Dining Preferences of SFU Students

Nicholas Ma, Jacky Seo, Erick Mudebayev

Introduction

Question of interest: What are the dining preferences and patterns among students on campus, and how can the campus dining services be improved to better meet their needs?

This research is important because it aims to enhance the overall student experience by aligning the dining services with their needs and preferences, potentially improving nutritional outcomes, satisfaction, and even academic performance.

Key survey topics included:

- Satisfaction with dining options
- Dietary information importance
- Operating hours convenience
- Dining environment aspects
- Quality of meals
- Types of meals
- Number of times students dine on campus per week

Problem

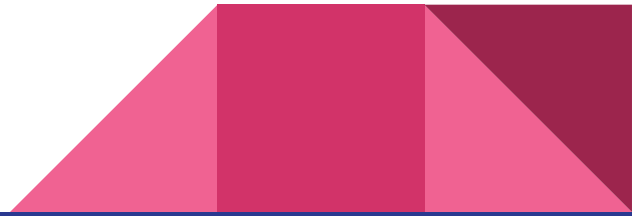
Target Population:

All SFU students enrolled at Burnaby campus

Study Population:

All SFU students enrolled at Burnaby campus

Problem aspect: Descriptive



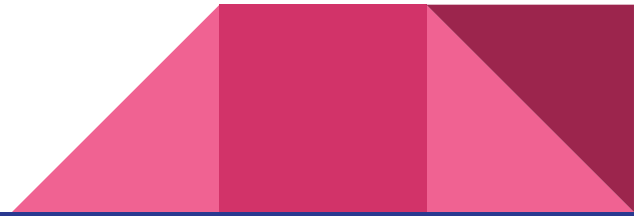
Research Methodology

- Sampling Design: Convenience sampling
- Sampling Frame: All SFU Burnaby Campus Students
- Data Collection Methods: Online survey using a tool that collected 54 responses to questions

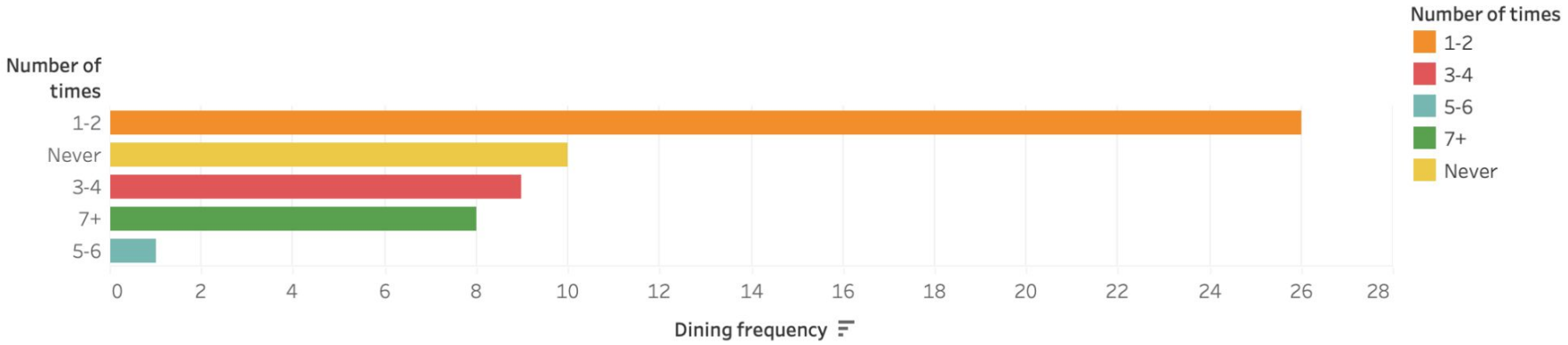
Possible Study Errors: Coverage and Nonresponse

Possible study errors: coverage and nonresponse

- Coverage Error: Risk of excluding respondents who do not have online access by the survey
- Nonresponse: Risk of obtaining bias due to lack of participation



Overal Number of Times Students Dine on Campus Weekly

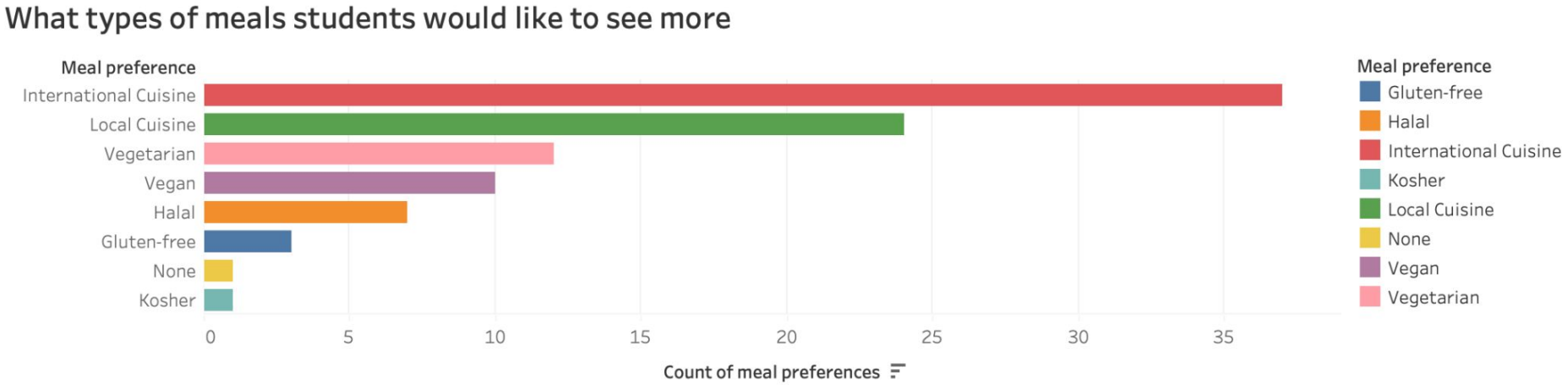


Sum of Dining frequency for each Number of times. Color shows details about Number of times. The view is filtered on Number of times, which keeps 1-2, 3-4, 5-6, 7+ and Never.

Question: How often do you dine on campus per week?

Base: All respondents (n=54)

Types of Meals

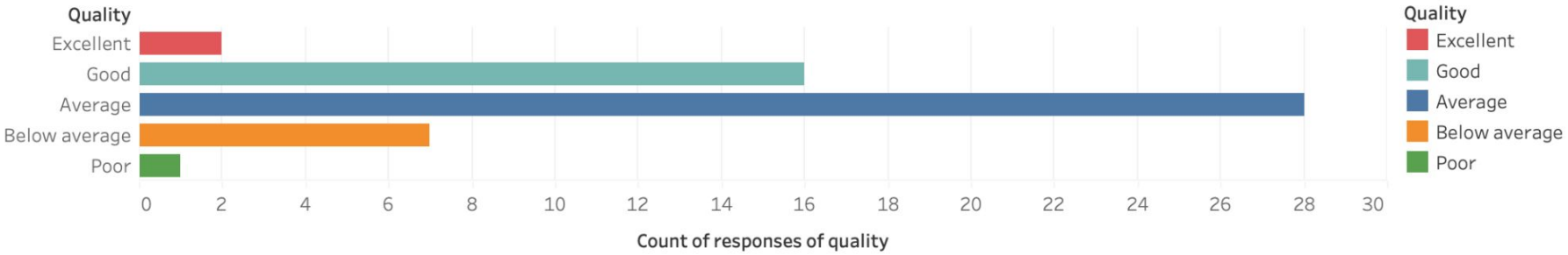


Sum of Count of meal preferences for each Meal preference. Color shows details about Meal preference. The view is filtered on Meal preference, which excludes Null.

Question: Which types of meals would you like to see more in the campus dining services?

Base: Number of selections made by respondents (n=94 selections from 54 respondents)

Quality of Meals

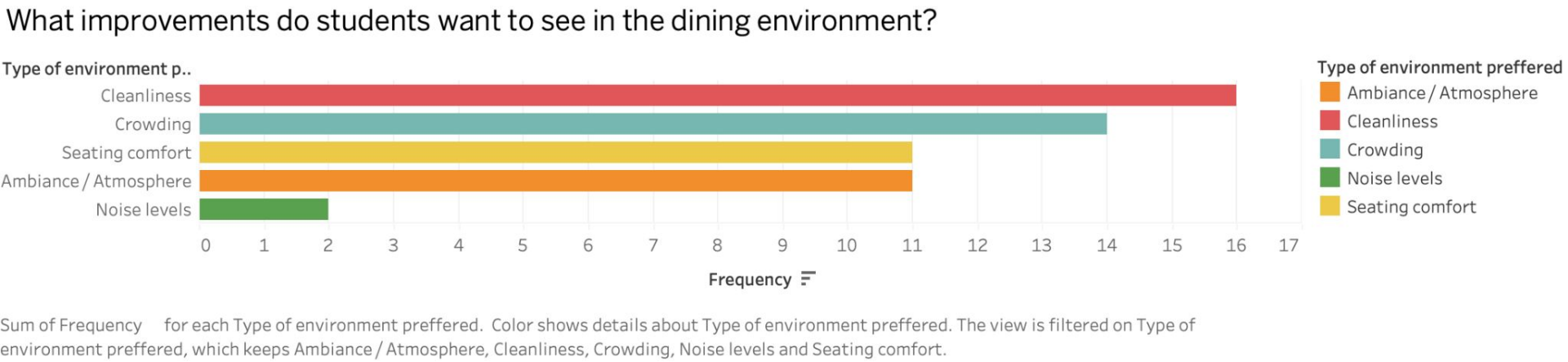


Sum of Count of responses of quality for each Quality. Color shows details about Quality. The view is filtered on Quality, which keeps Average, Below average, Excellent, Good and Poor.

Question: How would you rate the overall quality of meals currently offered on campus?

Base: All respondents (n=54)

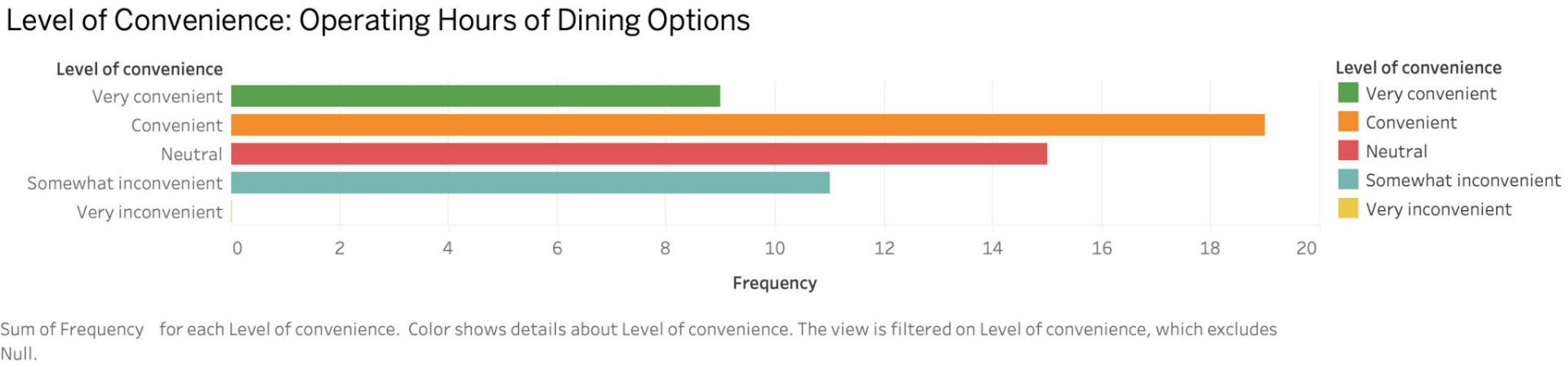
Dining Environment



Question: What aspect of the dining environment would you most like to see improved?

Base: All respondents (n=54)

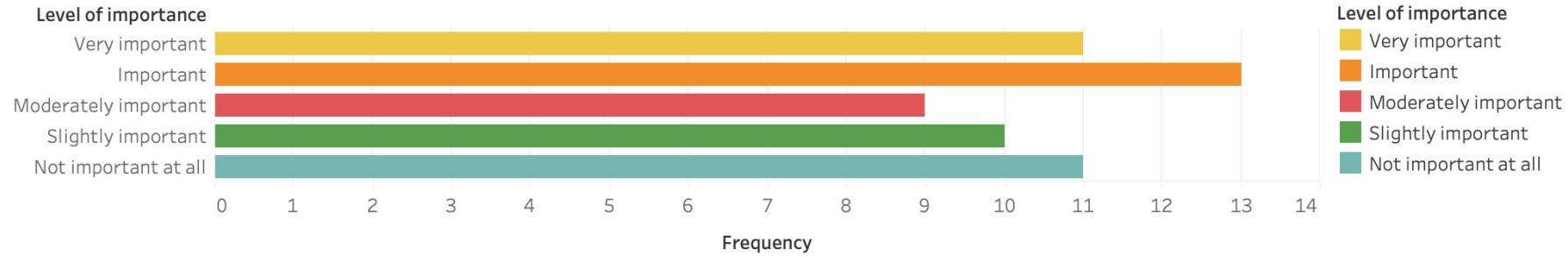
Convenient



Question: How convenient do you find the operating hours of the campus dining services?

Base: All respondents (n=54)

Level of Importance: Dietary Information of Meals Offered

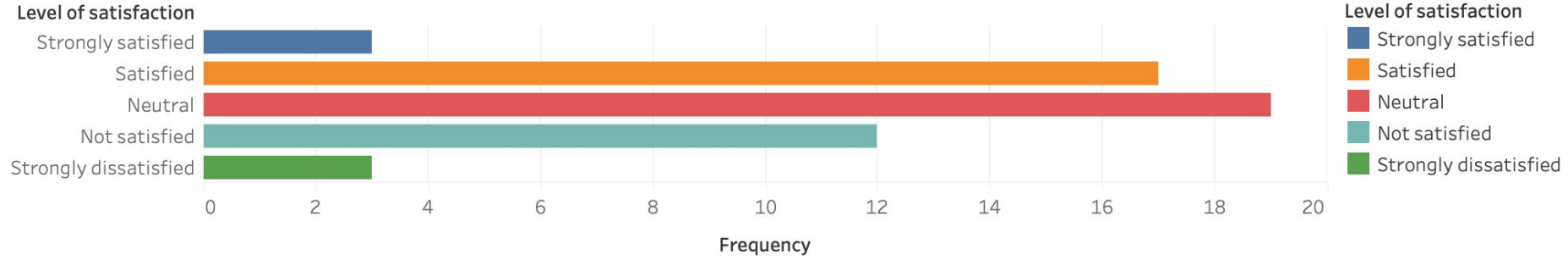


Sum of Frequency for each Level of importance. Color shows details about Level of importance. The view is filtered on Level of importance, which keeps Important, Moderately important, Not important at all, Slightly important and Very important.

Question: How important is it for you to have detailed dietary information available for each meal?

Base: All respondents (n=54)

Level of Satisfaction: Satisfaction Information of Dining Options Offered



Sum of Frequency for each Level of satisfaction. Color shows details about Level of satisfaction. The view is filtered on Level of satisfaction, which excludes Null.

Question: At what extent you are satisfied with dining options at SFU Burnaby campus?

Base: All respondents (n=54)

Analysis

Domain Estimation: Wanted to see the satisfaction of campus dining options based on how frequently they eat here.

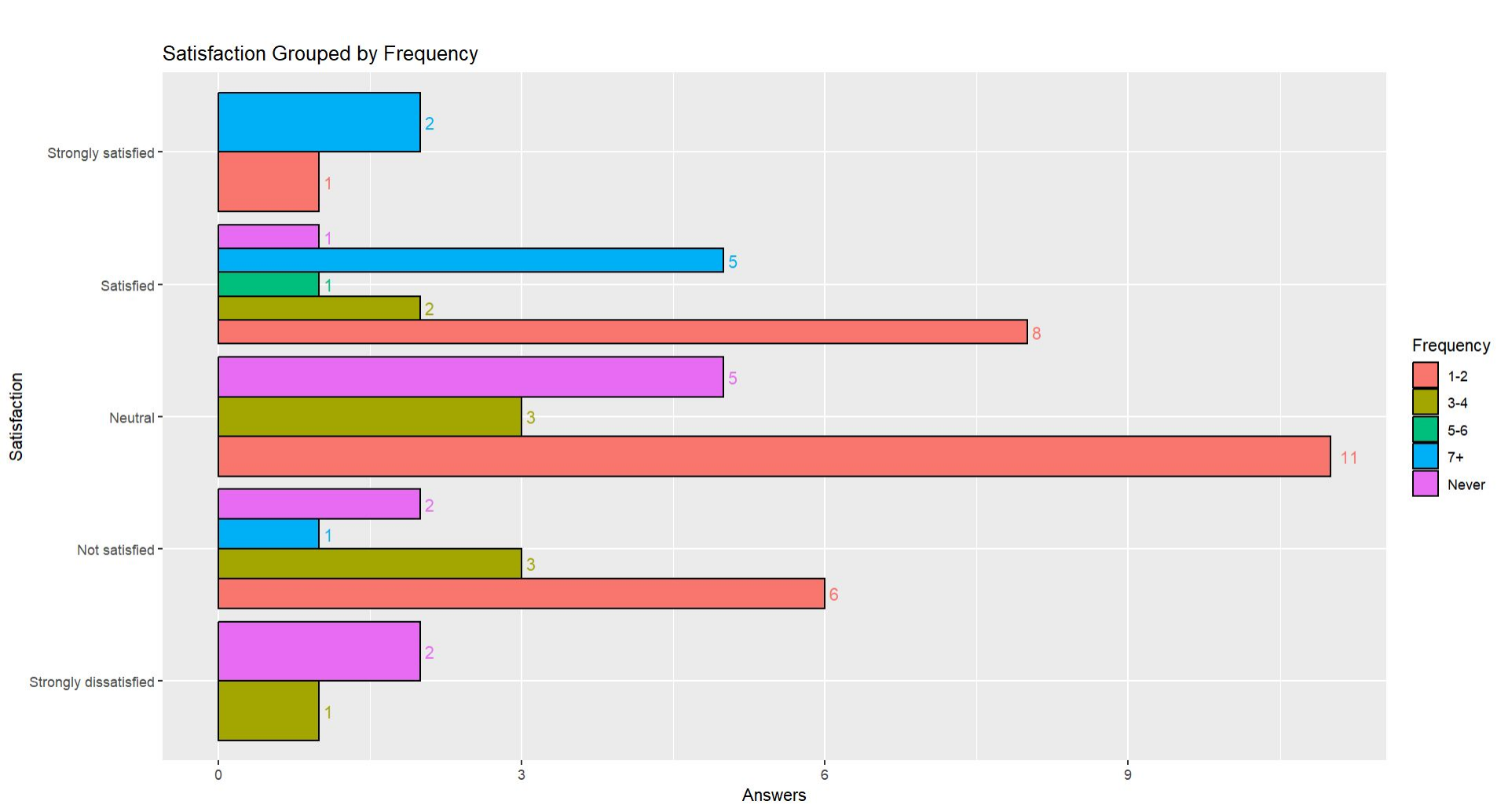
Domains: "1-2" , "3-4" , "5-6", "7+", "Never"

Changed “Satisfaction” values:

- 1 = "Strongly dissatisfied"
- 2 = "Not satisfied"
- 3 = “Neutral”
- 4 = “Satisfied”
- 5 = “Strongly satisfied

Analysis

	1-2	3-4	5-6	7+	Never
Strongly dissatisfied	0	1	0	0	2
Not satisfied	6	3	0	1	2
Neutral	11	3	0	0	5
Satisfied	8	2	1	5	1
Strongly satisfied	1	0	0	2	0


Satisfaction Grouped by Frequency
Strongly satisfied
Satisfied
Neutral
Not satisfied
Strongly dissatisfied
Satisfaction
2
1
1
5
1
2
8
5
3
11
2
1
3
6
2
1
0
3
6
9
Answers
Frequency
1-2
3-4
5-6
7+
Never

Analysis: Domain 1: (Eats on campus 1-2 times a week)

Domain 1:

$$x_i \begin{cases} 1 & i \in d_1 \\ 0 & i \notin d_1 \end{cases}, \quad \hat{t}_x = \sum_{i=1}^{N} x_i = 26$$

Let y_i be the satisfaction score for subject i in domain 1

$$u_i \begin{cases} y_i & i \in d_1 \\ 0 & i \notin d_1 \end{cases}$$

Analysis: Domain 1: (Eats on campus 1-2 times a week)

$$\hat{t}_u = \sum_{i=1}^{N} u_i = \sum_{i=1}^{N} y_i = 82$$

$$\bar{y}_{d_1} = \hat{t}_u / \hat{t}_{x_c} = 3.15 \quad , \quad SE(\bar{y}_{d_1}) = 0.405$$ (Using N = 30000)

$$CI: 3.15 \pm 1.96(0.405) = 2.91, 3.40$$

Analysis: Confidence Intervals of All Domains of Dining Frequency

1-2 times per week: [2.9120190, 3.3956734] ; Mean Score: 3.1538462

3-4 times per week: [2.440300, 3.380212] ; Mean Score: 2.666667

5-6 times per week: Not possible because only 1 response ; Mean Score: 4

7+ times per week: [2.196918, 4.956928] ; Mean Score: 4

Never: [2.490867, 3.162979] ; Mean Score: 2.5

Analysis: Confidence Intervals of All Domains of Gender

Female : [2.604327 , 3.087981] ; Mean Score: 2.846154

Male : [3.135474 , 3.633757] ; Mean Score: 3.384615

Other : [-0.8148972 , 5.814897] ; Mean Score: 2.5

- Only 2 reponses in “Other”

Analysis: Confidence Intervals of All Domains of Food Quality

Poor : [NaN , NaN] ; Mean Score: 1

Below average : [0.9063675 , 3.093632] ; Mean Score: 2

Average : [2.668981 , 3.116734] ; Mean Score: 2.892857

Good : [3.361951 , 4.263049] ; Mean Score: 3.8125

Excellent : [-0.4132045 , 10.4132] ; Mean Score: 5

Analysis: Confidence Intervals of All Domains of Student Type (Domestic or International)

Domestic student : [2.742737 , 3.090596] ; Mean Score: 2.916667

International student : [3.080442 , 3.808446] ; Mean Score: 3.444444

Analysis: Confidence Intervals of All Domains of Residence

No : [2.803472 , 3.10129] ; Mean Score: 2.952381

Yes : [3.019876 , 4.146791] ; Mean Score: 3.583333

Analysis: Confidence Intervals of All Domains of Types of Meals Students Want to See More

Gluten-free : [1.192696 , 5.473971] ; Mean Score: 3.333333

Halal : [1.803297 , 3.625274] ; Mean Score: 2.714286

International Cuisine : [2.85806 , 3.195994] ; Mean Score: 3.027027

Kosher : [NaN , NaN] ; Mean Score: 3

Local Cuisine : [2.863542 , 3.386458] ; Mean Score: 3.125

None : [NaN , NaN] ; Mean Score: 3

Vegan : [2.473376 , 3.726624] ; Mean Score: 3.1

Vegetarian : [2.394877 , 3.438456] ; Mean Score: 2.916667

Analysis: Confidence Intervals of All Domains of Dining Environment

Ambiance / Atmosphere : [2.608902 , 3.754734] ; Mean Score: 3.181818

Cleanliness : [2.912412 , 3.712588] ; Mean Score: 3.3125

Crowding : [2.624386 , 3.518471] ; Mean Score: 3.071429

Noise levels : [0.1851028 , 6.814897] ; Mean Score: 3.5

Seating comfort : [2.04964 , 3.223087] ; Mean Score: 2.636364

Analysis: Confidence Intervals of All Domains of Convenience

Convenient : [2.92853 , 3.597786] ; Mean Score: 3.263158

Neutral : [2.583291 , 3.416709] ; Mean Score: 3

Somewhat inconvenient : [1.740519 , 2.986754] ; Mean Score: 2.363636

Very convenient : [2.985158 , 4.570398] ; Mean Score: 3.777778

Analysis: Confidence Intervals of All Domains of Dietary Information

Important : [2.743592 , 3.717946] ; Mean Score: 3.230769

Moderately important : [2.074741 , 3.480814] ; Mean Score: 2.777778

Not important at all : [2.431761 , 3.568239] ; Mean Score: 3

Slightly important : [2.661028 , 3.938972] ; Mean Score: 3.3

Very important : [2.521497 , 3.660321] ; Mean Score: 3.090909

Conclusion and Discussion

No interesting data besides “Frequency” and “Quality of Food”

- Most average scores between [2.5 , 3.5]
- Large SE’s / wide CI’s due to small sample size

Shortcomings

- Convenience sampling may introduce bias into results
- Small sample size made inferences on data difficult
    - Undercoverage

Future Improvements

- Improve survey accessibility
  - Multi-format distribution
- Refine survey questions
  - Review and revise survey questions for clarity and to prevent misinterpretation
- Follow-up studies
  - Plan for follow-up surveys or interviews to deepen the understanding of specific issues highlighted in initial findings

Thank You for Your Attention