impact on the student’s level of satisfaction.**

2.5. Quality of Food and Customer Satisfaction

Based on the survey results, a large proportion of students at the university campus are dissatisfied with the meal plans offered by the cafeteria. This dissatisfaction stems from the fact that a significant portion of the student body is content with the cafeteria’s meals, leading to a divide in opinions (Hayes et al., 2003; Andaleeb & Caskey, 2007; El Zein et al., 2019). However, recent statistics indicate that most students are unhappy with the quality of the food and services provided by the cafeteria, even though they are willing to pay for them (Bauer et al., 2004; Ladhari et al., 2008). The lack of fulfillment of their expectations by the food authority has resulted in a negative relationship between students and the institute and the student’s behaviour towards the cafeteria’s service providers (Smith et al., 2020; Thompson et al., 2022). Numerous studies have been conducted on the impact of food service operations on satisfaction levels and attitudes toward campus dining (Zhang & Kwon, 2022; Van Embden et al., 2022). Despite this, the researcher has yet to find any previous research on the behaviour of Pakistani university students towards campus food operations, leaving a gap in the literature. It is essential to understand why students are dissatisfied with the university campus’s meal plans. Poor quality food and inadequate services can negatively impact students’ perceptions of the institution, affecting their overall satisfaction levels. Furthermore, students’ behaviour towards service providers can impact the campus’s culture and reputation. The study will investigate the relationship between food quality and the students’ satisfaction levels to validate the fourth hypothesis. The findings will help identify areas of improvement and inform policy decisions to enhance the quality of food services on the university campus. Ultimately, this will contribute to the student’s overall satisfaction levels and positively impact their behaviour towards service providers, leading to a better campus culture. The fifth hypothesis of the study is as follows:
2.6. The Ambience and Customer Satisfaction
The environment in which food is served, known as ambience, plays a vital role in the success of a restaurant. External factors, such as the social and physical environment, temperature, aroma, time, sound, and distractions, influence food and meal choices (Kim et al., 2022). Additionally, dietary variables affect food choices and preferences, including temperature, aroma, and meal colour. However, the impact of the brightness of the health system on meal choices has yet to be entirely understood (An et al., 2022; Chow et al., 2022). The surroundings in which people eat are the primary variable that influences their dining experience. Restaurant creators, architects, and retail professionals know how nature affects human behaviour and eating habits. The environmental literature on human food includes the impact of external stimuli, such as colour, aroma, light, temperature, and others (Navaf et al., 2022; Abedi-Firoozjah et al., 2023). Colour is a powerful stimulant in both indoor and outdoor food settings. In advertising, colours are a robust tool for direct marketing. Colours influence the environment and biotic processes, such as hunger, thirst, and heat production. They can create specific emotional responses and direct attention (Kim & Lee, 2020). Traders use colours to add an image or create a particular atmosphere. Warm colours stimulate the body, while cool colours make people feel more comfortable (Wan et al., 2020). Many people prefer bright lighting, while others prefer dimmer lighting, which feels more comfortable and slows their movement. For example, changing the amount of light on a table with peanut butter seems to entice people to want more food when the surface is lightened (Brates & Molfenter, 2021). Research shows that the relationship between lighting and meals is limited. However, warm lighting makes people feel more comfortable and relaxed, resulting in more food intake, while dimmer lighting reduces the time people spend at a restaurant (Bschenen et al., 2020; Choi et al., 2022). Bright lighting in fast-food restaurants may encourage faster food intake, while home-based food combined with dimmer lamps will likely encourage more and less energy consumption (Cummings et al., 2021; Folkoyd, 2020).

The temperature of the food or the temperature of the surrounding environment can evaluate the effects of temperature. The stomach responds differently to hot and cold food. For example, hot milk should reduce human food intake compared to cold milk (Vallath et al., 2022; Harrison, 2021). Warm meals taste pleasant, while hot foods increase metabolism and body temperature. The ambient temperature influences food intake and food choices. Warmer temperatures reduce food intake, and cooler temperatures increase it. Many studies are experimental and quantitative in animal models. Consumer comparison data have shown a significant tendency for variations in food purchases (Kitz et al., 2022). Therefore, a cool air-conditioned area can soften where needed, while a warm area can compress it (Suen et al., 2021). To validate the fifth hypothesis of the study, the impact of ambience on students’ level of satisfaction will be investigated. The findings will help identify areas of improvement and inform policy decisions to enhance the quality of the dining experience on the university campus. Ultimately, this will contribute to the student’s overall satisfaction levels and positively impact their behaviour towards dining environments, leading to a better campus culture. The sixth hypothesis of the study is as follows:

**H6. Ambience has a significant and positive impact on the student’s level of satisfaction.**

2.7. Customer Satisfaction and Dining Frequency
Numerous factors influence food and meal choices, including time of day, day of the week, season, and previous meals consumed (Paoli et al., 2019). Researchers suggest that even the sleep cycle can impact dietary patterns (Manoogian et al., 2019; Zhao et al., 2020). In the real world, individuals tend to regulate their food intake based on the previous meal, which differs from laboratory tests that predict consumption based on predetermined amounts. Disruptions in standard dietary patterns can adversely affect operational and health functions, and the time of day can influence specific food choices and amounts consumed. The amount and type of food consumed result from the impact of time of use. For example, consuming a more significant portion in the morning can reduce daily ingestion, and reducing the allotted time for meals on free days can be an alternate way to cut down on food (Queiroz et al., 2021). The seventh hypothesis of the study is as follows:

**H7: The students’ overall satisfaction significantly and positively impacts their dining experience.**

3. CONCEPTUAL FRAMEWORK
The conceptual framework proposes six hypotheses that examine the factors that impact students’ dining experience, particularly their satisfaction level. The proposed model includes five independent variables (food quality, service quality, variety, ambience, and cost) and two dependent variables (students’ satisfaction level and dining experience). The model aims to illustrate the relationship between these variables and how they affect the students’ overall dining experience. The study aims to explore the impact of various independent variables on the dependent variables. Specifically, it examines the relationship between food quality, service quality, variety, ambience, and cost, and the student’s overall satisfaction level and dining experience. The proposed model will help to understand how each independent variable influences the dependent variables, leading to a comprehensive understanding of the factors that impact students’ dining experiences. In conclusion, the proposed study examines the factors that impact students’ dining experience in a university campus setting. By understanding the impact of independent variables, such as food quality, service quality, variety, ambience, and cost, on the dependent variables, students’ satisfaction level, and dining experience, the study will contribute to developing effective strategies for improving campus food operations. The conceptual framework is proposed to check these hypotheses (see, Figure 1). This model includes independent and dependent variables and shows the link between these variables. Here are five independent variables and two dependent variables.
4. METHODOLOGY

4.1. Population of the Study

To gather data for the study, the study selected Pakistan, one of the famous public sector universities, as the target population and drew a sample from various departments within the university. The study utilized a convenient sampling technique to collect data, distributing 350 questionnaires among the student population. At the time of data collection, the university's total population was 3500. After collecting the responses, 201 usable responses were obtained and used for analysis. This method of sampling allowed for a relatively easy and efficient way of gathering data from a diverse range of students at the university. However, it is essential to note that the results obtained from this sample may not necessarily represent the entire student population at the university, as the sample was not selected through a more rigorous or random sampling method.

4.2. Items Measures

To measure the various constructs under investigation, a five-point Likert scale was utilized. The study sourced all the items from the work of Smith et al. (2020). Five items were used to measure food quality, while ambience and value for money were assessed using four and two items, respectively. Furthermore, food and beverage options were gauged using three items, whereas service quality was measured using nine items. Lastly, customer satisfaction was evaluated using four items. By employing these items, the study aimed to comprehensively understand the various factors that impact students' satisfaction levels regarding the university's food and dining services.

4.3. Statistical Framework

The study used a multiple regression model to estimate the impact of five independent variables, i.e., food quality, service quality, the value of money, ambience, and cost, on two dependent variables, i.e., students' satisfaction level and dining experience. The model illustrates the relationship between these variables and their influence on the student's dining experience.

**Model -1**

The regression equation for satisfaction level (SL) is as follows:

$$SL = \beta_0 + \beta_1FQ + \beta_2SQ + \beta_3VM + \beta_4AMB + \beta_5COST + \epsilon_1 \quad (1)$$

Where SL is the satisfaction level, FQ is the food quality, SQ is the service quality, VM is the value of money, AMB is the ambience, COST is the cost, $\beta_0$ is the intercept, $\beta_1$ to $\beta_5$ are the coefficients for the independent variables, and $\epsilon_1$ is the error term.

**Model 2**

Similarly, the regression equation for the dining experience is:

$$DE = \beta_0' + \beta_1'FQ + \beta_2'SQ + \beta_3'VM + \beta_4'AMB + \beta_5'COST + \epsilon_2 \quad (2)$$

Where DE is the dining experience, $\beta_0'$ is the intercept, $\beta_1'$ to $\beta_5'$ are the coefficients for the independent variables, and $\epsilon_2$ is the error term.

The coefficients in the model represent the change in the dependent variable associated with a one-unit increase in the corresponding independent variable, holding all other variables constant. The error terms $\epsilon_1$ and $\epsilon_2$ capture the unobserved factors affecting satisfaction and dining experience. The study used multiple regression analysis to estimate the coefficients, which involves minimizing the sum of squared errors between the observed and predicted values. The study uses statistical tests, such as the t-test and F-test, to determine the significance of the coefficients. Zaman (2023) introduced cross-panel techniques in his influential work to address the issue of cross-panel biases in regression estimates. In summary, the econometric framework for this study employs...
multiple regression analysis to estimate the impact of food quality, service quality, variety, ambience, and cost on students’ satisfaction level and dining experience. The regression equations provide a quantitative estimation of the relationships between the variables, and the coefficients and statistical tests provide insight into the relative importance of each variable in shaping the students’ dining experience.

5. RESULTS

The present study includes a descriptive analysis, which provides information on the respondents’ demographic characteristics, such as age, gender, and education level. Table 1 has been included to present the relevant data.

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>61</td>
<td>30.3</td>
<td>30.3</td>
<td>30.3</td>
</tr>
<tr>
<td>Male</td>
<td>140</td>
<td>69.7</td>
<td>69.7</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>201</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>11</td>
<td>5.5</td>
<td>5.5</td>
<td>15.4</td>
</tr>
<tr>
<td>undergraduate</td>
<td>170</td>
<td>84.6</td>
<td>84.6</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>201</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 to 30</td>
<td>180</td>
<td>89.6</td>
<td>89.6</td>
<td>89.6</td>
</tr>
<tr>
<td>above 30</td>
<td>9</td>
<td>4.5</td>
<td>4.5</td>
<td>94</td>
</tr>
<tr>
<td>18 to 20</td>
<td>12</td>
<td>6.6</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>201</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Note: Survey Results.

Table 1 presents the results of a demographic survey conducted on the study participants. The table shows the frequencies and percentages of respondents for each category in the three demographic variables: gender, education, and age. In terms of gender, the table indicates that out of the 201 respondents, 61 (30.3%) were female, and 140 (69.7%) were male. The cumulative percent shows that 30.3% of the respondents were female, and 69.7% were male. Regarding education, the majority of respondents (170, 84.6%) were undergraduate students, while 20 (10%) were graduate students, and 11 (5.5%) were postgraduate students. The cumulative percent shows that 15.4% of respondents had either graduate or postgraduate education, while the rest (84.6%) were undergraduate students. In terms of age, the majority of respondents (180, 89.6%) were aged between 21 and 30, while 12 (6%) were under 18 to 20 years old, and 9 (4.5%) were above 30 years old. The cumulative percent shows that 89.6% of respondents were aged between 21 and 30, while 4.5% were above 30. Overall, the table provides a summary of the demographic characteristics of the study sample. This information can help in understanding the characteristics of the population under study and in interpreting the study results.

The present study utilized Pearson’s Correlation as a statistical analysis technique. This method assesses the strength and direction of the relationship between the dependent and independent variables measured. Specifically, the Pearson product-moment correlation coefficient was utilized. Correlation analysis was conducted to examine the collected data, and the results are presented in Table 2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>DF</th>
<th>SL</th>
<th>AMB</th>
<th>VM</th>
<th>FQ</th>
<th>SQ</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SL</td>
<td>.509**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMB</td>
<td>.314**</td>
<td>.733**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VM</td>
<td>.456**</td>
<td>.641**</td>
<td>.503**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FQ</td>
<td>.520**</td>
<td>.578**</td>
<td>.339**</td>
<td>.567**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SQ</td>
<td>.560**</td>
<td>.782**</td>
<td>.729**</td>
<td>.678**</td>
<td>.636**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>COST</td>
<td>.511**</td>
<td>.799**</td>
<td>.836**</td>
<td>.649**</td>
<td>.468**</td>
<td>.830**</td>
<td>1</td>
</tr>
</tbody>
</table>

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

Source: Author’s estimate.
Table 2 presents a correlation matrix that shows significant positive correlations between dining frequency, satisfaction level, ambience, variety, food quality, service quality, and cost. Specifically, the correlation coefficients between satisfaction level and the other variables range from 0.5 to 0.8, indicating strong positive correlations. The strongest correlation is between satisfaction level and service quality (r=0.782), followed by cost (r=0.799) and ambience (r=0.733). There are also significant positive correlations among the independent variables (food quality, service quality, variety, ambience, and cost), with the strongest correlation being between service quality and ambience (r=0.729), followed by service quality and cost (r=0.830). These findings suggest that the different aspects of the dining experience are interrelated and contribute to overall satisfaction. In conclusion, the correlation matrix provides evidence that the variables in the study are positively correlated and may have a significant impact on the students’ overall dining experience and satisfaction level.

This study, Model-1, was used to predict customer satisfaction based on food quality, ambience, value for money, service quality, and cost. The model summary is presented in Table 3, which provides information on the regression analysis. ‘R’ represents the multiple correlations, the combined correlation of all independent variables on the dependent variable. The value of R achieved, which is 0.909, indicates a strong positive correlation. Additionally, the R-square is an important indicator as it shows the combined impact of all independent variables on the dependent variable. The value of R square, which is 0.827, indicates that all the independent variables contribute towards 82.7% of the change predicted in the dependent variable.

Table 3: Model-1 Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.909</td>
<td>0.827</td>
<td>0.823</td>
<td>0.475</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), SQ, FQ, VM, AMB, COST

Source: Author’s estimate.

Table 4, presenting the results of hypothesis testing, indicates that the variables under consideration have significant relationships with customer satisfaction. The first hypothesis (H1) postulated a positive relationship between food quality (FQ) and customer satisfaction. The results reveal a significant positive relationship between FQ and customer satisfaction, as indicated by a p-value of 0.000 and a positive beta coefficient of 0.286. Therefore, H1 is supported. The second hypothesis (H2) posited a positive relationship between ambience (AMB) and customer satisfaction. The analysis indicates a significant positive relationship between AMB and customer satisfaction, as evidenced by a p-value of 0.000 and a positive beta coefficient of 0.411. Therefore, H2 is supported. The third hypothesis (H3) proposed a positive relationship between value for money (VM) and customer satisfaction. The findings indicate a significant positive relationship between value for money and customer satisfaction, as indicated by a p-value of 0.002 and a positive beta coefficient of 0.176. Therefore, H3 is supported. The fourth hypothesis (H4) suggested a positive relationship between food and beverages cost and customer satisfaction. The analysis reveals a significant negative relationship between COST and customer satisfaction, as evidenced by a p-value of 0.081 and a negative beta coefficient of -0.126. Therefore, H4 is not supported. Finally, the fifth hypothesis (H5) posited a positive relationship between service quality (SQ) and customer satisfaction. The results reveal a significant positive relationship between SQ and customer satisfaction, as indicated by a p-value of 0.000 and a positive beta coefficient of 0.541. Therefore, H5 is supported.

Table 4: OLS Estimates for Model 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-1.152</td>
<td>0.193</td>
<td>-5.983</td>
<td>.000</td>
</tr>
<tr>
<td>FQ</td>
<td>0.286</td>
<td>0.080</td>
<td>0.197</td>
<td>3.575</td>
</tr>
<tr>
<td>AMB</td>
<td>0.411</td>
<td>0.051</td>
<td>0.402</td>
<td>8.063</td>
</tr>
<tr>
<td>VM</td>
<td>0.176</td>
<td>0.057</td>
<td>0.133</td>
<td>3.107</td>
</tr>
<tr>
<td>COST</td>
<td>-0.0126</td>
<td>0.072</td>
<td>-0.074</td>
<td>-1.755</td>
</tr>
<tr>
<td>SQ</td>
<td>0.541</td>
<td>0.095</td>
<td>0.341</td>
<td>5.694</td>
</tr>
</tbody>
</table>

a. Dependent Variable: SL

Source: Author’s estimate.

Table 5 shows that this model's multiple correlation coefficient (R) is 0.872, indicating a strong positive relationship between the independent variables and the dependent variable. The coefficient of determination (R Square) is 0.760, meaning that the independent variables can explain approximately 76% of the variance in the dependent variable in the model. The adjusted R Square, which considers the number of predictors in the model, is 0.753. This indicates that the independent variables in the model explain a substantial portion of the variance in the dependent variable, even when adjusting for the number of predictors. Finally, the standard error of the estimate for the model is 0.737, indicating the average distance between the actual and predicted values of the dependent variable. Overall, this suggests that the model fits well and reasonably estimates the relationship between the independent and dependent variables.
Table 5: Model-2 Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.872b</td>
<td>0.760</td>
<td>0.753</td>
<td>0.737</td>
</tr>
</tbody>
</table>

b. Predictors: (Constant), SQ, FQ, VM, AMB, COST

Source: Author’s estimate.

Table 6 shows that the food quality coefficient (FQ) is not statistically significant (p=0.392), meaning there is no evidence that food quality significantly impacts dining frequency. The ambience (AMB), value for money (VM), and service quality (SQ) coefficients are all statistically significant with p-values < 0.001, indicating that they have a significant positive effect on dining frequency. The coefficient for food and beverages cost (COST) is negative, indicating that a higher cost is associated with a lower dining frequency, but this coefficient is not statistically significant (p=0.094). The constant (3.216) represents the expected value of dining frequency when all independent variables are set to zero. This model suggests that ambience, value for money, and service quality are critical factors in predicting dining frequency. In contrast, food quality and cost are not significant predictors.

Table 6: OLS Estimates for Model 2

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant) 3.216</td>
<td>0.315</td>
<td>13.502</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>FQ 0.076</td>
<td>0.088</td>
<td>0.052</td>
<td>0.859</td>
</tr>
<tr>
<td></td>
<td>AMB 0.270</td>
<td>0.068</td>
<td>0.236</td>
<td>3.955</td>
</tr>
<tr>
<td></td>
<td>VM 0.385</td>
<td>0.080</td>
<td>0.236</td>
<td>4.788</td>
</tr>
<tr>
<td></td>
<td>COST -0.162</td>
<td>0.096</td>
<td>-0.098</td>
<td>1.684</td>
</tr>
<tr>
<td></td>
<td>SQ 0.437</td>
<td>0.121</td>
<td>0.257</td>
<td>3.609</td>
</tr>
</tbody>
</table>

a. Dependent Variable: DF

Source: Author’s estimate.

Table 7 results provide credence to hypothesis H7, which states that patrons’ satisfaction levels correlate with their frequency of eating out. One key finding from the data was that patrons more satisfied with their meals were likelier to return to the restaurant. As a result, it is safe to assume that the degree to which customers are satisfied significantly impacts how likely they are to return to a particular restaurant or chain.

Table 7: Regression Estimates between Student’s Satisfaction and Dining Frequency

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>2a</td>
<td>(Constant) 2.195</td>
<td>0.163</td>
<td>13.502</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>SL 0.443</td>
<td>0.053</td>
<td>0.511</td>
<td>8.376</td>
</tr>
</tbody>
</table>

a. Dependent Variable: DF

Source: Author’s estimate.

Goodness-of-Fit Estimates

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a</td>
<td>0.511b</td>
<td>0.261</td>
<td>0.257</td>
<td>0.844</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), SL

Source: Author’s estimate.

The result also implies that the hypotheses based on the variables were accepted, meaning that the research’s assumptions and correlations were checked out as predicted. This gives credence to the study’s results and supports the idea that customer happiness is a critical factor in influencing patronage in the restaurant industry. These results suggest that the study might have real-world relevance for restaurant and food service businesses. In order to enhance client loyalty and repeat business, companies should prioritize customer happiness. Thus, these findings can guide the creation of focused initiatives to boost customer satisfaction and loyalty, which can boost operational efficiency.

6. CONCLUSIONS
The main objective of this study is to investigate the satisfaction of university students who dine at the on-campus nutrition centre, specifically about the quality indicators of the services provided. The study examines how food quality, quantity, variety, meal and...
beverage categories, and services influence the frequency of students’ dining at the cafeteria. All seven hypotheses tested in the study were supported, indicating that all attributes and services of the nutrition centre significantly impact the satisfaction of students who use the facility. The study’s findings suggest that the food quality, ambience, value for money, meal and beverage categories, and service quality significantly influence students’ satisfaction with the nutrition centre and hence, their regularity of dining at the cafeteria. Therefore, food service providers should utilize these five criteria to express customer satisfaction and differentiate themselves from their competitors on campus. The study highlights the importance of university management assessing the opening hours of the nutrition centre, the meal and beverage categories offered, the facility’s ambience, institutional culture, and community development to ensure customer satisfaction and increase the frequency of students’ regularity. Additionally, ethical practices by the sellers can increase customer confidence and reduce scepticism towards the services provided, thereby enhancing customer satisfaction. In conclusion, the results of this study demonstrate the crucial relationship between absolute satisfaction and the quality of the food, ambience, value for money, meal and beverage categories, and service quality in the context of the on-campus nutrition centre. The findings provide valuable insights for food service providers and university management to improve student services and increase their satisfaction and regularity of dining at the nutrition centre.

6.1. Policy Implications
The research paper highlights the overall dissatisfaction of university students with cafeteria management, which requires specific steps to be taken to address the problem (Jamil & Qayyum, 2022). The study opines that the main problem with the cafeteria’s performance is the need for a healthy environment, negatively impacting the students’ satisfaction. The management’s behaviour and standards could also be better, leading to further dissatisfaction. Furthermore, the limited variety of food and beverage options, the pricing of meals, and inadequate seating capacity are contributing factors that must be addressed to improve the cafeteria’s performance and increase student satisfaction. Solutions to these issues are crucial to increase student satisfaction and improving the cafeteria’s overall performance. By improving the environment and management behaviour, offering a wider variety of food and beverage options, and adjusting the pricing and seating capacity, cafeteria management can significantly enhance the student’s experience. This will increase student satisfaction levels and, ultimately, attract more end-users to the cafeteria. It is essential to recognize that implementing ethical practices can also increase customer confidence (Jamil et al., 2022) and reduce scepticism towards the services (Jamil & Qayyum, 2021). In conclusion, addressing the identified issues and implementing specific solutions will enhance the cafeteria’s performance and increase student satisfaction. It is necessary to consider the importance of ethical practices in gaining the trust and confidence of the end users. This will lead to a more prosperous and sustainable cafeteria management system, benefitting the university and its students.

6.2. Challenges Faced by University Cafeteria Management and Potential Solutions
The university cafeteria faces certain limitations that its management must consider. First and foremost, the quality of the meal served must be appropriate and meet hygiene standards. Secondly, students typically demand healthy food options that are easy to consume, given their limited schedules and on-the-go lifestyles. It is essential for the cafeteria management to bear in mind that their clientele is comprised of students who expect healthy and affordable meals that meet their standards. Despite having limited budgets, students demand high-quality food, which challenges the cafeteria’s management to meet these demands. In order to meet these requirements, the management must employ a smart strategy to ensure the sustainability of their business.

Ethical approval
All international standards have been adopted and compliance.

Informed consent
The study was conducted with equal participation by all authors.

Conflicts of interests
The authors declare that there are no conflicts of interests.

Funding
The study has not received any external funding.

Data and materials availability
Not Applicable.
REFERENCES AND NOTES


8. Bauer, K. W., Yang, Y. W., & Austin, S. B. (2004). “How can we stay healthy when you’re throwing all of this in front of us?” Findings from focus groups and interviews in middle schools on environmental influences on nutrition and physical activity. Health Education & Behavior, 31(1), 34-46.


Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of Sherwan Journals and/or the editor(s). Sherwan Journals and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.