

How Do Boston University Undergraduate Students Spend Their Dining Points?

Abstract

This study assessed where BU students choose to spend the most of their dining points around campus, as well as these locations' possible relations to students' residences, grade level, and extracurricular activities. Our goal in performing these analyses was to help us understand which, if any, factors have the most influence on students' dining preferences. In order to test the correlation, we invited current Boston University undergraduate students to fill out a Google questionnaire survey, which yielded 208 responses. Respondents were specifically asked to answer questions regarding where they live, how many/what kind of clubs they participate in, and where their three most frequented dining point locations are. Our data showed that there were strong correlations between a student's grade level and residence and where their most frequented dining spots were. However, we were unable to find enough evidence within our sample to support the claim that a student's extracurriculars directly influence where they spend their dining points.

Introduction

Boston University operates an extensive dining point system, functioning as a valuable currency exchange for food items across multiple campus locations. With an impressive selection of over 25 retail establishments, BU offers a diverse and rich dining experience to its campus community. As a group, we recognized the potential variance in preferences among the student population due to the abundance of dining choices. Therefore, we have undertaken the main focus of our study to be investigating the relationship between the most frequented dining point-compatible locations scattered across BU's campus and the potential factors influencing students' various decisions.

Hypotheses

The null hypotheses are baselines we have accepted unless our data shows strong evidence disproving them. The alternative hypotheses are our claims of a specific deviation from each null that we hope to discover. They are as follows:

Residence vs dining points:

1a. (Null hypothesis): There is no correlation between where a student spends the most dining points and where their residence is.

1b. (Alternate hypothesis): There is a correlation between where a student spends the most dining points and where their residence is.

Grade level vs dining points:

2a. (Null hypothesis): The grade level of BU students does not significantly influence their dining point usage

2b. (Alternate hypothesis): The grade level of BU students significantly influences their dining point usage

Extracurriculars vs dining points:

3a. (Null hypothesis): There is no significant relationship between BU students' extracurriculars and where they choose to spend dining points.

3b. (Alternate hypothesis): There is a significant relationship between BU students' extracurriculars and where they choose to spend dining points.

Our primary variables of interest include BU dining point locations, students' class years, students' residences, and students' extracurricular activities. With these variables in mind, we formulated our hypotheses/questions to investigate not only where the most popular dining spots are, but also analyze what most influences students' dining selections as a whole.

Experimental Methods

We created a google form to collect our data from a variety of BU students, our population of interest. In order to get a large number of people to see and respond to our survey, we created a QR code that we shared with people around campus, as well as posting a link to our survey on the Boston University Class of 2026 Snapchat Story which is open for viewing to all BU classes. We made it an anonymous questionnaire and had every question be required except for one (in the event it wasn't applicable to the respondent). Each question was either a multiple choice, numerically scaled or a "select all that apply" for both the convenience of the respondents as well as easing the process of cleansing our data later. While creating the survey, we made numerous adjustments as we went. For one, we decided that adding an "off-campus" option to one of our questions would be necessary for people not living on campus. They may be less likely to have a meal plan, which in turn would limit some of their responses to this survey. Furthermore, we were originally going to ask participants for the last 5 places they used dining points at, but figured most would have a difficult time remembering. As such, we reworded the question to ask for the last 3 places ordered at instead. We also readjusted one of our questions' options to contain identical ranges of 5 hours to make data visualization easier. In total, we had 208 people respond to our survey.

As we were initially gathering responses to our pilot survey, we found out several issues that we accounted for in our final version. Firstly, there was a problematic design of our question "Where are the last 3 locations you spent most of your dining points on? (Last 3 orders, not separate locations)" telling people to choose the locations of the last 3 orders, while the questionnaire only allows people to choose 3 different locations. People would not be able to choose 3 same spots they spent dining points on. Therefore, in our final survey we reworded the question to ask "What are the 3 most frequent places you use your dining points at?" in hopes of clarification.

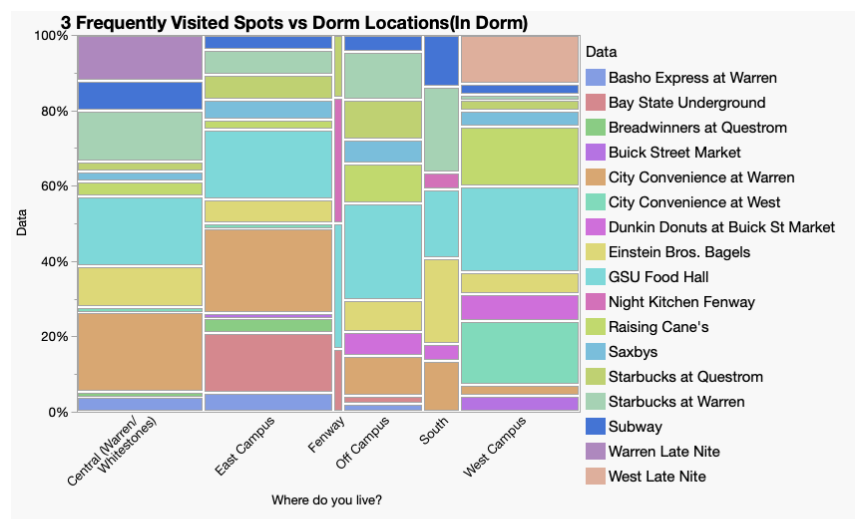
Plus, several variables in the existing dataset needed extra manipulations in further analysis. Considering the influence brought by the "3 most frequent locations" option, manual changes or further connections for data are required since locations are not specified in the context of options.

While we tried to appropriately account for bias in our results by surveying on a larger scale, admittedly the data we collected is not completely impartial. Half of our respondents were sophomores, with the second largest class being freshmen, which made up about 39% of our responses. With approximately 90% of our respondents falling into this age range, this is clearly not representative of the BU Undergraduate population as a whole. The sample observations containing more responses from younger students also likely skewed certain variables such as

As a group, we analyzed our collected data and were able to make several inferences. To begin with, we tried to analyze the relationship between students' frequently visited locations and their preferred dining places represented by the most frequently visited three spots they spent dining points on. As both variables are qualitative data, we computed mosaic plots and contingency tables to better compare. The places students frequently spend dining points on are shown on the y-axis represented as percentages on the graph below, and different locations of their dorms are on the x-axis.

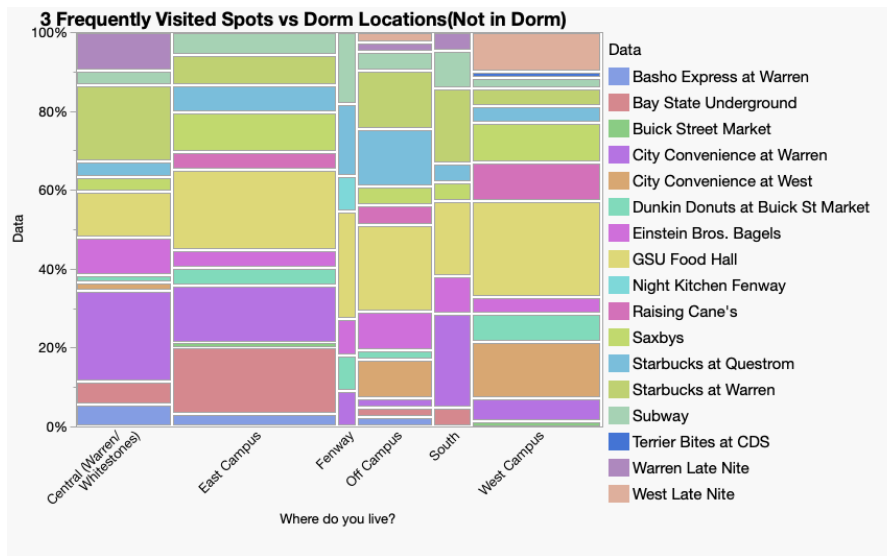
As shown in the mosaic diagrams, students' living locations and their frequently visited dining places can be seen as related. Apparently the largest percentage of people from all dorms prefer to visit the GSU Food Hall which is located in the central area of the campus. Aside from that, almost all large percentages of students prefer to spend their dining points near their dormitories. For Warren or Whitestones residents in the central area, City Convenience at Warren, Starbucks at Warren, and Warren Late Night are top choices, and all of them obviously are in Warren. And for people living in East Campus, two dining locations located in the eastern part of the campus Bay State Underground and City Convenience at Warren are highly preferred. Night Kitchen at Fenway are popular between Fenway residents, and there is no obvious preference for Off-campus students. Southern residents do prefer central campus dining locations such as City convenience at Warren, Einstein Bros. Bagels and Starbucks at Warren. And City Convenience at West and West Late Night are popular among students living in West Campus, though there is a group of them who love the Starbucks at Questrom in East Campus. Furthermore, the contingency table clearly shows the level of popularity spots among students. The numerical indicator of GSU Food Hall is significantly high, represented by 20.52, and other popular spots among different student groups are also clearly indicated such as Raising Cane's ranked first among Western residents through an indicator of 12.86 and ranked second by off-campus students through the numerical representation of 7.95.

We also tried to compare and contrast different outcomes from two student groups that have different tendencies towards their study spots, which can be referenced as another place they spend a long time aside from dorm. There is a more significant tendency for them to choose places nearby their dorms to spend their dining points on. For people living in the central and eastern part of the campus, a larger percentage of them prefer places there also. And similarly for students living in other regions. They also visit more limited places. Below is the graph draw from data collected of students who tend to study in their dorm (seen as who stay for a long period of time in their dorm):



For reference, we also selected groups of students who stay outside of their dorm more often to compare. They have a wider range of dining locations which shows their larger

footmaps. There is also a weaker relationship between their food choices and dorm locations which can be inferred through more equally distributed choices.

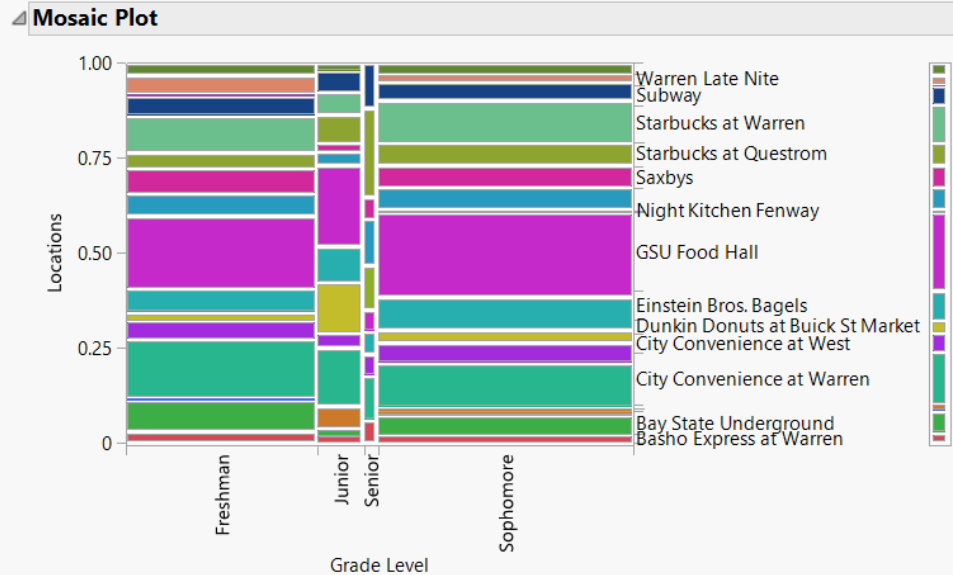


Tests				
	N	DF	-LogLike	RSquare (U)
	580	85	165.40252	0.1123
Test	ChiSquare		Prob>ChiSq	
Likelihood Ratio	330.805		<.0001*	
Pearson	386.519		<.0001*	

To test our hypothesis, we choose to perform the chi square test on all data, which is used to decide whether two variables might be related or not. As displayed in the table above, the test statistics equals to 386.519, and the p value that we get is smaller than 0.0001, which is smaller than the significance level and very close to 0. Based on that fact, the null hypothesis is rejected. We have sufficient evidence to claim that there is a strong relationship between a student's dorm location and where they choose to spend their dining points.

Grade Level vs Dining Location Selections:

In addition, we looked at mosaic plots and contingency tables displaying the relationship between students' grade levels (qualitative) and dining point location selections (qualitative). As addressed above, the distributions between the 4 undergraduate class sizes are not perfectly even, but this has been accounted for within our analysis. The visuals are depicted below:



Contingency Table																							
	Count	Total %	Col %	Row %	Locations																Total		
					Basho Express at Warren	Bay State Underground	Breadwinners at Questrom	Buick Street Market	City Convenience at Warren	City Convenience at West	Dunkin Donuts at Buick St Market	Einstein Bros. Bagels	GSU Food Hall	Night Kitchen Fenway	Raising Cane's	Saxbys	Starbucks at Questrom	Starbucks at Warren	Subway	Terrier Bites at CDS		Warren Late Nite	West Late Nite
Grade Level	Freshman	7	18	1	0	34	11	4	14	42	0	13	14	9	21	12	1	11	7	219			
		1.21	3.10	0.17	0.00	5.86	1.90	0.69	2.41	7.24	0.00	2.24	2.41	1.55	3.62	2.07	0.17	1.90	1.21	37.76			
		46.67	52.94	25.00	0.00	43.04	37.93	19.05	31.11	35.29	0.00	38.24	42.42	25.71	36.84	38.71	100.00	68.75	41.18				
		3.20	8.22	0.46	0.00	15.53	5.02	1.83	6.39	19.18	0.00	5.94	6.39	4.11	9.59	5.48	0.46	5.02	3.20				
	Junior	1	1	0	3	8	2	7	5	11	0	2	1	4	3	3	0	0	1	52			
		0.17	0.17	0.00	0.52	1.38	0.34	1.21	0.86	1.90	0.00	0.34	0.17	0.69	0.52	0.52	0.00	0.00	0.17	8.97			
		6.67	2.94	0.00	50.00	10.13	6.90	33.33	11.11	9.24	0.00	5.88	3.03	11.43	5.26	9.68	0.00	0.00	5.88				
		1.92	1.92	0.00	5.77	15.38	3.85	13.46	9.62	21.15	0.00	3.85	1.92	7.69	5.77	5.77	0.00	0.00	1.92				
	Senior	1	0	1	2	1	0	1	1	2	2	1	4	0	2	0	0	0	0	17			
		0.17	0.00	0.00	0.00	0.34	0.17	0.00	0.17	0.17	0.34	0.34	0.17	0.69	0.00	0.34	0.00	0.00	0.00	2.93			
	6.67	0.00	0.00	0.00	2.53	3.45	0.00	2.22	0.84	50.00	5.88	3.03	11.43	0.00	6.45	0.00	0.00	0.00					
	5.88	0.00	0.00	0.00	11.76	5.88	0.00	5.88	5.88	11.76	11.76	5.88	23.53	0.00	11.76	0.00	0.00	0.00					
Sophomore	6	15	3	3	35	15	10	25	65	2	17	17	18	33	14	0	5	9	292				
	1.03	2.59	0.52	0.52	6.03	2.59	1.72	4.31	11.21	0.34	2.93	2.93	3.10	5.69	2.41	0.00	0.86	1.55	50.34				
	40.00	44.12	75.00	50.00	44.30	51.72	47.62	55.56	54.62	50.00	50.00	51.52	51.43	57.89	45.16	0.00	31.25	52.94					
	2.05	5.14	1.03	1.03	11.99	5.14	3.42	8.56	22.26	0.68	5.82	5.82	6.16	11.30	4.79	0.00	1.71	3.08					
Total	15	34	4	6	79	29	21	45	119	4	34	33	35	57	31	1	16	17	580				
	2.59	5.86	0.69	1.03	13.62	5.00	3.62	7.76	20.52	0.69	5.86	5.69	6.03	9.83	5.34	0.17	2.76	2.93					

We can note right away that all 4 grade levels have at least a decent portion each that prefers the GSU Food Hall (and this aligns with the preliminary data that we collected in our pilot survey as well). The GSU is the most popular location for all grade levels except for the senior class, making up approximately 20% of selections for each. City Convenience at Warren was the second most popular selection for all grade levels, ranging from 11-15% of selections for each. Looking closer at the variety within each class, the junior class selections were the most centralized, followed by the freshmen, who were leaning towards central/east locations (Saxby's, City Co. at Warren, Bay State Underground, and Starbucks at Warren were near the top after GSU). The sophomore class was similar, except instead of leaning east their selections were skewed central/west (City Co. at both Warren + West, Einstein Bros. Bagels, Raising Cane's). The senior class as a whole was the most versatile. Despite Starbucks at Questrom being by far their most popular location, they have a fairly even distribution of dining selections and no clear bias towards any side of campus.

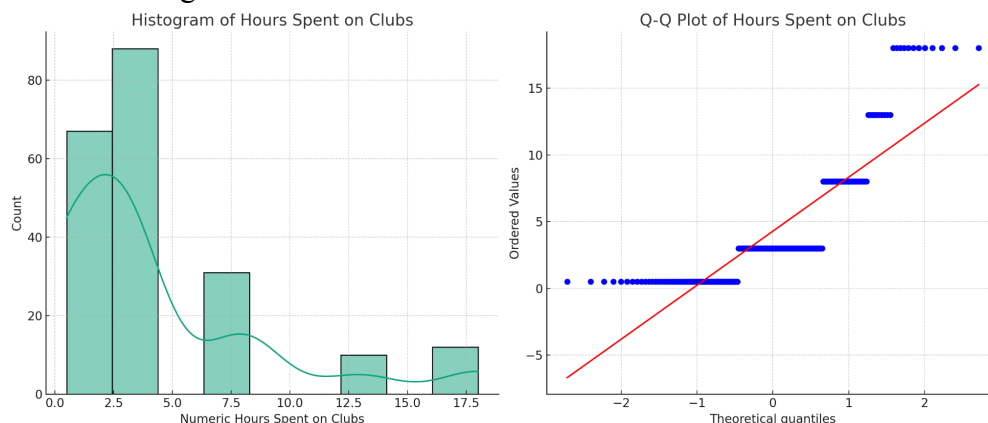
Tests			
N	DF	-LogLike	RSquare (U)
580	51	37.749979	0.0256
Test	ChiSquare	Prob>ChiSq	
Likelihood Ratio	75.500	0.0145*	
Pearson	101.893	<.0001*	

To test our alternate hypothesis(2b), we performed a chi-square test at significance level $\alpha = 0.05$. As displayed in this table above, our test statistic was 101.893 and our p-value was incredibly close to 0. Since the p-value is less than the significance level value, we can reject the null hypothesis → we have sufficient evidence to claim that there is a strong relationship between a student's grade level and where they choose to spend their dining points.

Number of Clubs Participated In vs Food Choices:

To further our investigation, we then analyzed the relationship between students' extracurricular involvement and their dining point spending patterns. Given the non-normal distribution of the quantitative variable, the number of hours students spend on clubs, we employed non-parametric methods and visual analytics to find patterns.

To first assess the normality of the data, we could look at a histogram and Q-Q plot to find that our data is right skewed:



We also conducted a Shapiro-Wilk normality test which provides a statistic and a p-value in which the respective results were approximately 0.729 and approximately 3.63×10^{-18} which is much lower than the common alpha level of 0.05. This further supports that the data is not normally distributed.

Continuing with our exploration of the data, we visualized the relationship between the time students spend on their clubs a week and their dining location choices. We categorized the quantitative variable into bins to facilitate a clearer analysis of trends and using these bins we constructed the heatmap below. The heatmap illustrates a relatively consistent preference for dining choices such as the GSU Food hall, irrespective of time spent on club activities. While there are some small variations in location frequencies across the bins, they don't suggest a strong correlation. This aligns with our null hypothesis 3a; there is no significant relationship between extracurricular activities and dining point preferences.



Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Basho Express at Warren	15	1.80000	0.4053	1.004	2.5961
Bay State Underground	34	2.32353	0.2692	1.795	2.8523
Breadwinners at Questrom	4	1.75000	0.7849	0.208	3.2916
Buick Street Market	6	2.00000	0.6408	0.741	3.2587
City Convenience at Warren	79	2.02532	0.1766	1.678	2.3722
City Convenience at West	29	2.17241	0.2915	1.600	2.7450
Dunkin Donuts at Buick St Market	21	1.66667	0.3425	0.994	2.3395
Einstein Bros. Bagels	45	1.57778	0.2340	1.118	2.0374
GSU Food Hall	119	1.96639	0.1439	1.684	2.2490
Night Kitchen Fenway	4	2.75000	0.7849	1.208	4.2916
Raising Cane's	34	1.88235	0.2692	1.354	2.4111
Saxbys	33	2.09091	0.2733	1.554	2.6276
Starbucks at Questrom	35	1.71429	0.2653	1.193	2.2354
Starbucks at Warren	57	1.87719	0.2079	1.469	2.2856
Subway	31	1.80645	0.2819	1.253	2.3602
Terrier Bites at CDS	1	3.00000	1.5697	-0.083	6.0832
Warren Late Nite	16	1.68750	0.3924	0.917	2.4583
West Late Nite	17	2.00000	0.3807	1.252	2.7478

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Locations	17	23.3472	1.37336	0.5574	0.9225
Error	562	1384.7546	2.46398		
C. Total	579	1408.1017			

In order to test our alternative hypothesis (3b), we performed a one-sample test on our data, in which we analyzed the variance of our qualitative variables. For this test, we had:

$H_0: \mu_1 = \mu_2 = \dots = \mu_n$, and

H_a : At least one pair of means (μ) is not equal.

From the Oneway chart, it can be noted right away that the means of each column are not all perfectly equal to one another, but do not seem to vary too significantly from each other either. To formalize our result, we calculated the p-value of the variance test in order to compare to our significance level, $\alpha = 0.05$, which came out to be $p = 0.9225$. Since $p > \alpha$, we fail to reject the null hypothesis. So we do not have sufficient evidence to claim that there is a strong relationship between a student's extracurriculars and where they choose to spend their dining points.

Evaluation of random sampling

A random sample is a subset of individuals chosen from a larger set where each individual is chosen randomly and has a known, non-zero chance of being selected in the sample. We will analyze whether our sample is random from the following three facets: selection process, Bias and representativeness and sample size.

Selection Process: Our research objects include many people, including freshmen, sophomores, juniors, seniors, students from different colleges, students in the dining hall and other students around us. We have no intention to exclude any special group from our research. However, due to the limitation of the experimental method, we could not involve our research in all aspects of the whole school. Our research method is to distribute the QR code and survey link to a specific student group through various media platforms, which is the students of BU. The distribution of the survey through QR codes and links on various media platforms to BU students may have introduced selection bias. Those who are more active on these platforms or who are more inclined to participate in such surveys might be overrepresented, while others may be underrepresented or excluded altogether. The team's assertion that they tried their best for randomness indicates an effort, but the method used might not have guaranteed a truly random selection.

Bias and Representativeness: We did not intentionally include any bias in this experiment. However, for the purpose of investigating the use of Dining points and the factors affecting dining points, we cannot study the ethnic characteristics and special preferences of the audience in detail. So, there's some Systematic bias in our experiment. Even if a sample is randomly selected, it may not be representative of the larger population. It's essential to ensure that the sample represents various demographics and characteristics of the entire Boston University student population.

Sample Size: The sample size of 208 students is acknowledged by the team as not being large enough to represent the entire university. However, they claim it's sufficient for their specific aim of understanding the trend in the usage of dining points. The statement that "crucial details about the selection process are missing" and uncertainty regarding every BU student's chance of selection also raises concerns about the randomness and representativeness of the sample.

Therefore, while there was a clear intent to ensure randomness, the sample might not be entirely random or representative of the entire Boston University student population. Efforts were made, but methodological constraints could have impacted the true randomness of the sample.

Discussion/Conclusions:

Hypotheses	Findings
<p>Null hypothesis: There is no correlation between where a student spends the most dining points and where their residence is.</p> <p>Alternate hypothesis: There is a correlation between where a student spends the most dining points and where their residence is.</p>	<p>$P < \alpha$ <u>Reject the null hypothesis</u></p> <p>The Pearson Chi-square test yielded a value of 386.519, and the associated p-value was less than 0.0001. This p-value is considerably lower than the conventional alpha level of 0.05, indicating that the probability of observing the data if the null hypothesis were true is extremely low.</p>
<p>Null hypothesis: The grade level of BU students does not significantly influence their dining point usage</p> <p>Alternate hypothesis: The grade level of BU students significantly influences their dining point usage</p>	<p>$P < \alpha$ <u>Reject the null hypothesis</u></p> <p>The Pearson Chi-square test yielded a value of 101.893, and the associated p-value was less than 0.0001. This p-value is considerably lower than the conventional alpha level of 0.05, indicating that the probability of observing the data if the null hypothesis were true is extremely low.</p>
<p>Null hypothesis: There is no significant relationship between BU students' extracurriculars and where they choose to spend dining points.</p> <p>Alternate hypothesis: There is a significant relationship between BU students' extracurriculars and where they choose to spend dining points.</p>	<p>$P > \alpha$ <u>Failed to reject the null hypothesis</u></p> <p>Our sample evidence shows that the p-value 0.9225 is greater than α. Therefore, we can draw the conclusion that the relationship between BU students' extracurriculars and where they choose to spend dining points is weak.</p>

Conclusion:

The statistical analyses we conducted on two distinct hypotheses regarding Boston University students' behaviors have led to clear conclusions about their dining preferences and the factors influencing them.

We found that the first hypothesis tested the correlation between students' residence locations and their dining choices. The results were statistically significant, with a chi-square test yielding a p-value far less than the conventional threshold of 0.05. This strongly suggests that there is indeed a correlation between where students live and where they choose to spend their dining points. The data indicated that proximity plays a significant role in these decisions, as students are more inclined to frequent dining facilities that are located near their dormitories.

Similarly, the second hypothesis tested the correlation between students' grade level and their dining selections, which yielded results that were statistically significant. The chi-square test gave a p-value that was almost zero, which was also much less than the significance level of 0.05. This indicates that a student's grade level also plays a significant role in where students choose to spend their dining points, and that these selections vary between each class year.

In contrast, the third hypothesis focused on the relationship between students' involvement in extracurricular activities and their dining choices. The Shapiro-Wilk test for normality and the evidence did not support the alternative hypothesis. With a p-value much higher than 0.05, there is no statistical reason to reject the null hypothesis. Therefore, the study concludes that there is no significant link between the time students spend on extracurricular activities and the places where they spend their dining points. This suggests that extracurricular engagement does not influence dining location preferences, and other factors may be at play.

In a nutshell, Boston University students' choices of dining locations appear to be influenced by their living arrangements rather than their extracurricular activities. These findings should contribute to potentially campus dining guidance of services in optimizing their offerings and operations. By understanding that proximity to residence halls is a primary factor in dining decisions, campus services can tailor their offerings to better meet student needs. Conversely, since extracurricular involvement does not significantly affect dining choices, efforts to link dining options with club locations or event timings may not be as effective as previously thought. At the same time, the decision of the dining plan and product should differ with the consideration of students in different grades. This data provides actionable insights for university administrators to enhance the campus dining experience, prioritizing convenience, and accessibility.

Contributions

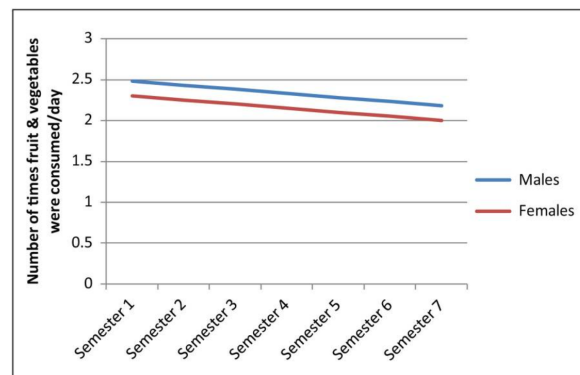
Group Members

- Anmar Abdi → Deliverable 1: Proposed questions of questionnaire, Deliverable 2: Designed and created Google Form, Deliverable 3: Performed Clubs vs Points Analysis, Deliverable 4: Performed Clubs vs Points Analysis, Full Paper: Performed hypothesis test for Clubs vs Points.
- Jessica Cannon → Deliverable 1: Wrote majority of summary, Deliverable 2: Aided with Google Form + Summary/Design section, Deliverable 3: Reorganized and added to Intro + Methods sections, performed Grade vs Points analysis, Deliverable 4: Added to Experimental Methods + Performed Grades vs Points Analysis (final), Full Paper: Chi-square test for Grade vs Points, Completed Abstract + Appendix + References sections + Discussions and Conclusions section.
- Lize Chen → Deliverable 1: Proposed questions of questionnaire, Deliverable 2: Raised up hypotheses + Issues and Feedback section + Google Form, Deliverable 3: Performed Locations vs Points Analysis, Deliverable 4: Performed Locations vs Points Analysis (final), Full Paper: Performed Chi-square testing for Location vs Points + Discussions and Conclusions section.
- Yunzheng Yang → Helped come up with the topic idea, structure the summary and complement on content, Deliverable 2: Google Form + Organization of information, Deliverable 3: Completed the Outlier Inspection and added to Intro, Deliverable 4: Evaluation of the random sample, Full Paper: Discussions/Conclusions section.

Appendix

Frequency With Which College Students Consumed Fruits, Vegetables, and Sugared Soda and Engaged in Physically Active or Sedentary Behaviors by Semester

Eating and Activity Variable	Mean (SD)						
	Semester 1 (Fall 2007)	Semester 2 (Spring 2008)	Semester 3 (Fall 2008)	Semester 4 (Spring 2009)	Semester 5 (Fall 2009)	Semester 6 (Spring 2010)	Semester 7 (Fall 2010)
Number of times fruits and vegetables were consumed per day	<i>N</i> = 704; 2.37 (1.78)	<i>N</i> = 606; 2.36 (1.82)	<i>N</i> = 622; 2.11 (1.70)	<i>N</i> = 618; 2.19 (1.77)	<i>N</i> = 593; 2.00 (1.71)	<i>N</i> = 574; 2.02 (1.61)	<i>N</i> = 571; 1.91 (1.58)
Number of times sugared soda was consumed per day	<i>N</i> = 704; 0.58 (0.69)	<i>N</i> = 606; 0.49 (0.64)	<i>N</i> = 622; 0.48 (0.62)	<i>N</i> = 618; 0.41 (0.54)	<i>N</i> = 593; 0.41 (0.59)	<i>N</i> = 574; 0.37 (0.56)	<i>N</i> = 571; 0.37 (0.54)
Number of hours engaged in sports/working out per day	<i>N</i> = 716; 0.43 (0.50)	<i>N</i> = 624; 0.43 (0.48)	<i>N</i> = 639; 0.34 (0.46)	<i>N</i> = 640; 0.42 (0.52)	<i>N</i> = 612; 0.27 (0.41)	<i>N</i> = 596; 0.40 (0.54)	<i>N</i> = 590; 0.30 (0.44)
Number of hours engaged in sedentary activities per day	<i>N</i> = 716; 2.18 (1.47)	<i>N</i> = 605; 2.27 (1.60)	<i>N</i> = 639; 1.59 (1.19)	<i>N</i> = 640; 1.61 (1.26)	<i>N</i> = 612; 1.64 (1.20)	<i>N</i> = 596; 1.56 (1.30)	<i>N</i> = 590; 1.58 (1.17)



This table and graph are from a survey published in 2013, which looked to analyze how eating habits among college students changed across a seven-semester period. There is a clear, strong negative correlation between what/how much students choose to eat and what semester/grade level the student is currently in. This is representative of the data that we aspired to collect within our own research when analyzing the relationship between grade level and dining point locations on BU's campus. The data that we collected also demonstrated a strong relationship between the two variables, acting as further support of our second alternative hypothesis (2b).

References

Bevans, Rebecca. "Choosing the Right Statistical Test: Types & Examples." *Scribbr*, 22 June 2023, www.scribbr.com/statistics/statistical-tests/.

Small, Meg, et al. "Changes in Eating and Physical Activity Behaviors across Seven Semesters of College: Living on or off Campus Matters." *Health Education & Behavior : The Official Publication of the Society for Public Health Education*, U.S. National Library of Medicine, Aug. 2013, www.ncbi.nlm.nih.gov/pmc/articles/PMC4186223/.

"Where to Use Your Meals & Points." *Where to Use Your Meals & Points | Dining Services*, www.bu.edu/dining/plans-points/where-to-use/. Accessed 20 Nov. 2023.