PERCEPTIONS AND EXPERIENCE OF UNDERGRADUATES IN THE FACULTY OF SCIENCE ABOUT THE CANTEENS AT THE UNIVERSITY OF KELANIYA.

A report presented in partial fulfillment of the

requirements for the course module

STAT 32633 - Corporate Capstone Project

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Sri Lanka.

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Academic Year 2022/2023

DECLARATION

I do hereby declare that the work reported in this thesis which titled as “Perceptions and Experience of Undergraduates in the Faculty of Science about the Canteens at the University of Kelaniya.” is originally prepared by us, Group 06 in the purpose of partial fulfilment of requirement of the Bachelor of Science Degree in Statistics, Department of Statistics & Computer Science, Faculty of Science, University of Kelaniya, Sri Lanka and not for any other academic purposes. No part of this thesis has been submitted earlier or concurrently for the same or any other degree.

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Abstract

University canteens are indispensable in the lives of students, providing them with food, space for socializing, and convenience. However, food quality, sanitation, digital payment options, and food waste management are some of the key factors affecting student satisfaction. This study investigates the perception of students about canteen services at the Faculty of Science, University of Kelaniya, to identify the key areas for improvement. It was done by collecting data using a structured survey questionnaire via stratified sampling from students of all academic years. The relationships among nutritional awareness, usage of digital payments, cleanliness standards, food waste management, and overall satisfaction were studied using descriptive statistics and categorical data analysis, including chi-square tests. Results indicate that students are neutral about the cleanliness of canteens, seldom use digital payment options, and the affordable price and quality of food are considered in choosing a canteen. Chi-square analysis confirms significant dependencies between meal preferences and times of the meal, chosen canteens, and factors influencing these choices. Better hygiene practices need to be followed by offering more variety in the menu, enhancing digital payment facilities, and portion control to reduce food wastage. It is clear from the study that addressing these issues can significantly improve student satisfaction and dining experiences. The insights gained contribute to a broader understanding of institutional catering services and provide recommendations for creating a more efficient and student-friendly canteen environment.

Keywords: Undergraduates, Faculty of Science, University Canteens, University of Kelaniya, Student satisfaction, Nutritional awareness, Digital payments, Sanitation, Food waste management, Categorical data analysis.

Acknowledgement

We would like to express our sincere gratitude to our supervisor Dr. Pansujee Dissanayake for her valuable guidance, insightful suggestions and fruitful feedback throughout this research. We also express our heartfelt gratitude to the lecturers and demonstrators of the Department of Statistics and Computer Science for their invaluable support, advice and encouragement which greatly contributed to the successful completion of this study. The facilities and resources provided by the department helped us to carry out this research effectively, and we greatly appreciate their support.

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Chapter 1: Introduction

University canteens are an important part of student life. They provide food, a place to meet friends, and a space to relax. Many things affect how students use these canteens, like the quality of food, cleanliness, and the availability of digital payment options. It is important to understand these factors to meet the needs of students and improve their experience.

However, students have raised concerns about meal quality, hygiene, and the speed of service. These problems can affect how satisfied students are with the canteens. This makes it necessary to study how well the canteens are meeting their needs.

The goal of this study is to assess the quality of canteen services at the Faculty of Science, University of Kelaniya. It focuses on areas like nutrition, cleanliness, digital payments, and food waste management. The results of this study will help identify problems and suggest ways to make canteen services better and more convenient for students.

1.1 Research Background

University canteens serve an important role in student life by offering food, social spaces, and rest facilities. The students of the Faculty of Science, University of Kelaniya, cited issues of food quality, hygiene concerns, and less efficient service in food provision. This could impact student satisfaction, health, and experiences on all levels within campus settings. In addition, other emerging important variables to enhance canteen services are options for digital payments and procedures to manage food waste. This, therefore, makes quite an important determination of the status of canteen services as it is now, to decide on the critical issues to explore ways to enhance their quality, efficiency, and convenience.

1.2 Objectives

The main objective of this study is to evaluate the quality of canteen services at the Faculty of Science, University of Kelaniya, by examining key aspects that influence student satisfaction and usability. Specifically, the study aims to assess the nutritional value, variety, and portion sizes of meals to determine their adequacy in meeting students' dietary needs. It also seeks to analyze hygiene and cleanliness standards in both food preparation and dining areas to ensure a safe and sanitary environment. Additionally, the study will evaluate service efficiency by examining waiting times and overall responsiveness. Another focus is on the availability and usage of digital payment methods, exploring their impact on convenience and accessibility.

Chapter 2: Literature Review

***Dhananjani, W. T. et al*.** conducted a study at the University of Kelaniya, highlighting the popularity of the Base Canteen, particularly among first-year and female students, due to its accessibility. In contrast, male and senior students preferred the Staff and Gym Canteens. This study emphasizes the importance of accessibility and demographic preferences in shaping canteen usage patterns.

Dimalsha, W. A. S. et al. explored canteen services across universities in Sri Lanka, recommending the expansion of food options, improvements in taste, and maintenance of affordable prices. The study also suggests upgrading dining areas, ensuring cleanliness, and adjusting operating hours to meet student needs better.

Dr. Subhash D. Pawar (2020) investigated canteen services at Nagpur University, India. The findings emphasize the negative impact of sudden price hikes without prior notice, which affects both administrators and students. The study advocates ethical practices in pricing while focusing on maintaining food quality, hygiene, and affordability.

Huang Wenjing (2019) analyzed canteen satisfaction at Jiangsu University. The study found that overall satisfaction was low, with product quality being the most significant factor driving dissatisfaction among students.

2.1 Research Gap

Previous studies have looked at important factors like accessibility, food quality, affordability, and hygiene. However, they do not focus much on modern student needs, such as meal preferences, the importance of knowing nutritional information, interest in using digital payment systems, and new ways to reduce food waste, like food donations and offering flexible portion sizes. Our study aims to address these gaps by looking at these issues in detail.

Chapter 3: Materials and Methods

3.1 Procedures

This study aimed to explore the perceptions and experiences of undergraduates in the Faculty of Science at the University of Kelaniya regarding canteen services. A structured questionnaire was developed to collect data on the following areas:

- **Demographics:** Academic year, Gender, and Accommodation type.
- **Nutritional Awareness:** Importance of nutrition in meal choices and its influence on food selection.
- **Digital Payment Options:** Frequency of use and perceived convenience of digital payments in university canteens.
- **Sanitation:** Students' opinions on the cleanliness and hygiene of canteens.
- **Food Waste Management:** Frequency of food wastage and reasons such as portion size, freshness, and taste.
- **Canteen Preferences:** Factors affecting canteen selection, including food quality, price, service speed, and seating availability.

The questionnaire included Likert-scale questions, multiple-choice options, and ranking items. Stratified sampling with proportional allocation was applied to ensure representation of all academic years at Faculty of Science. Data was collected via online questionnaire.

3.2 Subjects

The study targeted undergraduate students in the Faculty of Science at the University of Kelaniya, with an approximate population of 2,800 students. A sample of 363 respondents was surveyed, with representation from each academic year:

- First Year: 29% of responses.
- Second Year: 34% of responses.
- Third Year: 30% of responses.
- Fourth Year: 7% of responses.

This distribution ensured proportional coverage of all undergraduate levels.

Mathematical and Statistical Techniques

Sample Size Determination

Proportional allocation ensures each Academic Year fairly represented

$$n_h = \frac{N_h}{N}\, n$$

nh =	Sample size using proportionate stratified random sampl
Nh =	Total stratum population
N =	Total population
n =	Sample size (calculation results using the slovin formula

$$n = \frac{\sum_{i=1}^{l} N_i p_i q_i}{ND + \frac{1}{N}\sum_{i=1}^{l} N_i p_i q_i}$$

Figure 3.1: Sample size determination using proportional allocation

3.3 Equipments

The following tools and methods were used for the study:

- Survey Questionnaire: Designed to capture students' perceptions and experiences regarding canteen services.
- R Statistical Software: Used for data analysis, including descriptive statistics and Categorical data analysis.
- Microsoft Excel: Creating visual representations of data, such as tables, graphs and charts.
- Ethical Measures: All responses were anonymous, and data was used solely for academic purposes, ensuring confidentiality and ethical compliance.

Chapter 4: Results and Discussion

4.1 Modular Test Results

4.1.1 Living Arrangement vs Canteen Frequency

Living Arrangement:

1. Campus Hostels
2. Bording/Apartment
3. At Home

Canteen Frequency:

1. Never
2. Rarely
3. Occasionally
4. Frequently
5. Daily

Chi-Square Test of Independence

Null hypothesis : Living Arrangement are independent of Canteen Frequency.
Alternative hypothesis : Living Arrangement are not independent of Canteen Frequency.

```
        Pearson's Chi-squared test

data:  contingency_table_prefer_canteen_status
X-squared = 66.967, df = 8, p-value = 1.969e-11
```

Figure 4.1.1: Chi-Square test result of independence Living Arrangement vs Canteen Frequency

Interpretation:

P-value is significantly smaller than $\alpha = 0.05$, we reject the null hypothesis. This indicates that Living Arrangement(Campus Hostels, Bording/Apartment,At Home) are not independent of Canteen Frequency.

Chi-Square Goodness-of-Fit Test

Null hypothesis : Living Arrangement are equally distributed
Alternative hypothesis : Living Arrangement are not equally distributed

```
        Chi-squared test for given probabilities

data:  rowSums(contingency_table_prefer_canteen_status)
X-squared = 70.386, df = 2, p-value = 5.198e-16
```

Figure 4.1.2: Chi-Square test result of Goodness-of-Fit Living Arrangement vs Canteen

Interpretation:

Since the p-value is much smaller than the standard significance level (e.g., α=0.05), we reject the null hypothesis. This means that Living Arrangement (Campus Hostels, Bording/Apartment, At Home) are not equally distributed across the population.

Two-way contingency table for Living arrangement vs Canteen Frequency

		Living Arrangement		
		Campus Hostels	Bording/Apartment	At Home
Canteen Frequency	Never	2	3	3
	Rarely	5	15	26
	Occasionally	14	37	17
	Frequently	25	39	15
	Daily	48	96	7

Table 4.1.1: Contingency table Living arrangement vs Canteen Frequency

Interpretation:

Canteen usage is highest among students living in boarding/apartments and campus hostels, whereas students staying at home use canteens significantly less. Proximity and convenience seem to have significant effects on canteen frequency.

4.1.2 Meal type with Mealtime

Meal Types:

1. Fast food
2. Balanced meals
3. Vegetarian meal
4. Snacks and Beverages
5. None

Mealtime:

1. Breakfast
2. Lunch
3. Dinner

Chi-Square Test of Independence

Null hypothesis : Meal preferences are independent of meal time.
Alternative hypothesis : Meal preferences are dependent of meal time

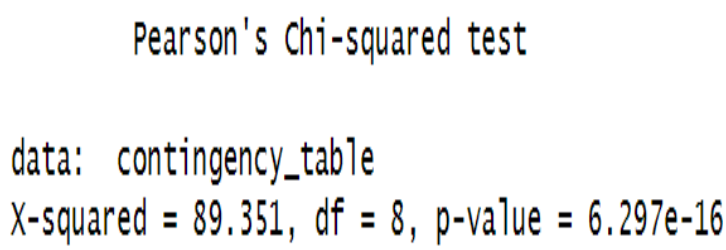


Figure 4.1.3: Chi-Square test result of independence Meal Type with Mealtime

Interpretation:

P-value is significantly smaller than α = 0.05, we reject the null hypothesis. This indicates that meal preferences (e.g., Fast Food, Balanced Meal, etc.) are not independent of meal times (Breakfast, Lunch, Dinner).

Chi-Square Goodness-of-Fit Test

Null hypothesis : Meal preferences are equally distributed
Alternative hypothesis : Meal preferences are not equally distributed

```
        Chi-squared test for given probabilities

data:  rowSums(contingency_table)
X-squared = 763.73, df = 4, p-value < 2.2e-16
```

Figure 4.1.4: Chi-Square test result of goodness-of-fit Meal Type with Mealtime

Interpretation:

Since the p-value is much smaller than the standard significance level (e.g., α=0.05), we reject the null hypothesis. This means that meal preferences (Fast Food, Balanced Meal, etc.) are not equally distributed across the population.

Two-way contingency table for Meal type with Mealtime

		Mealtime		
		Breakfast	Lunch	Dinner
Type of meal	Fast food	113	60	25
	Balanced meals	134	150	250
	Vegetarian meal	70	98	69
	Snacks and Beverages	12	29	5
	None	23	15	3

Table 4.1.2: Contingency table Meal Type with Mealtime

Interpretation:

The high number of balanced meals suggests that many people prioritize better eating habits, especially during lunch and dinner.
Breakfast skipping is more common than other meals, which corresponds to common patterns of missing early meals due to time restrictions.
The reduction in fast food from breakfast to evening indicates that convenience foods are chosen during busy periods, such as mornings.
Dinner's high Balanced meal count indicates that people may prefer healthier or more substantial meals at the end of the day.

4.1.3 Factor for preference with Prefer canteen

Factor for preference:

1. Food Quality
2. Price
3. Service Speed
4. Cleanliness
5. Beverage Options
6. Seating Availability

Prefer canteen:

1. Base Canteen
2. Gym Canteen
3. Staff Canteen
4. Hilton Canteen
5. Don & Son's shop
6. Hela Bojun Hala
7. Kiri Hala
8. Juice Bar I (in Gym)
9. Juice bar II (in Staff)

Chi-Square Test of Independence

Null hypothesis : Prefer of canteens are independent from Factors for Preference.

Alternative hypothesis : Prefer of canteens are dependent from Factors for Preference.

```
        Pearson's Chi-squared test

data:  contingency_table_prefer_canteen
X-squared = 684.05, df = 40, p-value < 2.2e-16
```

Figure 4.1.5: Chi-Square test result of independence Factor of preference with prefer canteen

Interpretation:

P-value is significantly smaller than α = 0.05, we reject the null hypothesis. This indicates that Prefer of canteens are not independent from Factors for Preference.

Chi-Square Goodness-of-Fit Test

Null hypothesis : Canteen preferences are equally distributed
Alternative hypothesis : Canteen preferences are not equally distributed

```
        Chi-squared test for given probabilities

data:  rowSums(contingency_table_prefer_canteen)
X-squared = 1978.1, df = 8, p-value < 2.2e-16
```

Figure 4.1.6: Chi-Square test result of goodness-of-fit Factor of preference with prefer canteen

Interpretation: Since the p-value is much smaller than the standard significance level (e.g., α=0.05), we reject the null hypothesis. This means that Canteen preferences are not equally distributed across the population.

Two-way contingency table of Factor for preference with Prefer canteen

		Factor for preference					
		Food Quality	Price	Service Speed	Cleanliness	Beverage options	Seating Availability
Prefer canteen	Base Canteen	122	161	156	108	79	131
	Gym Canteen	20	112	58	23	36	131
	Staff Canteen	135	25	57	99	72	44
	Hilton Canteen	13	35	24	19	21	24
	Don & Son's shop	9	3	15	25	10	3
	Hela Bojun Hala	33	6	10	39	10	8
	Kiri Hala	5	1	9	8	16	4
	Juice Bar I (in Gym)	14	8	9	23	64	4
	Juice bar II (in Staff)	1	1	14	8	44	3

Table 4.1.3: Contingency table Factor for preference with prefer canteen

Interpretation:

Base Canteen is the most popular option for almost every factor, which include price (161), service speed (156), and seating availability (131). This suggests that it is popular for its cost, efficiency, and seating capacity.

Gym Canteen is highly appreciated for its price (112), with moderate preferences for food quality (20) and seating availability (131). This implies that it is preferred for cost and seating but less so for other factors.

Staff Canteen is popular for Food Quality (135) and Cleanliness (99), demonstrating its ability to maintain food standards and hygiene.

4.1.4 Digital Payment Usage at University Canteens vs. Usual Convenience of Digital Payments

Digital Payment Usage at University:

1. Never
2. Rarely
3. Occasionally
4. Frequently
5. Always

Usual Convenience of Digital Payments:

1. Not Convenient
2. Slightly Convenient
3. Moderately Convenient
4. Convenient
5. Very Convenient

Chi-Square Test of Independence

Null hypothesis : Digital Payment Usage at University canteens are Independent of Usual Convenience of Digital Payments.
Alternative hypothesis : Digital Payment Usage at University canteens are dependent of Usual Convenience of Digital Payments.

```
        Pearson's Chi-squared test

data:  contingency_table_Digital_payment
X-squared = 79.715, df = 16, p-value = 1.873e-10
```

Figure 4.1.7: Chi-Square test result of independence Factor of preference with prefer canteen

Interpretation:

P-value is significantly smaller than α = 0.05, we reject the null hypothesis. This indicates that Digital Payment Usage at University canteens are not independent of Usual Convenience of Digital Payments.

Chi-Square Goodness-of-Fit Test

Null hypothesis : Digital Payment Usage at University canteens are equally distributed.
Alternative hypothesis : Digital Payment Usage at University canteens are not equally Distributed.

```
        Chi-squared test for given probabilities

data:  rowSums(contingency_table_Digital_payment)
X-squared = 385.07, df = 4, p-value < 2.2e-16
```

Figure 4.1.8: Chi-Square test result of goodness-of-fit Factor of digital payment usage at university

Interpretation:

Since the p-value is much smaller than the standard significance level (e.g., α=0.05), we reject the null hypothesis. This means that Digital Payment Usage at University canteens are not equally distributed by the population.

Two-way contingency table for Digital Payment Usage at University Canteens vs. Usual Convenience of Digital Payments

		Usual Convenience of Digital Payments				
		Not Convenient	Slightly Convenient	Moderately Convenient	Convenient	Very Convenient
Digital Payment	Never	37	41	59	47	29
	Rarely	0	13	16	13	5
	Occasionally	1	9	29	12	9
	Frequently	0	1	4	12	9
	Always	0	0	0	0	6

Table4.1.4: Contingency table Usual Convenience of Digital Payments

Interpretation:

The investigation indicates a gap between perception of convenience and actual usage. While many Undergraduates find digital payments somewhat or extremely convenient, a considerable proportion do not use digital payment options at university canteens frequently or at all.

Some concise suggestions for barriers to adopting digital payment methods:

- Lack of access to digital payment platforms.
- Lack of trust in digital payment systems.
- Resistance to change from traditional payment methods.

4.2 Data Visualizing Analysis

4.2.1 Demographics

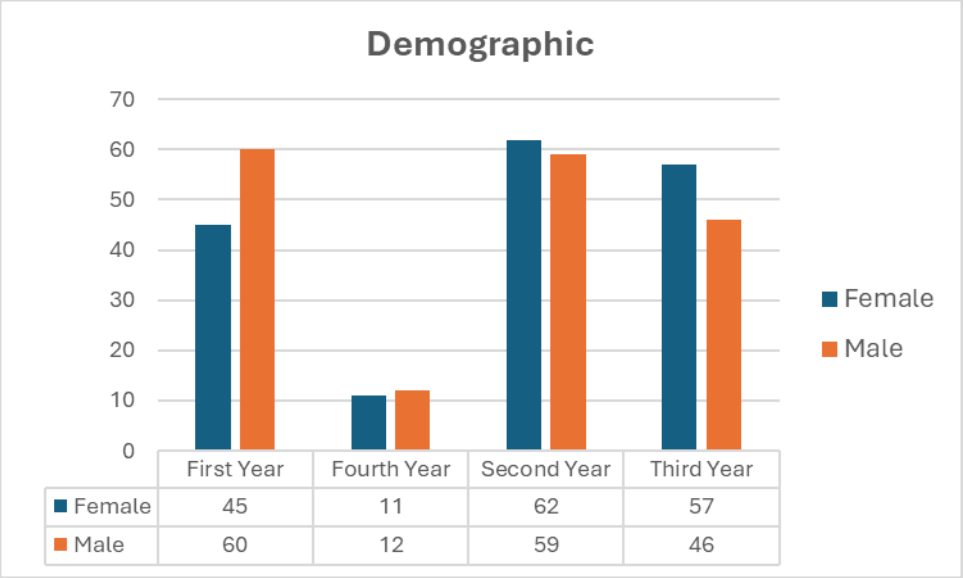


Figure 4.2.1: Bar chart of responder's demographics

- First Year Responses – 29.8%
- Second Year Responses – 34.4%
- Third Year Responses – 29.3%
- Fourth Year Responses – 6.5%

4.2.2 Accommodation during Academics

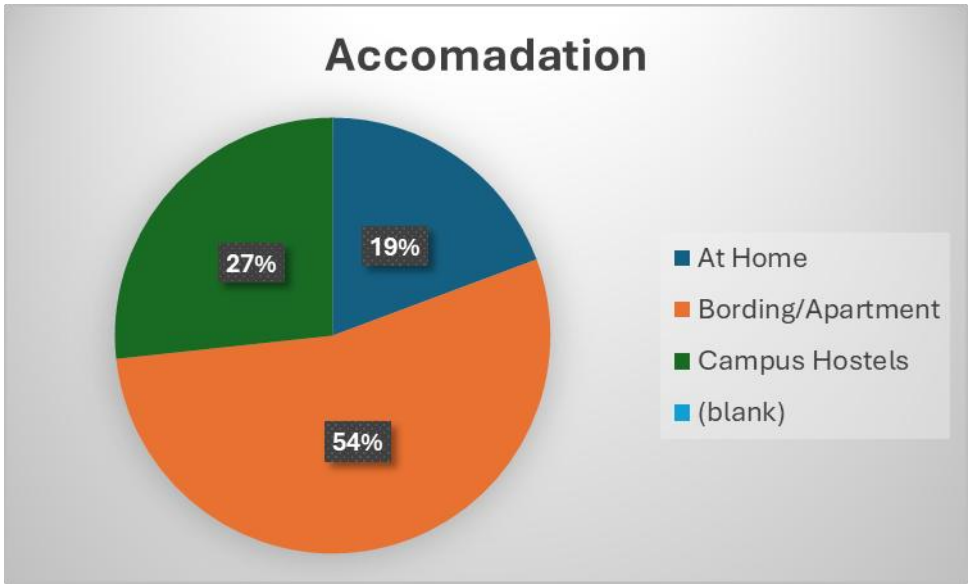


Figure 4.2.1: Pie chart of responder's Accommodations

The chart illustrates the distribution of accommodation choices among students during their academic pursuits.
Campus Hostels: 27% of the group resides in campus hostels.
At Home: 19% of the group lives at home.
Boarding/Apartment: 54% of the group stays in boarding houses or apartments
Therefore, the majority of undergraduates use the university canteens because they not came to university at home.

4.2.3 Frequency of Canteen Visits

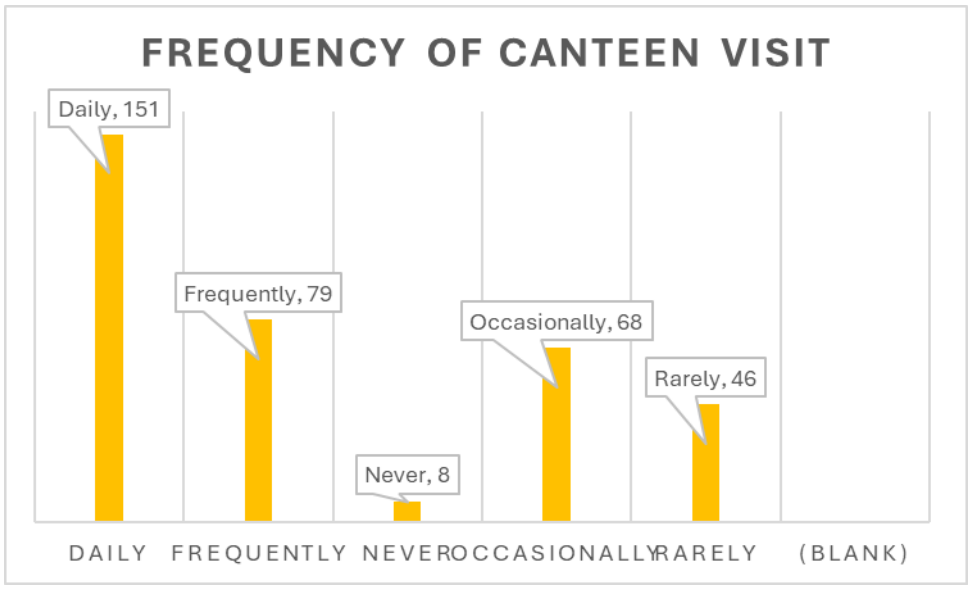


Figure 4.2.3: Bar graph of Frequency of canteen visits

Most of the undergraduates visit canteens daily. This is more than 50% of all the others. Only a small number (8) never visit the canteen. Therefore, we can say that the most of undergraduates use the canteen for their purposes.

4.2.4 Weekly Income Discussion

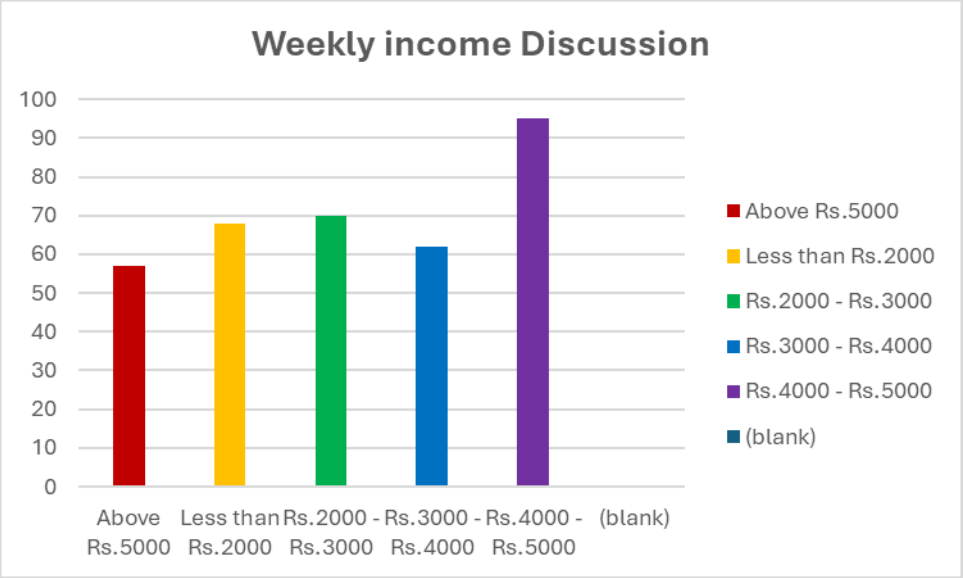
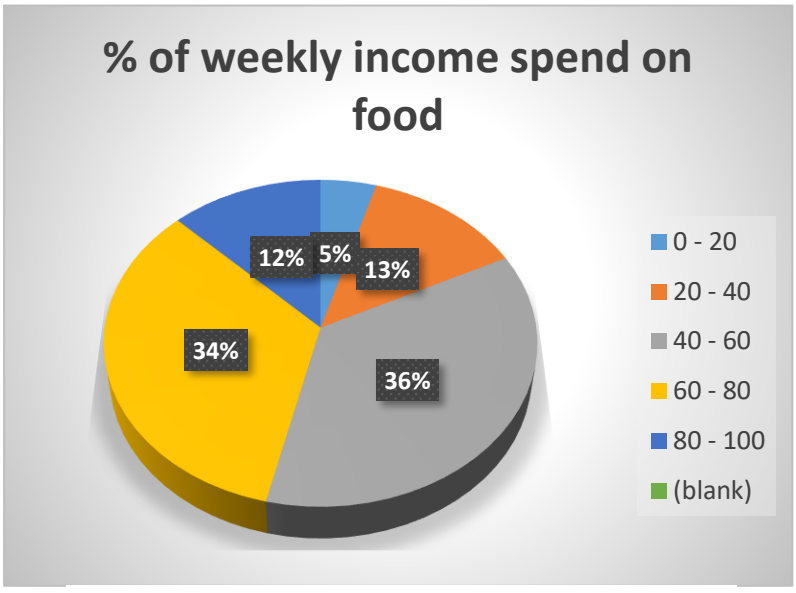


Figure 4.2.4: Bar graph of Weekly Income Discussion

Most individuals (68) report a weekly income between Rs.4000 – rs.5000, while only 57 have an income above Rs. 5000. Most respondents fall in the income range of Rs. 4000 - Rs. 5000, suggesting this is the dominant weekly expenditure.

4.2.5 Percentage of Weekly Income Spend on Food



Most undergraduates spent (40-60) % for their food and beverages from their weekly income. This demonstrates that food expenditures are a significant portion of their budget. The percentage of 60-80% shows that it may represent their food and beverages from their weekly income.

Figure 4.2.5: Pie chart about Percentage of Weekly Income Spend on Food

4.2.6 Nutritional Consciousness

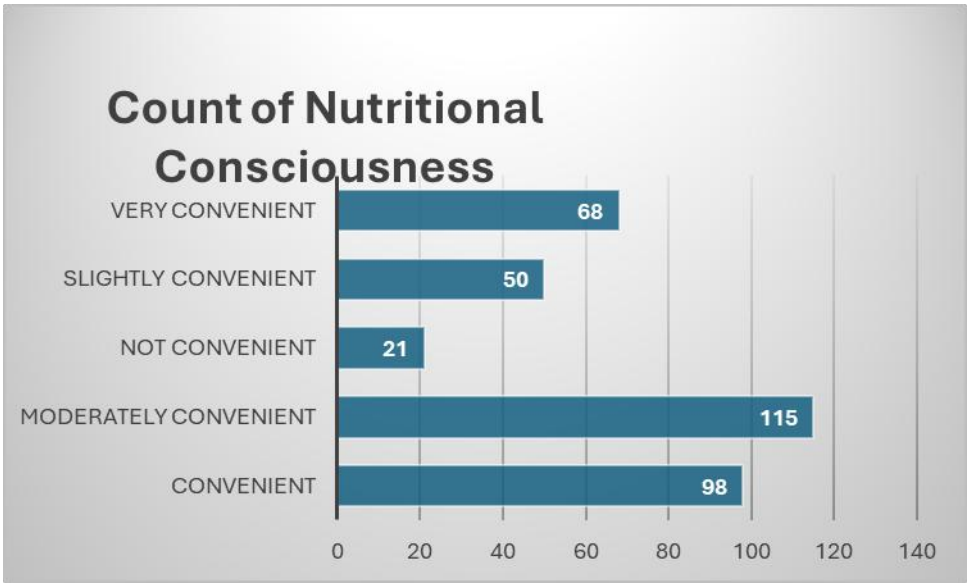


Figure 4.2.6: Bar graph about nutritional consciousness

Most people surveyed consider nutritional consciousness to be important.

- A large number of undergraduates rated nutritional consciousness as moderately important.
- A smaller number of people rated it as very important.

4.2.7 Usual preferences for each Mealtime

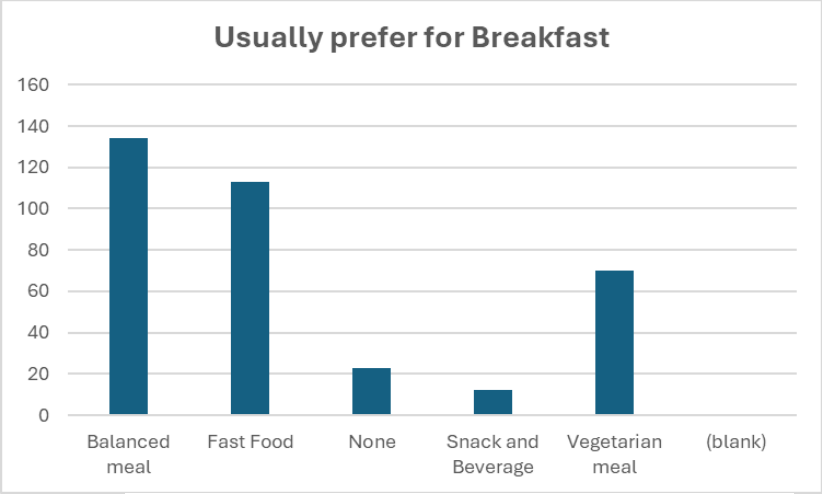


Figure 4.2.7.1: Bar graph about usual preferences in breakfast

Balanced meals are the most popular choice for breakfast. Fast foods are also common choice. Vegetarian Meal, Snacks & beverages and are less common. Some undergraduates do not get the breakfast usually.

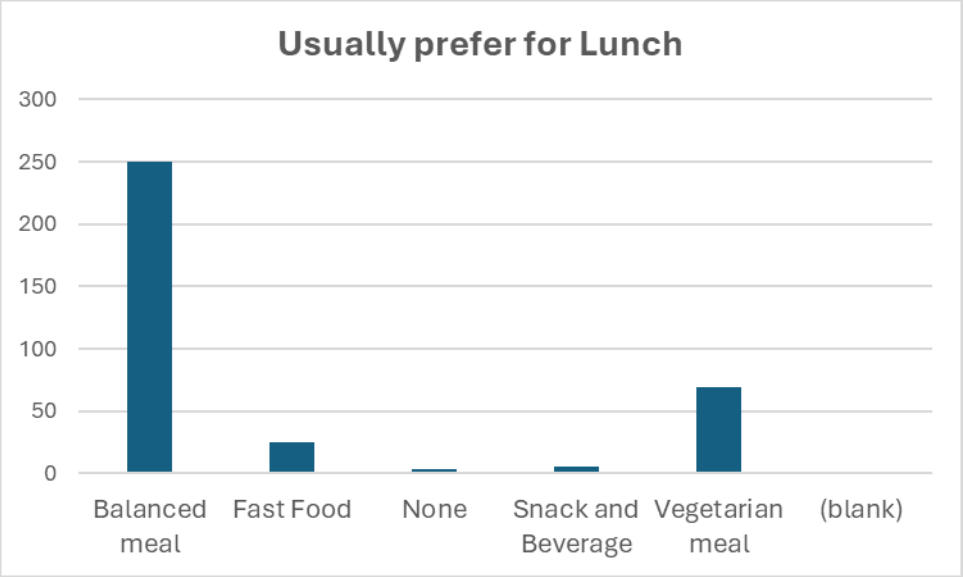


Figure 4.2.7.2: Bar graph about usual preferences in Lunch

Balanced meals are the most popular choice for lunch. Vegetarian meals is also a common choice. Other meals are less common.

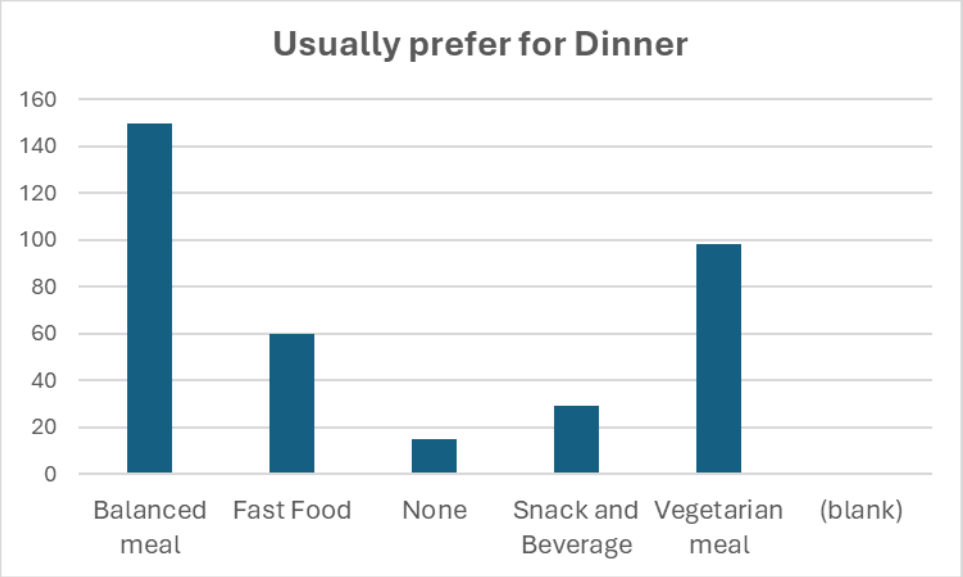


Figure 4.2.7.2: Bar graph about usual preferences in dinner

Balanced meals are again the most popular choice for dinner. Vegetarian meals and Fast foods are also a common choice. Snack & beverages and fast food are less common.

4.2.8 Use of Digital Payment options at the University Canteens

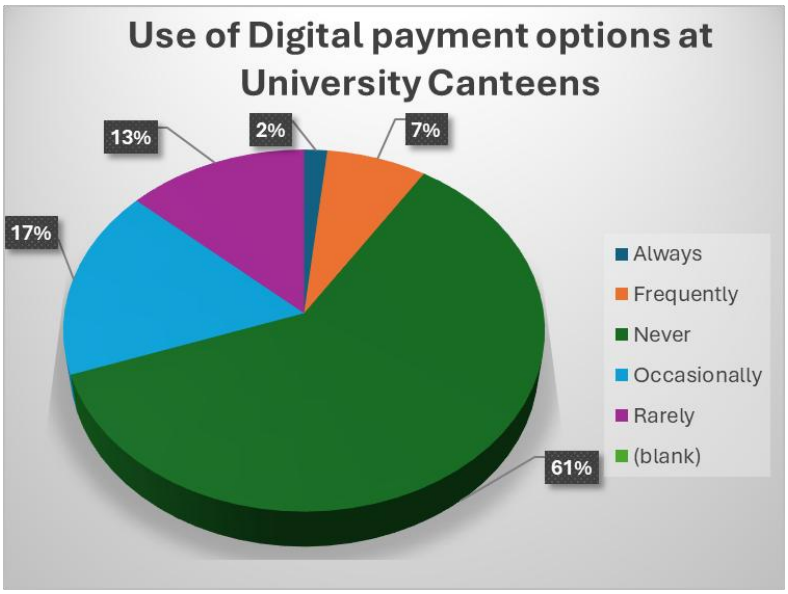


Figure 4.2.8: Pie chart about Digital Payment Methods Usage

Most students rarely or never use digital payment options at university canteens.

- A large majority (61%) of students never use digital payment options at university canteens.
- A small percentage (17%) use them occasionally.
- Even fewer students use them frequently (7%) or rarely (13%).

4.2.9 Overall Cleanliness of the canteens

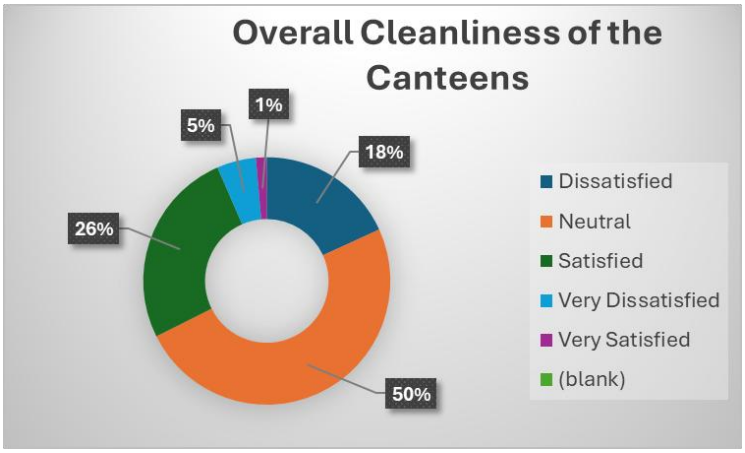


Figure 4.2.9: Pie chart about overall Cleanliness

Most people are neutral about the overall cleanliness of the canteen.

A large majority (50%) of people are neutral about the cleanliness.

A small number of undergraduates rated the very satisfied and satisfied about the overall cleanliness of the canteens.

4.1.10 Frequency of Food waste in the canteen

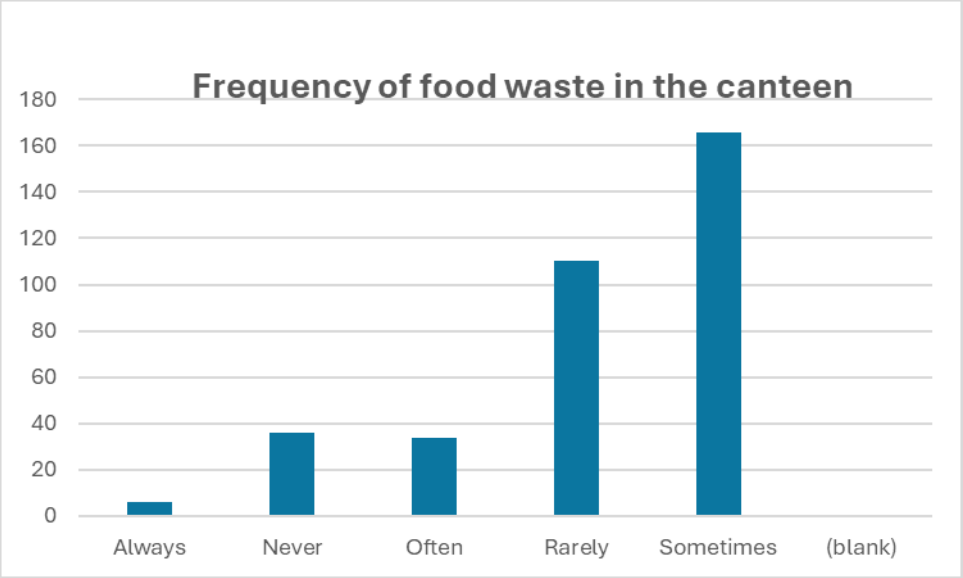


Figure 4.2.10: Bar graph about food waste in the canteen

Most undergraduates report wasting food "sometimes." A smaller number report wasting food "rarely" or "never." Even fewer people report wasting food "often" or "always." Always : 1.70% Rarely : 31.25% Sometimes : 47.17% Often : 9.66% Never : 10.22%

4.2.11 Main Reasons for Food Waste

Figure 4.2.11: Pie chart about Reasons for Food Wasting

The most common reason for food waste is that they didn't like the taste. Other reasons include the food not being fresh or the portion size is too large.

4.2.12 Evaluation of Canteens based on Factors

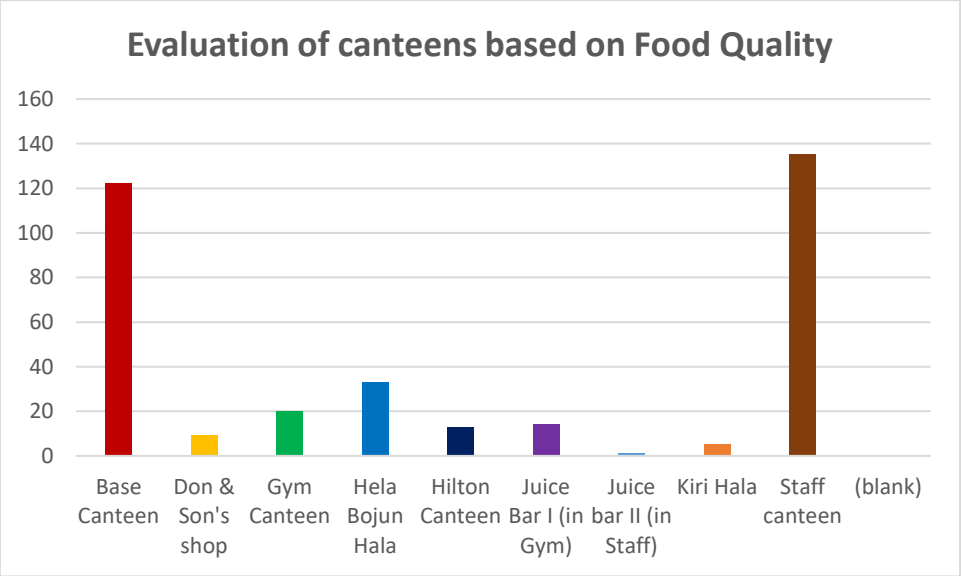


Figure 4.2.12.1: Bar graph about evaluation of canteens based on Food Quality

Base Canteen and Staff Canteen have the highest ratings for food quality.

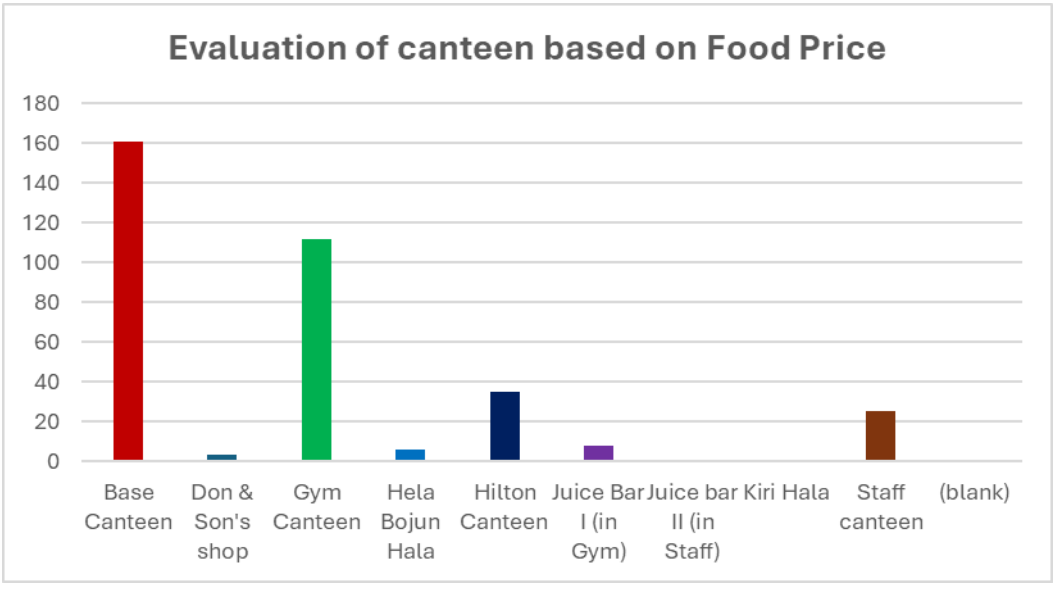


Figure 4.2.12.2: Bar graph about evaluation of canteens based on Food Price.

Base Canteen and Gym Canteen have the highest rating for price (meaning it is perceived as the most affordable). Staff Canteen has the low rating for price (meaning it is perceived as the most expensive).

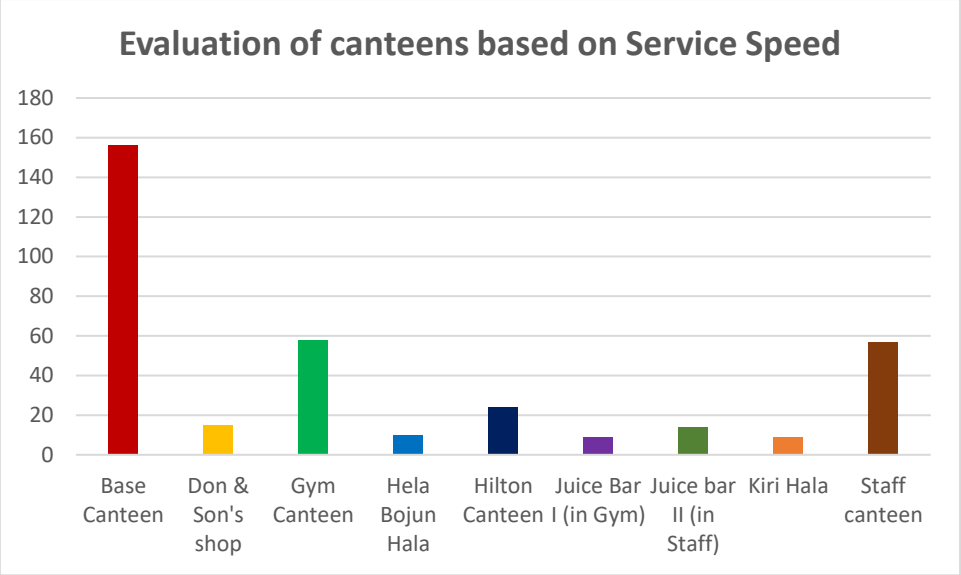


Figure 4.2.12.3: Bar graph about evaluation of canteens based on Service Speed.

Base Canteen and Staff Canteen have the highest ratings for service speed.

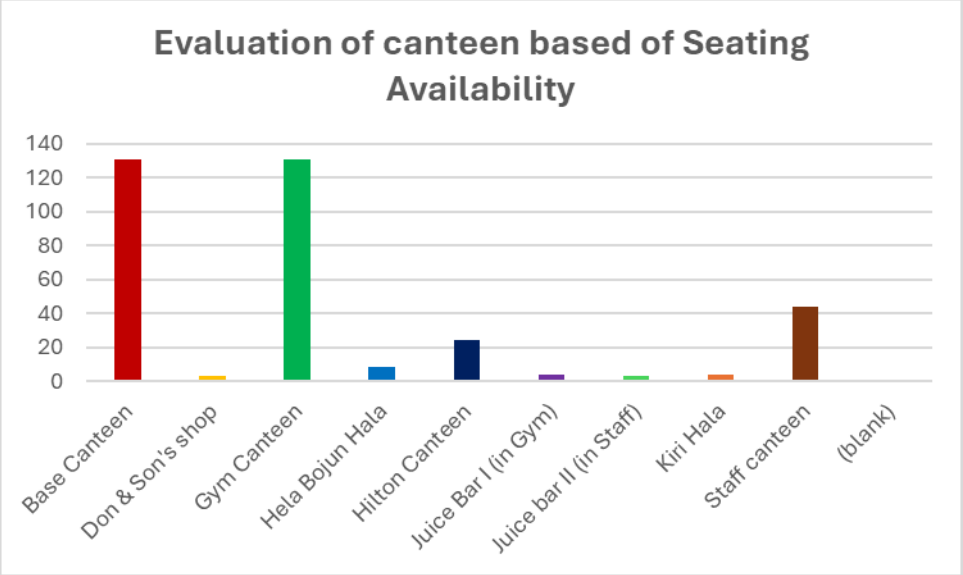


Figure 4.2.12.4: Bar graph about evaluation of canteens based on Seating Availability

Base Canteen & Gym Canteen have the highest rating for seating availability. Juice bar I (in Gym) has the lowest rating for seating availability.

Chapter 05: Conclusion

This study explored the perceptions and experiences of undergraduates at the Faculty of Science, University of Kelaniya, regarding canteen services. It systematically analyzed key factors, including food quality, cleanliness, digital payment usage, and food waste management, to assess their impact on student satisfaction. The findings underscore the central role university canteens play in student life, not only as providers of sustenance but also as spaces for social interaction and convenience.

The analysis revealed critical insights into student priorities and concerns. Affordability and food quality emerged as the most influential factors in canteen selection, with the Base Canteen standing out as a popular choice. At the same time, significant gaps were noted in sanitation practices, the adoption of digital payment methods, and food waste management. For instance, while many students recognized the convenience of digital payments, their actual usage remained low, indicating barriers such as accessibility or familiarity with these systems. Furthermore, the prevalence of food waste due to dissatisfaction with taste or inappropriate portion sizes highlights areas for operational improvement.

By tying these findings back to the study's objectives, it is evident that addressing the identified challenges could greatly enhance the overall dining experience. Prioritizing measures such as maintaining higher hygiene standards, diversifying meal options, optimizing portion sizes, and promoting the use of digital payment systems will create a more efficient and student-focused canteen environment.

This research contributes valuable insights into the factors shaping student satisfaction with canteen services and provides actionable recommendations for improvement. Through thoughtful implementation of these recommendations, the university can foster a better, more inclusive, and sustainable environment for its students.

Chapter 06: References

The references used in this study were derived from previous research papers that focused on similar topics.

[1] M.s.M.s Kumara et al. (September – November 2015) , University of Kelaniya

https://www.researchgate.net/publication/311439542_A_survey_on_usage_of_canteens_of_university_of_kelaniya_by_students_of_faculty_of_science#:~:text=Discover%20the%20world's%20research&text=Content%20may%20be%20subject%20to%20copyright.&text=W.%20T.,Sandaruwan%2C%20P.%20A.%20A.%20C.&text=interviewing%20busy%20students%20in%20order%20to%20collect%20data.&text=of%20the%20respondents%20

[2] W.A.Sadul Dimalsha et al. (September – November 2015) , NSBM Green University

https://www.scribd.com/document/721948417/The-Impact-of-Canteen-Services-on-Students-SatisfactionA#:~:text=This%20research%20paper%20presents%20a,will%20help%20in%20creating%20an

[3] Dr. Subhash D. Pawar (March 2020) , **Journal:** Studies in Indian Place Names

Appendixes

Appendix A: Questionnaire

1. Demographics (Section 01)

♦ **Gender:**

- □ Male
- □ Female
- □ Other

♦ **Year:**

- □ First Year
- □ Second Year
- □ Third Year
- □ Fourth Year

♦ **Where do you live during the academic year?**

- □ Campus Hostels
- □ Bording/Apartment
- □ At Home

♦ **How often do you eat at University canteens?**

- □ Daily
- □ A few times a week
- □ Once a week
- □ Rarely

♦ **How about your weekly income?**

- □ Less than Rs.2000
- □ Rs.2000 - Rs.3000
- □ Rs.3000 - Rs.4000
- □ Rs.4000 – Rs.5000
- □ Above Rs.5000

♦ What percentage(%) of your weekly income do you spend on food?

- □ 0 - 20
- □ 20 - 40
- □ 40 – 60
- □ 60 - 80
- □ 80 - 100

2. Nutritional Awareness (Section 02)

♦ Do you check or consider the nutritional information of meals before purchasing?

- □ 1 – Not important
- □ 2 – Slightly important
- □ 3 – Moderately important
- □ 4 – Important
- □ 5 – Very important

♦ What type of meals do you usually prefer? (Select all that apply)

- □ Fast food
- □ Balanced meals (Protein, carbs, Vegetables, etc.)
- □ Vegetarian meal
- □ Snacks and Beverages

	Breakfast	**Lunch**	**Dinner**
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

3. Digital Payment Options (Section 03)

♦ Do you use digital payment options at university canteens?

- □ Never
- □ Rarely
- □ Occasionally
- □ Frequently
- □ Always

♦ How convenient do you find digital payment methods compared to cash?

- □ 1 – Not Convenient
- □ 2 – Slightly Convenient
- □ 3 – Moderately Convenient
- □ 4 – Convenient
- □ 5 – Very Convenient

♦ What additional digital services would you like? (Select all that apply)

- □ Meal subscription plans
- □ Discounts or rewards for digital payments
- □ None

4. Sanitation (Section 04)

♦ How important is cleanliness in your choice of a canteen?

- □ 1 – Not important
- □ 2 – Slightly important
- □ 3 – Moderately important
- □ 4 – Convenient
- □ 5 – Very important

♦ Do you think sanitation practices in university canteens meet your expectations?

- □ Very Dissatisfied
- □ Dissatisfied
- □ Neutral
- □ Satisfied

□ Very Satisfied

♦ How would you rate the overall cleanliness of the following canteens?
(1 - Very Dissatisfied, 2- Dissatisfied, 3 – Neutral, 4- Satisfied, 5 = Very Satisfied)

Canteen	Satisfaction Level				
	1	2	3	4	5
Base Canteen					
Gym Canteen					
Staff Canteen					
Hilton Canteen					
Don & Son's shop					
Hela Bojun Hala					
Kiri Hala					
Juice Bar I (in Gym)					
Juice bar II (in Staff)					

♦ What sanitation issues have you observed in the university canteens?

□ Unclean seating areas

□ Poor food handling practices

□ Lack of waste disposal bins

□ Unclean equipment

□ Other

5. Food waste management (Section 05)

♦ How appropriate do you think the portion sizes served in the canteen are?

□ Much too small

□ Slightly too small

□ Just right

□ Slightly too large

□ Much too large

♦ **How often do you waste food from canteen?**

□ Never

□ Rarely

□ Sometimes

□ Often

□ Always

♦ **If you waste food, what is the main reason? (Select all that apply)?**

□ The portion size is too large.

□ I didn’t like the taste.

□ The food was not fresh.

□ Other

♦ **Do you agree with having the option to customize your portion size to reduce food waste?**

□ Strongly Disagree

□ Disagree

□ Neutral

□ Agree

□ Strongly Agree

♦ **Rate your overall food waste management satisfaction with each canteen. (1 - Very Dissatisfied, 2- Dissatisfied, 3 – Neutral, 4- Satisfied, 5 = Very Satisfied)**

Canteen	Satisfaction Level				
	1	2	3	4	5
Base Canteen					
Gym Canteen					
Staff Canteen					
Hilton Canteen					
Don & Son's shop					
Hela Bojun Hala					
Kiri Hala					
Juice Bar I (in Gym)					
Juice bar II (in Staff)					

6. Canteen Preferences (Section 06)

♦ Which university canteen do you most frequently?

- □ Base canteen
- □ Gym canteen
- □ Staff canteen
- □ Hilton canteen
- □ Don & son’s shop
- □ Hela Bojun Hala
- □ Kiri Hala
- □ Juice Bar I (in Gym)
- □ Juice Bar II (in Staff)

♦ How often do you visit the following canteens?

Cateen	Daily	Few Times a week	Rarely	Never
Base Canteen				
Gym Canteen				
Staff Canteen				
Hilton Canteen				
Don & Son's shop				
Hela Bojun Hala				
Kiri Hala				
Juice Bar I (in Gym)				
Juice bar II (in Staff)				

♦ Which canteen best meets your expectations for the following factors?

Factor	Canteen Name (Choose one)
Food Quality	
Price	
Service Speed	
Cleanliness	
Beverage Options	
Seating Availability	

♦ Rate your overall satisfaction with each canteen. (1 - Very Dissatisfied, 2- Dissatisfied, 3 – Neutral, 4- Satisfied, 5 = Very Satisfied)

Canteen	Satisfaction Level				
	1	2	3	4	5
Base Canteen					
Gym Canteen					
Staff Canteen					
Hilton Canteen					
Don & Son's shop					
Hela Bojun Hala					
Kiri Hala					
Juice Bar I (in Gym)					
Juice bar II (in Staff)					