



**MONTCLAIR STATE**  
UNIVERSITY

# **Montclair State University Foodscape Audit, 2019**

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**An Audit of Food Security, Perceptions,  
and Experiences, of Students Within  
the Campus Foodscape**

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 **Introduction**

This report was authored for the Montclair State University Campus Community Garden, the Montclair State University chapter of the Food Recovery Network, and the Red Hawk Pantry, in order to provide guidance to these campus organizations in identifying and addressing student food needs.

This report provides necessary updates to the campus statistics on student food security, including the prevalence of student food insecurity and student perceptions of the campus foodscape.

This report also sets a baseline measurement which has been standardized to allow for comparison between this and other populations (i.e., by utilizing a modified version of the standardized USDA Household Food Security Survey Tool), and allows for follow-up surveys to be performed in order to measure progress made towards addressing student food security by the abovementioned, and other potentially interested, campus entities.

 **Audit Methodology, Data Collection, and Statistical Analysis**

During the Spring 2019 Semester, two email invitations to participate in research were sent to all students attending Montclair State University; one invitation sent in February and one invitation sent in April. Potential respondents were invited to take an anonymous survey, administered via the online survey platform Qualtrics. The survey asked questions that were aimed at identifying food security during the duration of the Spring Semester, and during the duration of the prior Winter Session / Winter Recess Period.

The food security audit was composed of a modified version of the USDA's US Adult Food Security Survey Module, which is intended to be administered to the adults in a given household. The language of the tool was modified in order to better reflect the target audience of college-aged adults. The modified survey module was administered twice, with respondents being asked about their level of food security during both the Winter '18 recess and the Spring '19 semester.

Additional questions were added to the survey tool in order to collect demographic information and additional information about possible factors impacting student food security, as well as capturing student perceptions of the campus foodscape.

Potential respondents were considered to be eligible for the audit if they were actively enrolled as a student for the Spring '19 semester. For this audit, staff and faculty members were not recruited; however, student workers, such as Graduate Assistants (GA's) or Teachers Assistants (TA's) were eligible, due to their student status. Students were recruited via the "All Students" emailing list, as well as through college, department, and student club emailing lists.

A total of 628 valid responses were recorded throughout the course of the Spring '19 semester.

Student responses to the adapted USDA's US Adult Food Security Survey Modules were coded according to the USDA's guidance, in order to determine each respondent's level of food security during the Spring '19 academic semester and during the Winter '18 academic recess. Students designated as having high food security or marginal food security were classified as being food secure, while students designated as having low food security or very low food security were classified as food insecure. Definitions of these classifications are provided on the following page.

Statistical tests were run comparing responses between students who reported being food secure and students who reported being food insecure during the Spring '19 semester using the R statistics package. Two-sample t-tests for unpaired data were conducted using two-tailed tests, and a significance level of  $p < .05$ .

 **Interpreting the Audit**

Results from the 2019 food security audit are presented below. Results of the audit include student demographics, levels of student food security, and student perceptions of the campus food system.

Please see the definitions used for food security below. According to the USDA<sup>1</sup>, the varying levels of food security are defined as the following:

**High food security** — Students had no problems, or anxiety about, consistently accessing adequate food.

**Marginal food security** — Students had problems at times, or anxiety about, accessing adequate food, but the quality, variety, and quantity of their food intake were not substantially reduced.

**Low food security** — Students reduced the quality, variety, and desirability of their diets, but the quantity of food intake and normal eating patterns were not substantially disrupted.

**Very low food security** — At times during the semester, eating patterns of students were disrupted and food intake reduced because the respondent lacked money and other resources for food.

An individual that expresses high food security or marginal food security is considered to experience **food security**, or be **food secure**; an individual that expresses low food security or very low food insecurity is considered to experience **food insecurity**, or be **food insecure**.

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<sup>1</sup> <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement.aspx>

Please note that some definition text has been adapted for this report to better refer to a single student respondent, as compared to a household of more than one individual.

## **Student Food Security** **During the Spring 2019 Semester**

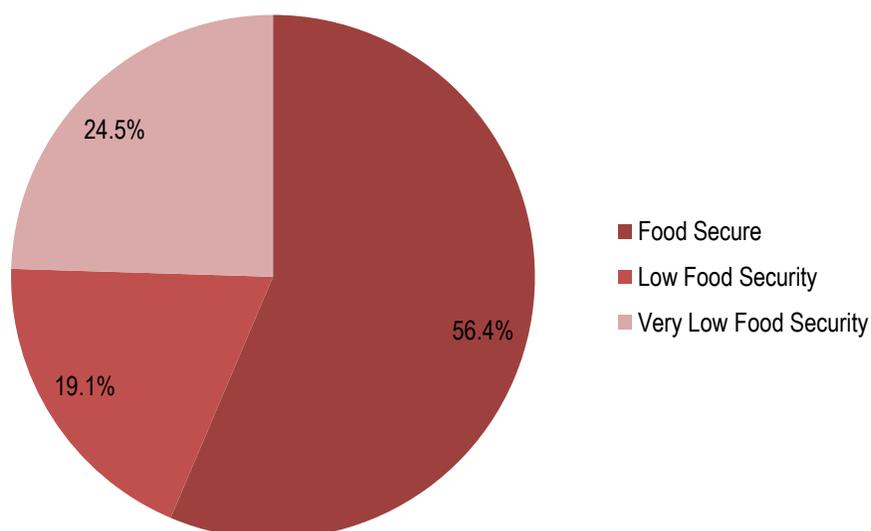
During the course of the Spring '19 Semester, 354 (56.4%) students were food secure.

Specifically, 243 (38.7%) students suggested having high food security and reported no issues with accessing food; 111 (17.7%) students suggested having marginal food security and reported at least one issue with accessing food, but are still considered to be food secure.

During the course of the Spring '19 Semester, 274 (43.6%) students were food insecure.

Specifically, 120 (19.1%) students suggested having low food security and reported reducing the quality of the food that they eat; 154 (24.5%) students suggested having very low food security and reported reducing the amount of food that they eat.

**Figure 1. Spring 2019 Student Food Security (n = 628)**



## **Student Food Security During the Winter 2018 Recess**

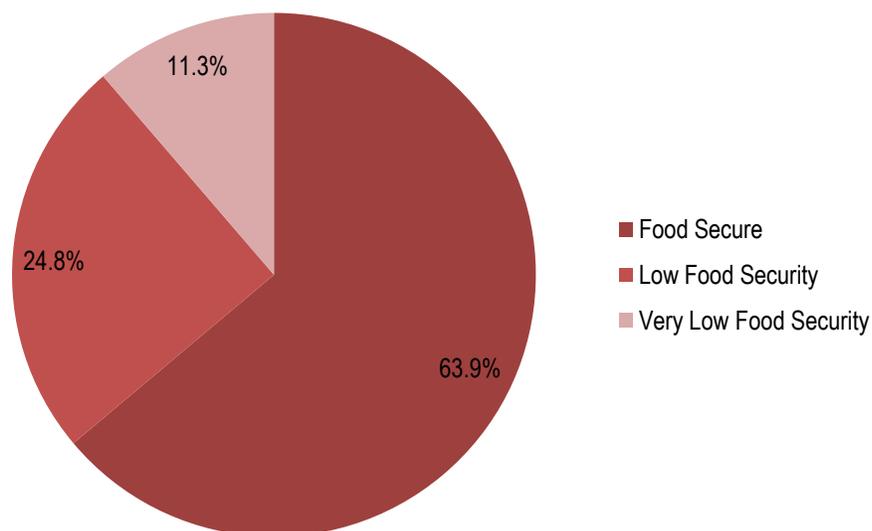
During the course of the Winter '18 Recess, 401 (63.9%) students were food secure.

Specifically, 245 (39.0%) students suggested having high food security and reported no issues with accessing food; 156 (24.8%) students suggested having marginal food security and reported at least one issue with accessing food, but is still considered to be food secure.

During the course of the Winter '18 Recess, 227 (36.1%) students were food insecure.

Specifically, 156 (24.8%) students suggested having low food security and reported reducing the quality of the food that they eat; 71 (11.3%) students suggested having very low food security and reported reducing the amount of food that they eat.

**Figure 2. Winter 2018 Student Food Security (n = 628)**

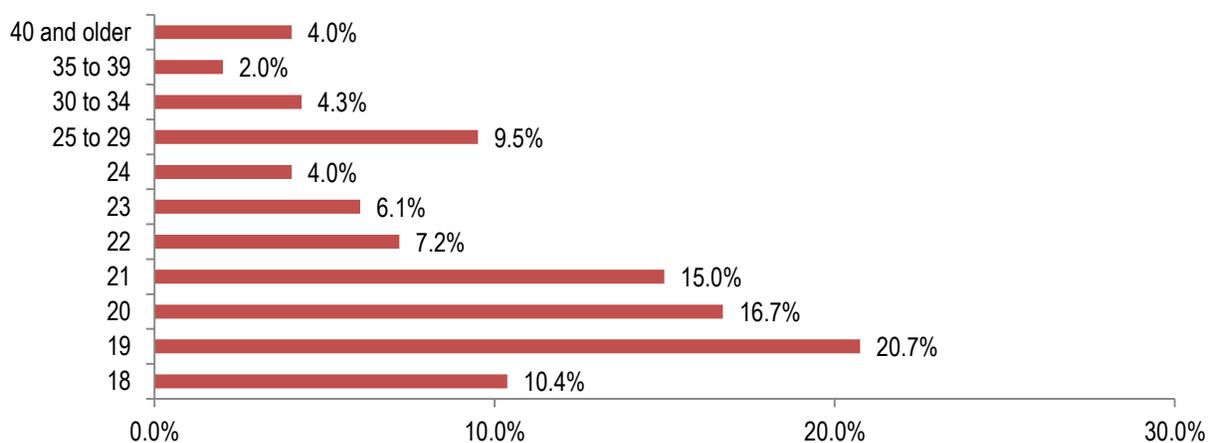


## Age, Grade Level, and Student Status Among Students Experiencing Food Security

During the Spring '19 semester, 354 students reported experiencing food security.

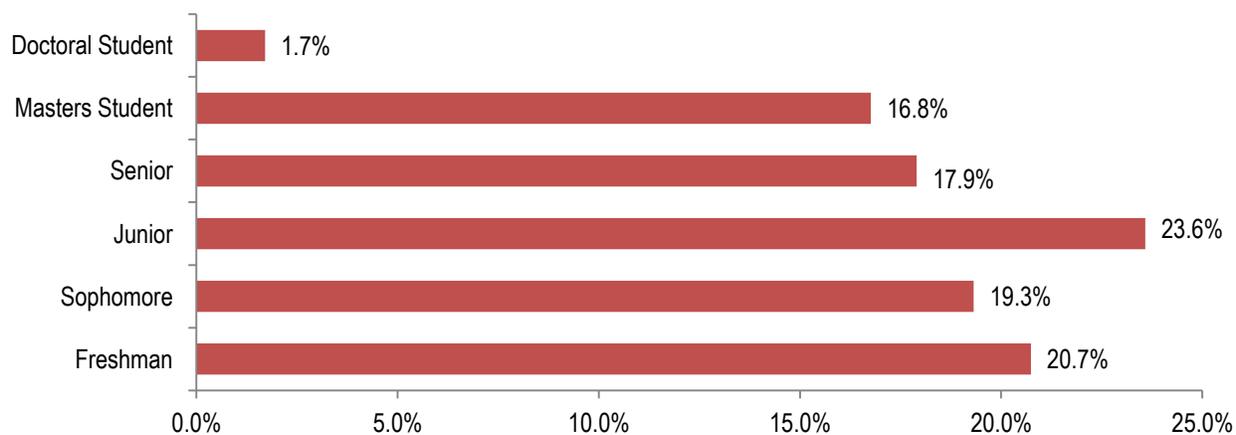
The majority (80.1%) of students experiencing food security reported being aged 24 or younger (Figure 3).

**Figure 3. Age Distribution Among Students Experiencing Food Security (n = 347)**



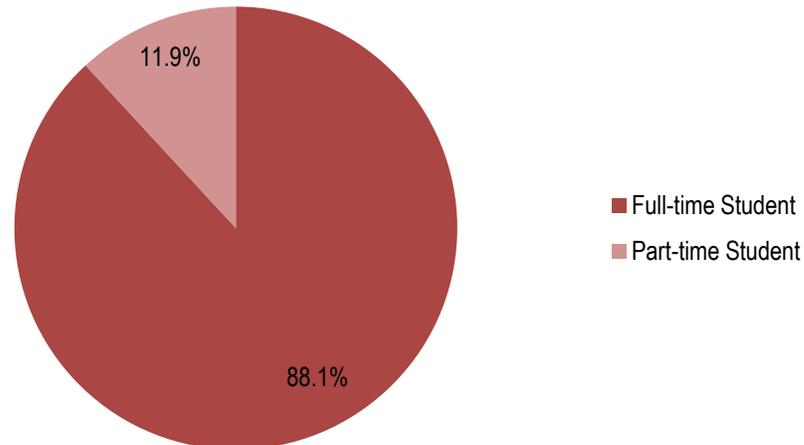
Undergraduate students from each grade level reported experiencing food security at similar levels, with each undergraduate grade representing approximately one-fifth of food secure students; graduate students combined represent approximately one-fifth (18.5%) (Figure 4).

**Figure 4. Academic Year Distribution among Students Experiencing Food Security (n = 352)**



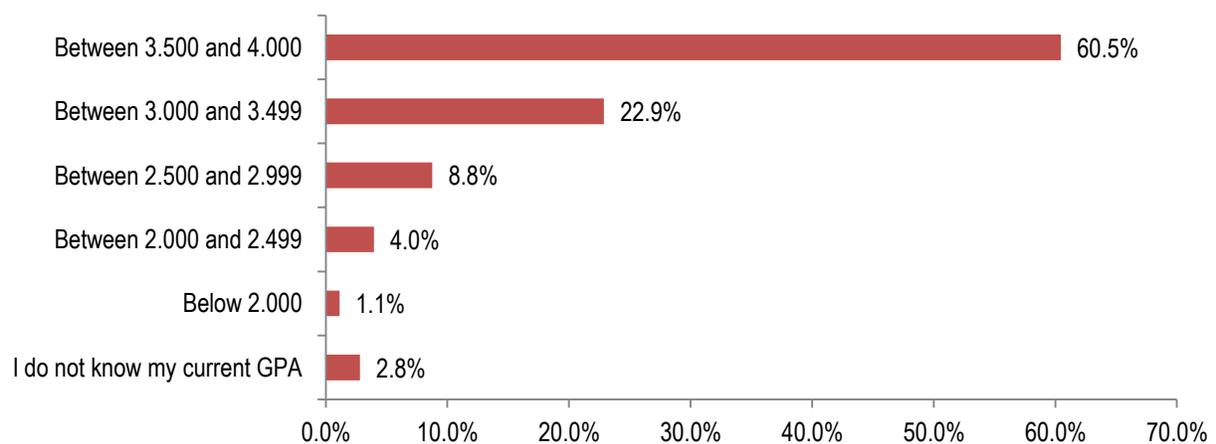
The majority (88.1%) of students experiencing food security reported being full-time students (Figure 5). Full-time status is 12 or more credits per semester for undergraduate students and 9 or more credits per semester for graduate students.

**Figure 5. Student Status Among Students Experiencing Food Security (n = 354)**



Students experiencing food security reported considerable academic success, with two-thirds (60.5%) reporting a GPA of 3.5 or greater, and over four-fifths (83.4%) reporting a GPA over 3.0 (Figure 6).

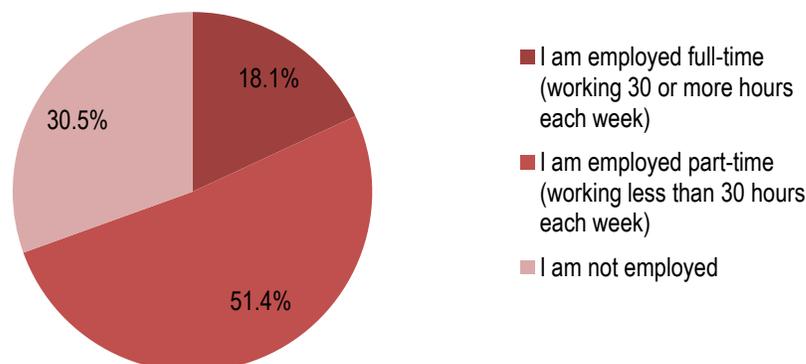
**Figure 6. Grade Point Average Distribution Among Students Experiencing Food Security (n = 354)**



## **Employment, Place of Residence, and Meal Plan Participation Among Students Experiencing Food Security**

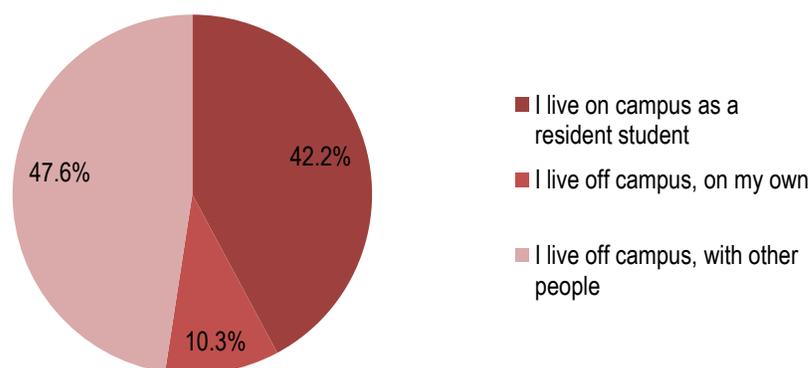
Students experiencing food security were predominantly employed at least part-time, with half (51.4%) of students reporting working less than 30 hours per week; the minority of students experiencing food insecurity were students who were employed more than 30 hours per week (Figure 7).

**Figure 7. Employment Status Among Students Experiencing Food Security (n = 354)**



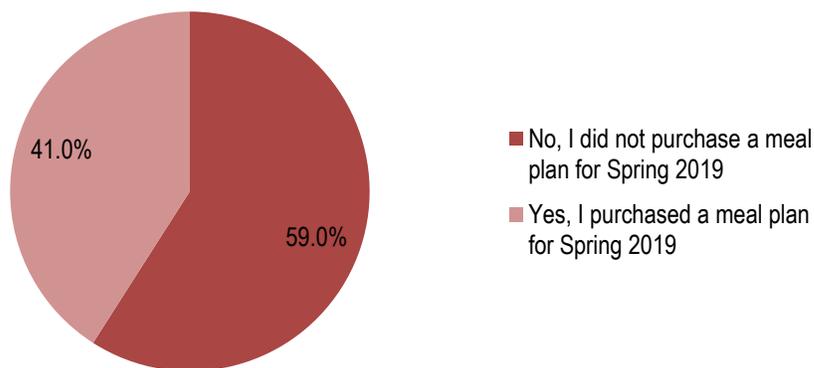
Students experiencing food security came from all residence types, with approximately half (47.6%) of students experiencing food security living off campus with other people during the semester (Figure 8).

**Figure 8. Place of Residence Among Students Experiencing Food Security (n = 352)**



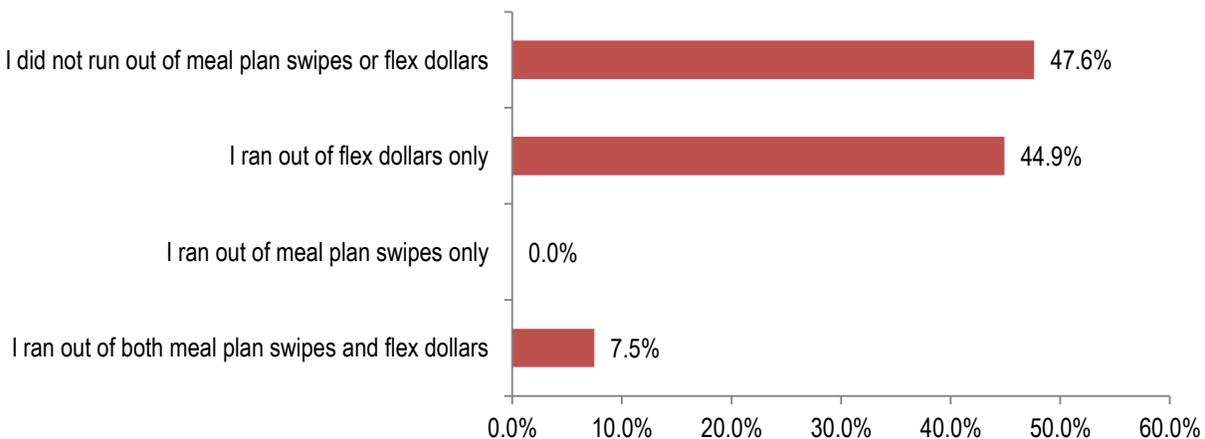
Over half (59.0%) of students experiencing food security did not purchase any of the meal plan options during the Spring '19 semester (Figure 9).

**Figure 9. Meal Plan Participation During the Spring '19 Semester Among Students Experiencing Food Security (n = 354)**



Less than half (41.5%) of students experiencing food security purchased a meal plan for the Fall '18 semester. Of those students, almost half (47.6%) did not exhaust their meal plans; however, the other half (44.9%) exhausted their flex dollars. The minority (7.5%) of students experiencing food security exhausted their meal plan, and no students reported exhausting only their meal swipes (Figure 10).

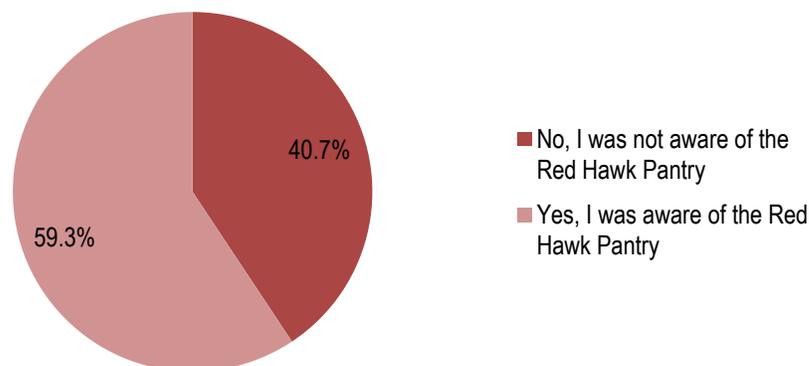
**Figure 10. Meal Plan Exhaustion During the Fall '18 Semester Among Students Experiencing Food Security (n = 147)**



## Red Hawk Pantry Awareness and Use Among Students Experiencing Food Security

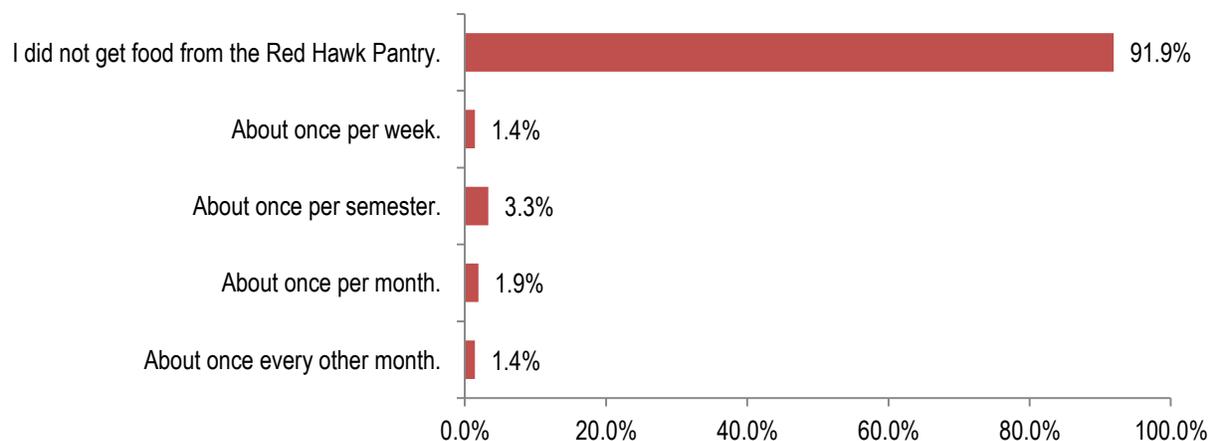
Students experiencing food security were mostly aware of the Red Hawk Pantry. Of the students experiencing food security, over half (59.3%) were aware that Montclair State University has an on-campus food pantry available for students to use (Figure 11).

**Figure 11. Food Pantry Awareness Among Students Experiencing Food Security (n = 354)**



Of the students experiencing food security that were aware of the pantry, the majority (91.9%) reported having never used the Red Hawk Pantry; this equates to 4.8% of all students that reported experiencing food security using the Red Hawk Pantry at least once (Figure 12).

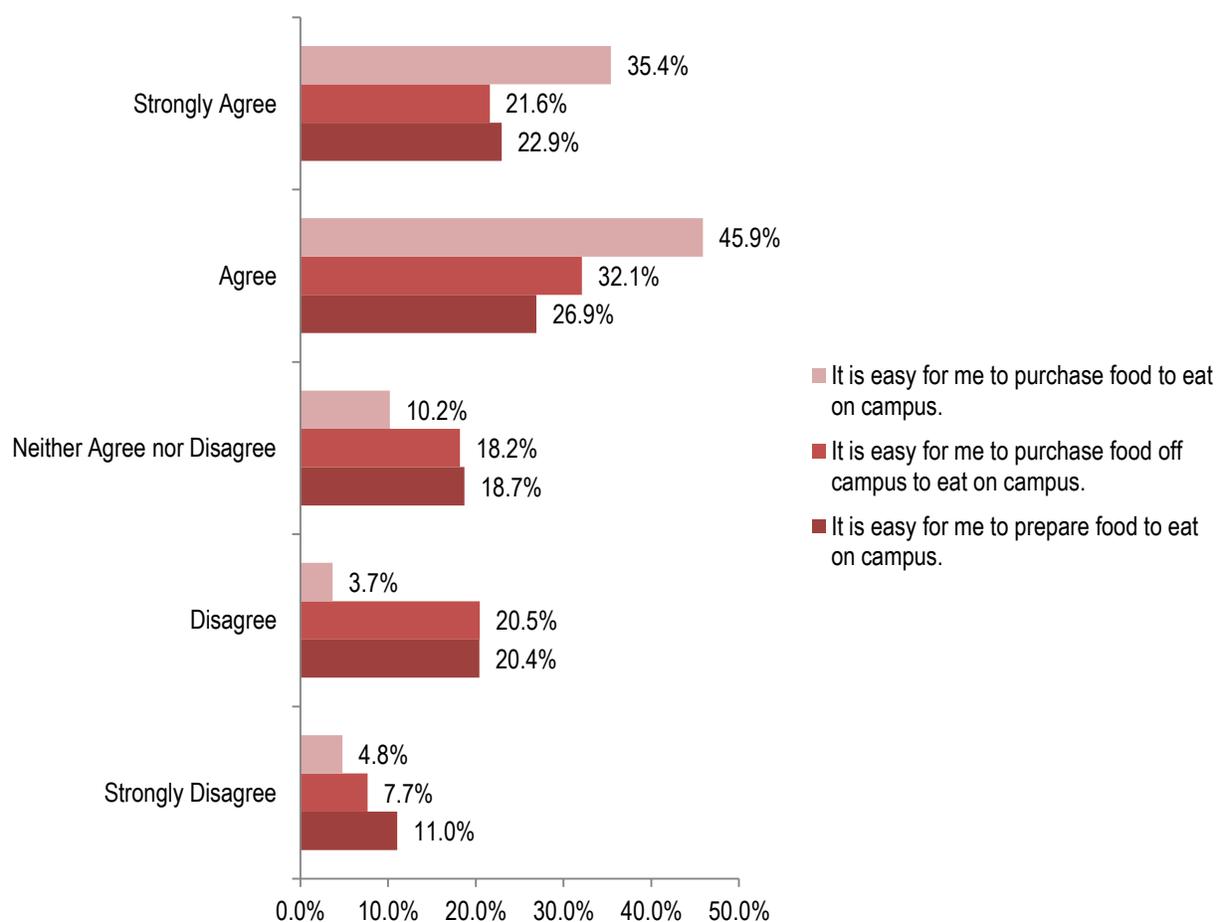
**Figure 12. Food Pantry Use Among Students Experiencing Food Security, Who Were Aware of the Red Hawk Pantry (n = 210)**



## **Impact of the Campus Foodscape Among Students Experiencing Food Security**

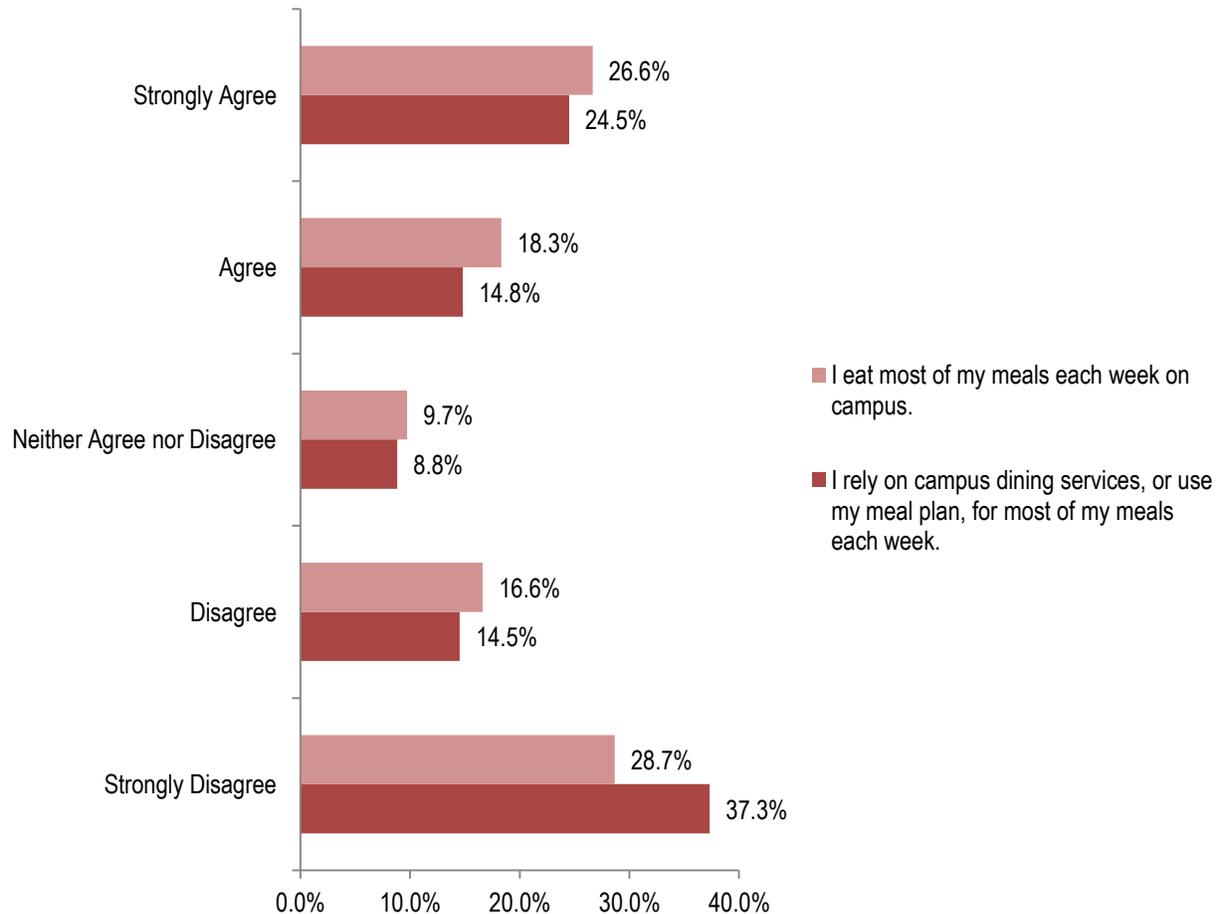
Students experiencing food security reported general ease in accessing food to eat on campus. Half (49.9%) of students experiencing food security reported it was easy for them to prepare food for themselves to eat on campus. Students experiencing food security also reported that it was easy to purchase food off campus for them to consume while on campus (53.7%) and that it was easy to purchase food to eat on campus (81.3%) (Figure 13).

**Figure 13. Perceptions of Food Access on Campus Among Students Experiencing Food Security (n = 353)**



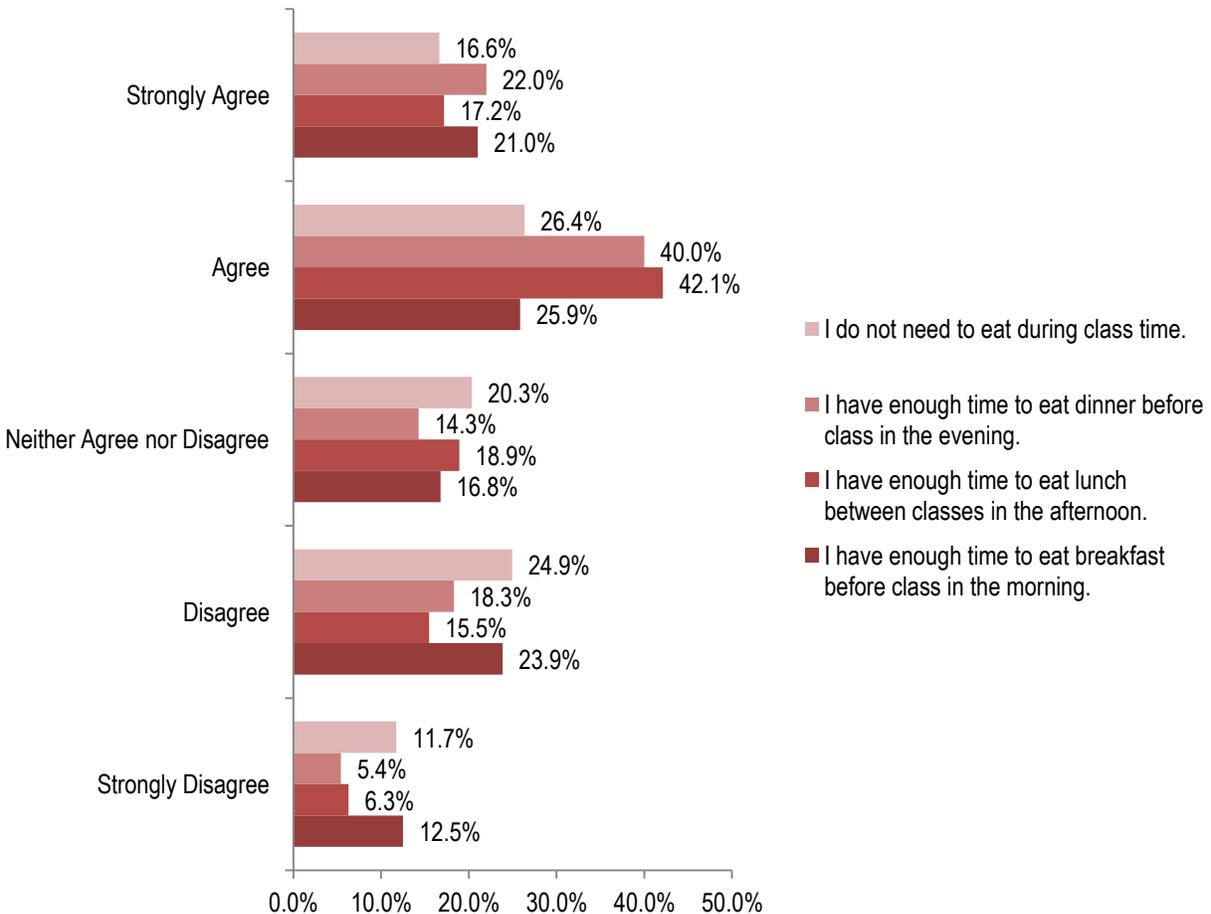
Half (51.9%) of students experiencing food security reported that they did not rely on campus dining services for most of their meals each week; however, one-third (39.3%) reported using dining services for most of their meals each week. Approximately half (45.0%) of students experiencing food security reported eating most of their meals each week on campus, with as many students reporting not needing to eat most of their meals on campus (45.3%) (Figure 14).

**Figure 14. Reliance on the Campus Foodscape Among Students Experiencing Food Security (n = 351)**



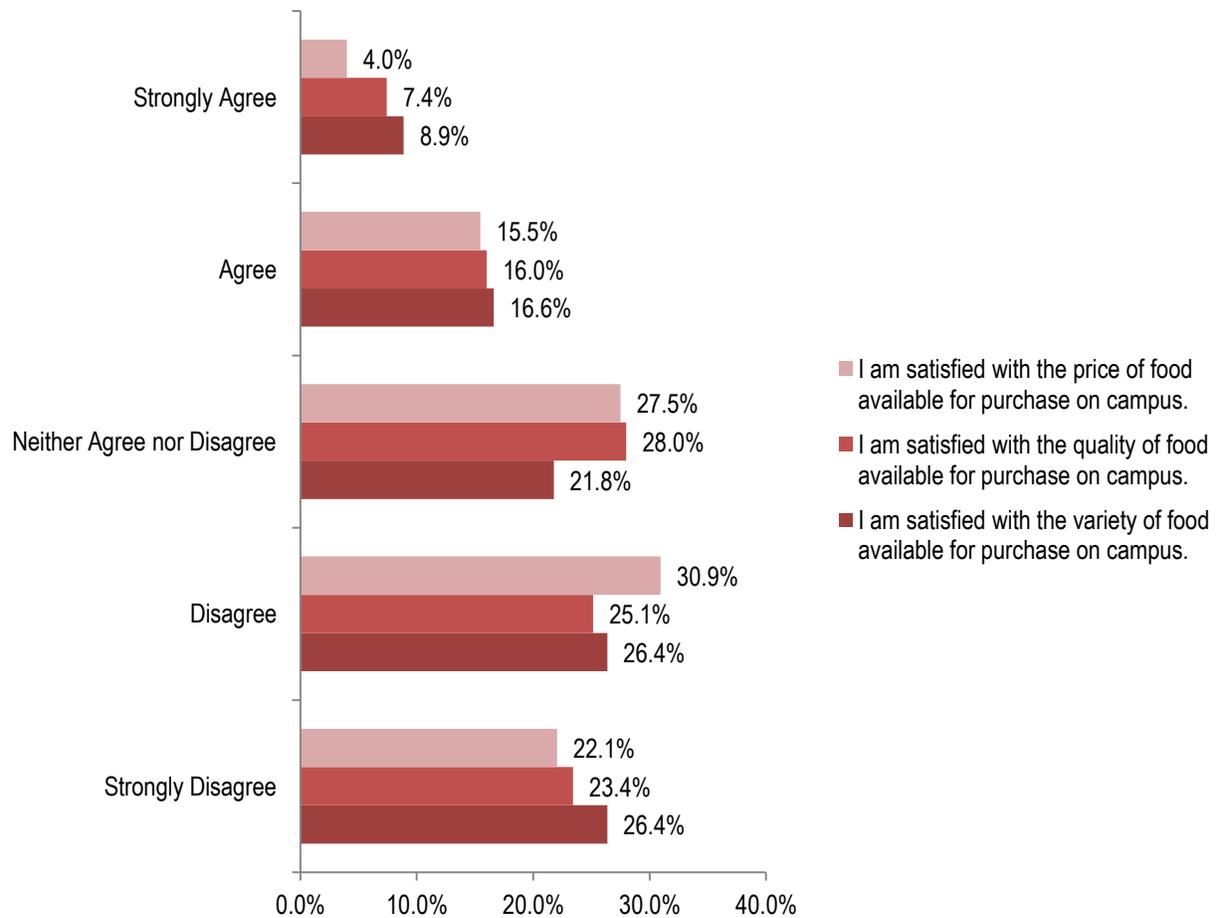
Students experiencing food security reported that the timing of classes did not considerably impact their eating habits on campus; one-third of students reported difficulty eating breakfast (36.4%), and under one-fourth of students reported difficulty eating lunch (21.8%) and dinner (23.7%), due to their class schedule. However, one-third (36.7%) of students experiencing food security reported needing to eat during instructional class time (Figure 15).

**Figure 15. Ability to Eat Based on Campus Schedule Among Students Experiencing Food Security (n = 352)**



Students experiencing food security reported general dissatisfaction with the food options available within the campus foodscape. Approximately half of students stated that they were dissatisfied with the variety (52.7%) and quality (48.6%) of food available to purchase on campus. Only one-fifth (19.5%) of students were satisfied with the price of food available to purchase on campus (Figure 16).

**Figure 16. Perceptions of Foods Available on Campus Among Students Experiencing Food Security (n = 350)**

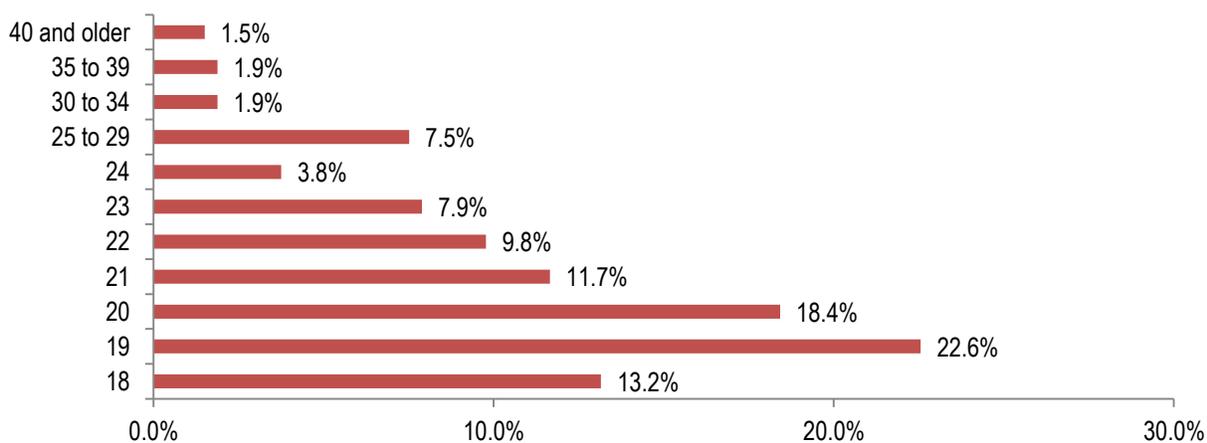


## Age, Grade Level, and Student Status Among Students Experiencing Food Insecurity

During the Spring '19 semester, 274 students reported experiencing food insecurity.

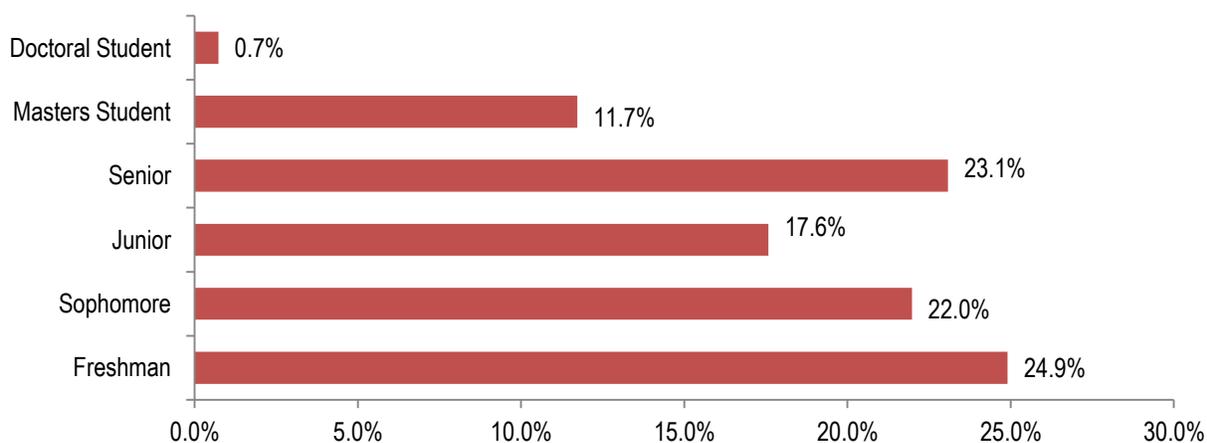
The majority (87.2%) of students experiencing food insecurity reported being aged 24 or younger (Figure 17). **Students experiencing food insecurity were significantly younger than their food secure peers ( $t(601) = 2.77, p < .05, r = -.11$ ).**

**Figure 17. Age Distribution Among Students Experiencing Food Insecurity (n = 266)**



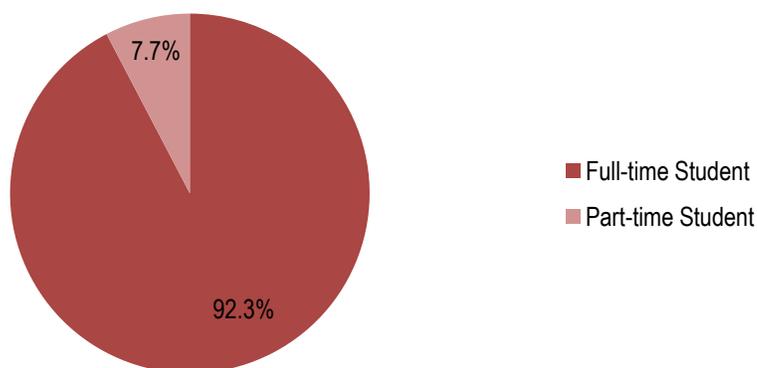
Undergraduate students from each grade level reported experiencing food insecurity at similar levels (Figure 18). There was not a significant difference in grade level distribution based on food security status.

**Figure 18. Academic Year Distribution Among Students Experiencing Food Insecurity (n = 273)**



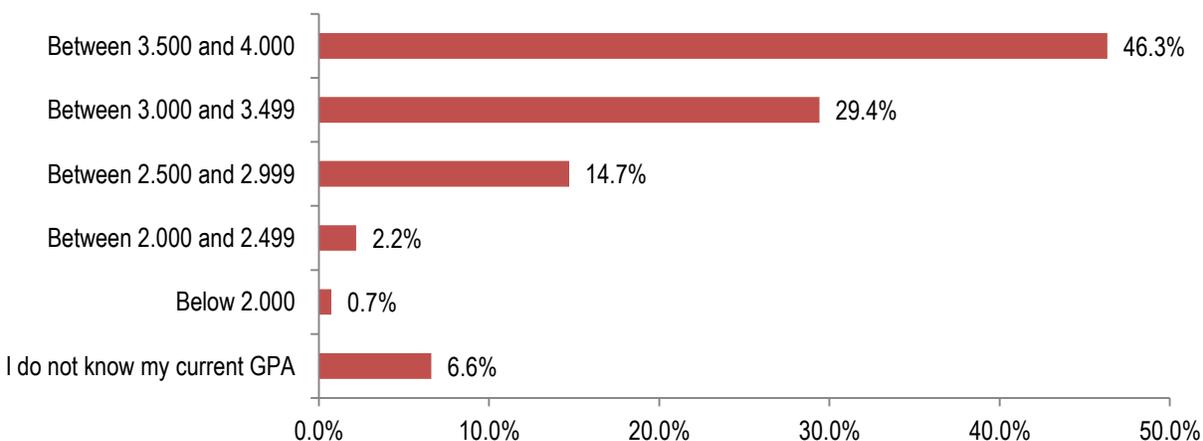
The majority (92.3%) of students experiencing food insecurity reported being full-time students (Figure 19). Full-time status is 12 or more credits per semester for undergraduate students and 9 or more credits per semester for graduate students. There was not a significant difference in student status based on food security status.

**Figure 19. Student Status Among Students Experiencing Food Insecurity (n = 274)**



Students experiencing food insecurity reported attaining considerable academic success despite their food insecurity status; almost half (46.3%) of students facing food insecurity reporting a GPA over 3.5, and three-quarters (75.7%) reporting a GPA over 3.0 (Figure 20). **Students experiencing food insecurity reported significantly lower GPAs than their food secure peers ( $t(596) = 2.02, p < .05, r = -.08$ ).**

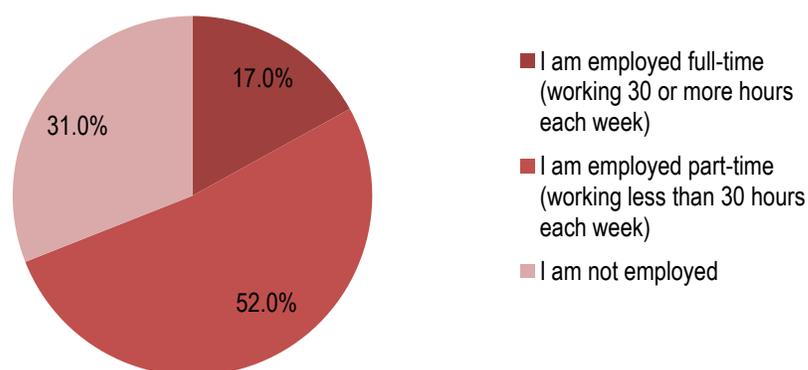
**Figure 20. Grade Point Average Distribution Among Students Experiencing Food Insecurity (n = 272)**



## **Employment, Place of Residence, and Meal Plan Participation Among Students Experiencing Food Insecurity**

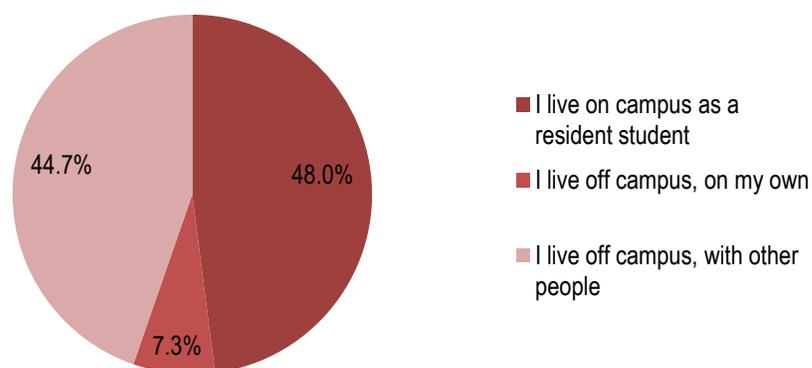
Students experiencing food insecurity were predominantly employed at least part time, with half (52.0%) of students reporting working less than 30 hours per week; the minority of students experiencing food insecurity were students who were employed more than 30 hours per week (Figure 21). There was not a significant difference in levels of employment based on food security status.

**Figure 21. Employment Status Among Students Experiencing Food Insecurity (n = 271)**



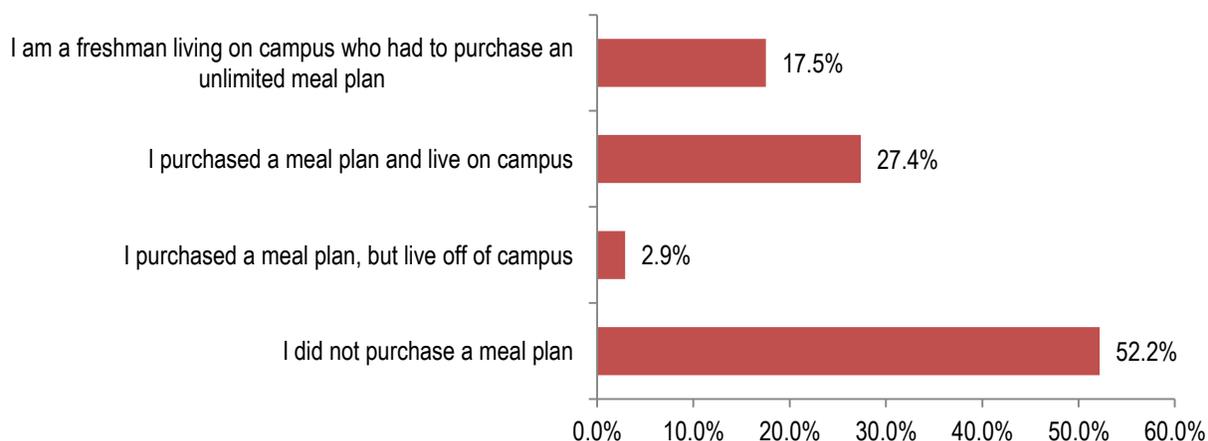
Students experiencing food insecurity came from all residence types, with approximately half (48.0%) of students experiencing food insecurity living on campus during the semester; the majority of students experiencing food insecurity while living off campus lived with at least one other person (Figure 22). There was not a significant difference in student residence based on food security status.

**Figure 22. Place of Residence Among Students Experiencing Food Insecurity (n = 273)**



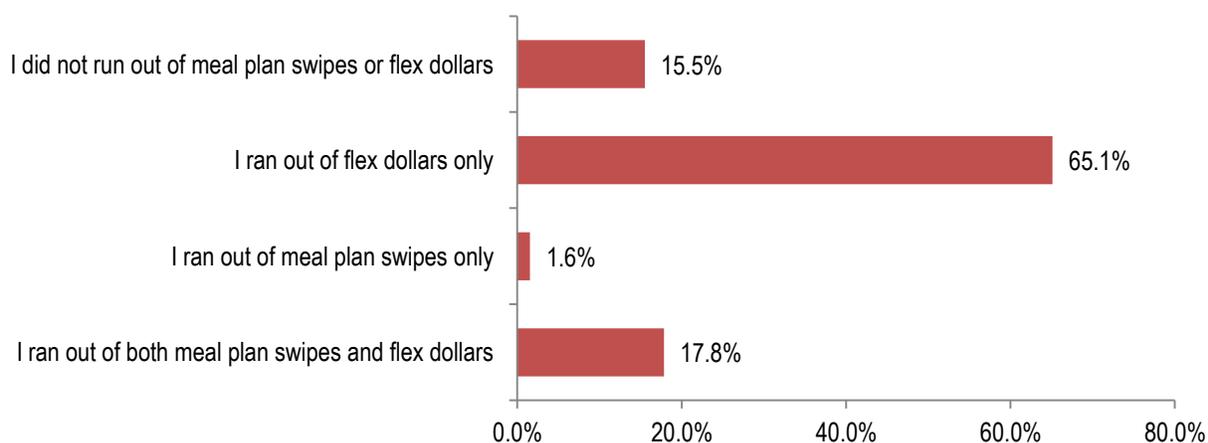
Of the students experiencing food insecurity, almost half (47.8%) of students had a meal plan. Of the students experiencing food insecurity with a meal plan, almost all (93.1%) of them experienced food insecurity while living on campus with a meal plan; one-third (39.3%) of those students were freshmen residents, who were required to purchase an unlimited swipe meal plan (Figure 23). There was not a significant difference in meal plan participation based on food security status.

**Figure 23. Meal Plan Participation During the Spring '19 Semester Among Students Experiencing Food Insecurity (n = 274)**



Students experiencing food insecurity did so predominantly without exhausting their meal plans; however, the majority (65.1%) exhausted their flex dollar allotment. Less than one-fifth (17.8%) of students reported having exhausted their meal plan swipes and flex dollars (Figure 24). **Students experiencing food insecurity were significantly more likely to have exhausted either their swipes, flex dollars, or both, during the prior semester ( $t(274) = -5.99, p < .001, r = .34$ ), compared to their food secure peers.**

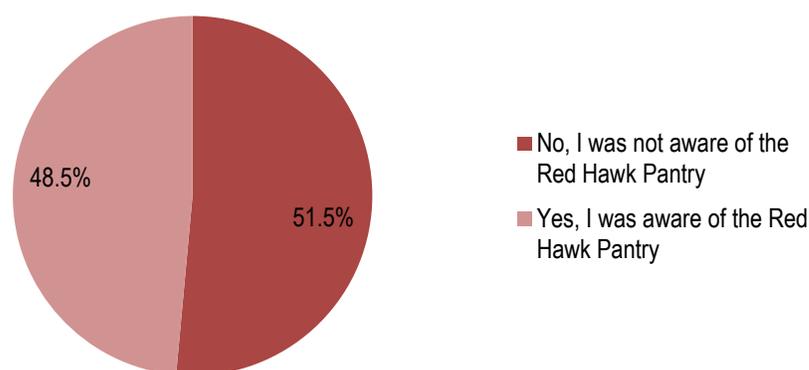
**Figure 24. Meal Plan Exhausting During the Fall '18 Semester Among Students Experiencing Food Insecurity (n = 129)**



## Red Hawk Pantry Awareness and Use Among Students Experiencing Food Insecurity

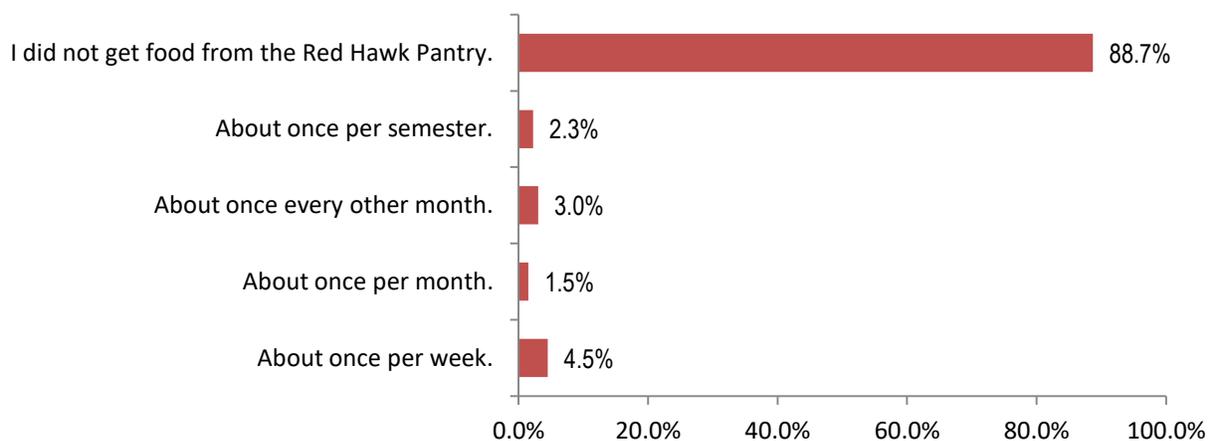
Students experiencing food insecurity were less likely to be aware of the Red Hawk Pantry, with just under half (48.5%) being aware that Montclair State University has an on-campus food pantry available for students to use (Figure 25). **Students experiencing food insecurity were significantly less likely to be aware of the Red Hawk Pantry ( $t(626) = 2.70, p < .05, r = -.11$ ) than their food secure peers.**

**Figure 25. Food Pantry Awareness Among Students Experiencing Food Insecurity (n = 274)**



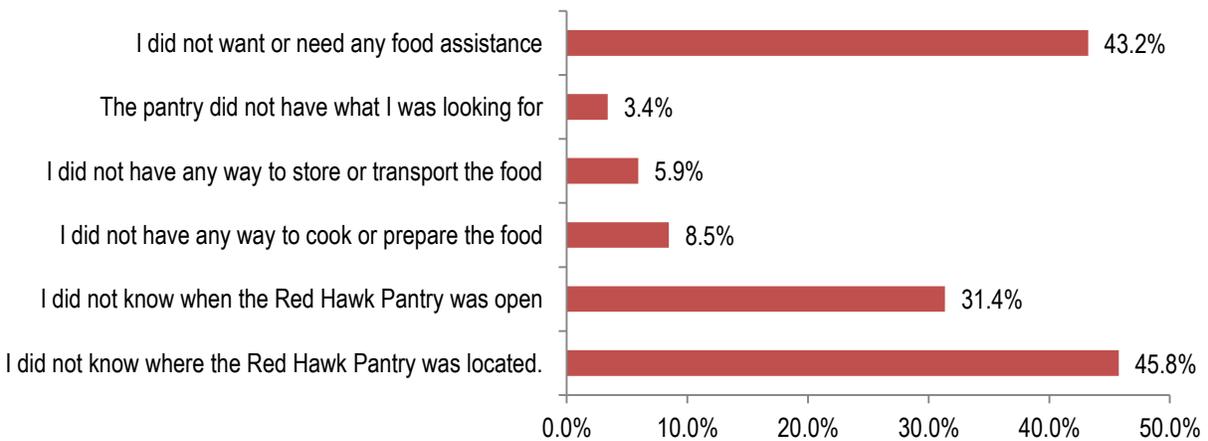
Of the students experiencing food insecurity that were aware of the pantry, the majority (88.7%) reported having never used the Red Hawk Pantry; **this equates to only 5.5% of all students that reported experiencing food insecurity using the Red Hawk Pantry at least once** (Figure 26). There was not a significant difference in use of the Red Hawk Pantry based on food security status.

**Figure 26. Food Pantry Use Among Students Experiencing Food Insecurity, Who Were Aware of the Red Hawk Pantry (n = 133)**



Students experiencing food insecurity that did not use the Red Hawk Pantry were asked what influenced their decision. Almost half (45.8%) of students experiencing food insecurity that did not use the Red Hawk Pantry stated that they did not know where the pantry was located, while one-third (31.4%) did not know when the Red Hawk Pantry was open. Relatively few students expressed concerns about not being able to either prepare the food (8.5%) or transport or store the food (5.9%) that they would have gotten from the Red Hawk Pantry. However, nearly half (43.2%) of students experiencing food insecurity that did not use the Red Hawk Pantry stated that they did not want or need any formal food assistance (Figure 27).

**Figure 27. Reasons for Red Hawk Pantry Non-Use Among Students Experiencing Food Insecurity (n = 118)**



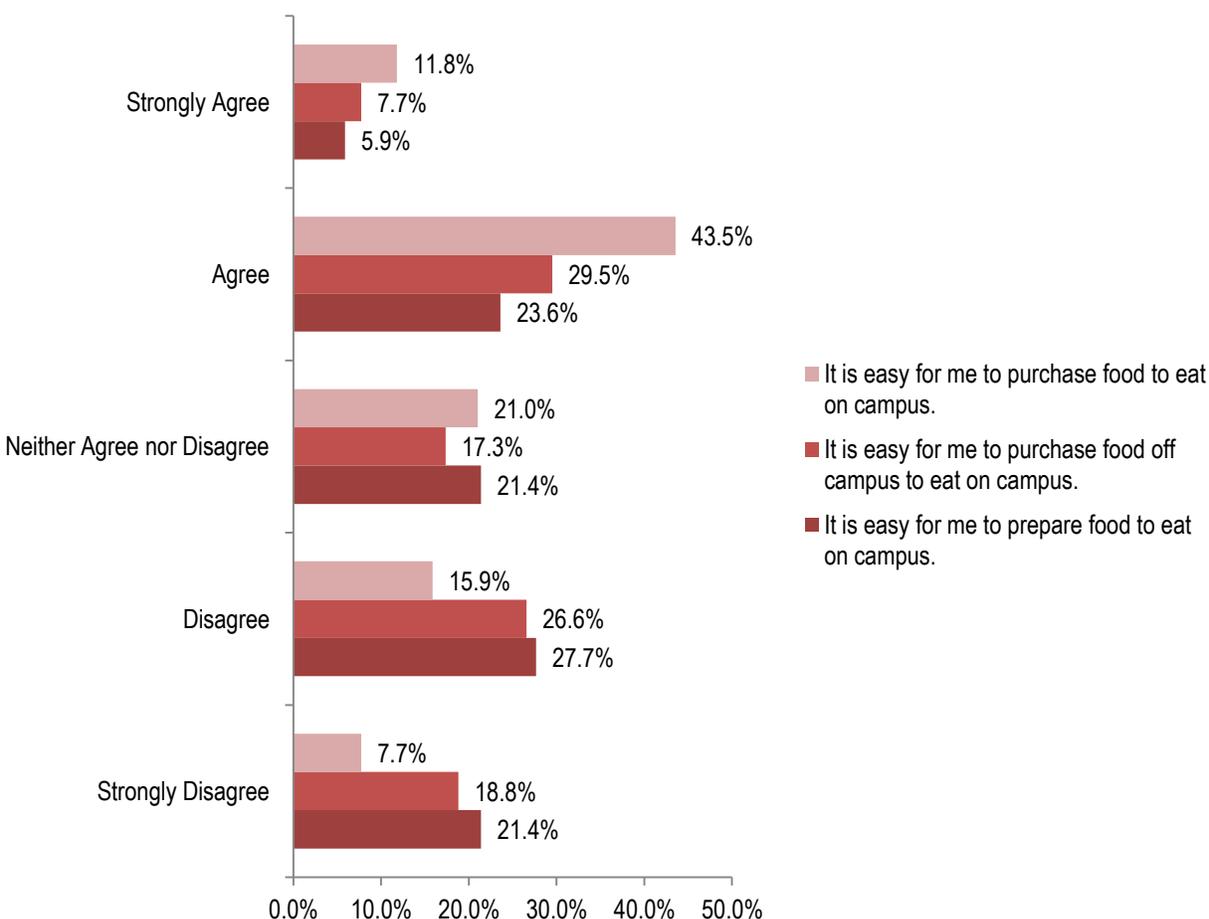
## Impact of the Campus Foodscape Among Students Experiencing Food Insecurity

Students experiencing food insecurity reported difficulty in preparing food for themselves to eat on campus (49.1%). Students experiencing food insecurity also reported that it was not easy to purchase food off campus for them to consume while on campus (45.5%); however, students experiencing food insecurity reported it was easier to purchase food on campus (55.4%) (Figure 28).

**Students experiencing food insecurity experience significantly more difficulty in acquiring food from all sources compared to their food secure peers.** Specifically, students experiencing food insecurity reported experiencing more difficulty with:

- preparing food at home to eat on campus ( $t(622) = 6.33, p < .001, r = -.25$ );
- purchasing food off campus to eat on campus ( $t(621) = 5.80, p < .001, r = -.23$ );
- purchasing food on campus ( $t(622) = 7.87, p < .001, r = -.30$ ).

**Figure 28. Perceptions of Food Access on Campus Among Students Experiencing Food Insecurity (n = 271)**

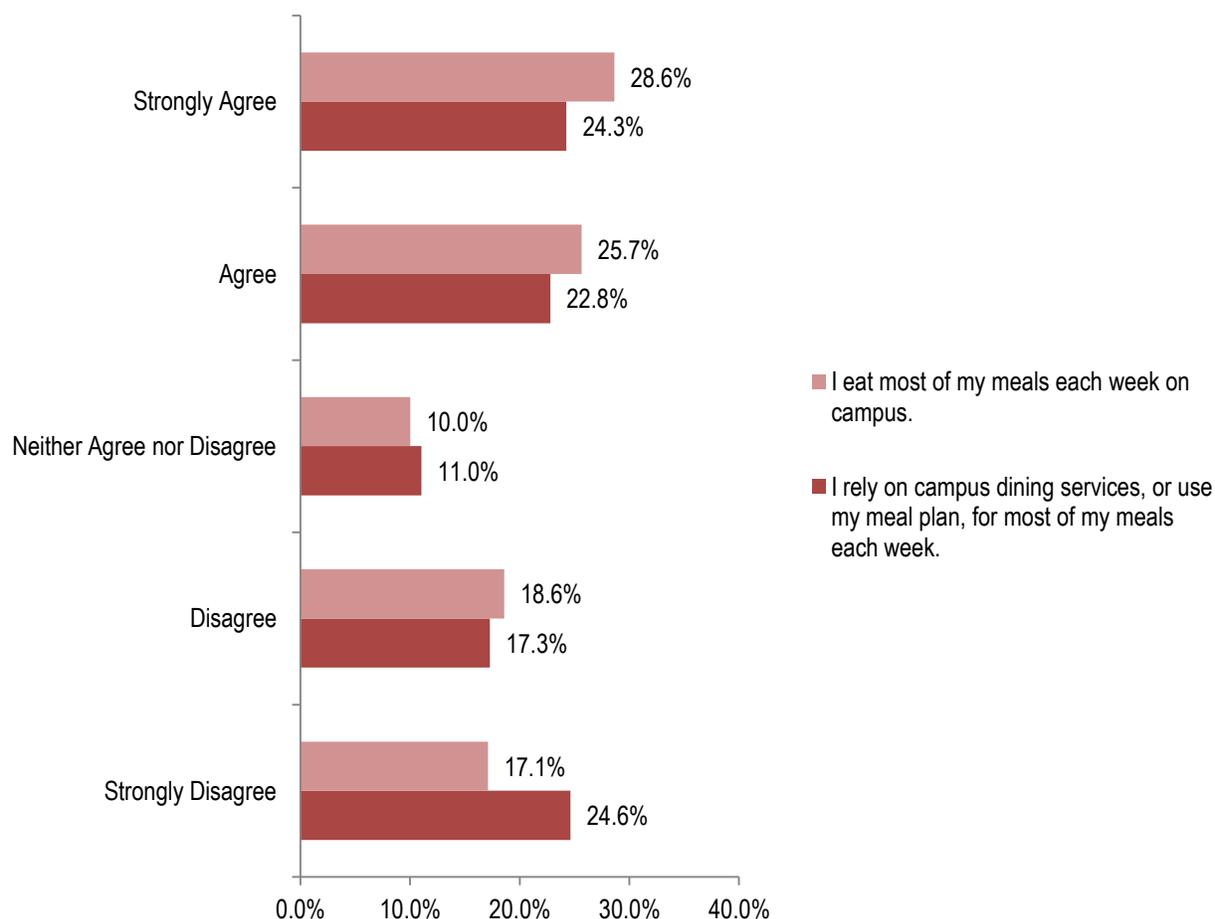


Over half (54.3%) of students experiencing food insecurity reported that they ate the majority of their meals on campus. Almost half (47.1%) of students experiencing food insecurity reported that they rely on campus dining services or their meal plan for the majority of the meals that they eat each week (Figure 29).

Students experiencing food insecurity eat most frequently when they are on campus. **Compared to their food secure peers, significantly more students experiencing food insecurity reported:**

- **relying on campus dining services, or using their meal plans, for the majority of their meals each week ( $t(621) = -2.33, p < .05, r = .09$ );**
- **eating the majority of their meals on campus, as opposed to their homes or other locations ( $t(616) = -2.58, p < .05, r = .10$ ).**

**Figure 29. Reliance on the Campus Foodscape Among Students Experiencing Food Insecurity (n = 272)**

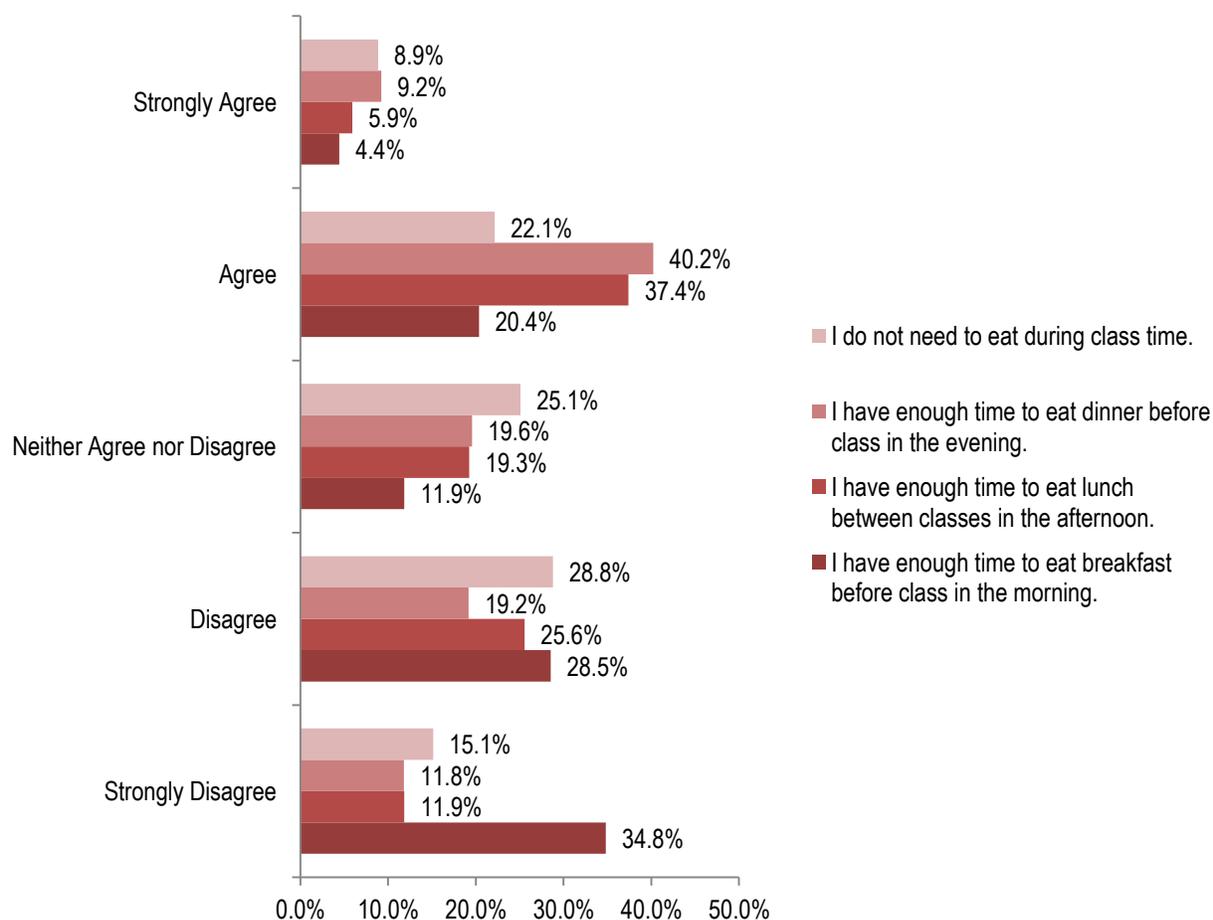


Students experiencing food insecurity reported that the timing of classes impacted their eating habits on campus; two-thirds of students reported difficulty eating breakfast (63.3%), and one-third of students reported difficulty eating lunch (37.4%) and dinner (31.0%), due to their class schedule (Figure 30). Nearly half (43.9%) of students experiencing food insecurity reported needing to eat during instructional class time.

**Students experiencing food insecurity experience significantly more difficulty in eating meals on campus due to their schedules than their food secure peers.** Specifically, students experiencing food insecurity reported:

- more difficulty eating breakfast before morning classes ( $t(620) = 8.31, p < .001, r = -.32$ );
- more difficulty eating lunch between afternoon classes ( $t(617) = 5.22, p < .001, r = -.21$ );
- more difficulty eating dinner before evening classes ( $t(619) = 4.08, p < .001, r = -.16$ );
- needing to eat during instructional class time ( $t(618) = 3.01, p < .05, r = -.12$ );
- attending events on campus for the food provided ( $t(616) = -7.12, p < .001, r = .28$ ).

**Figure 30. Ability to Eat Based on Campus Schedule Among Students Experiencing Food Insecurity (n = 271)**

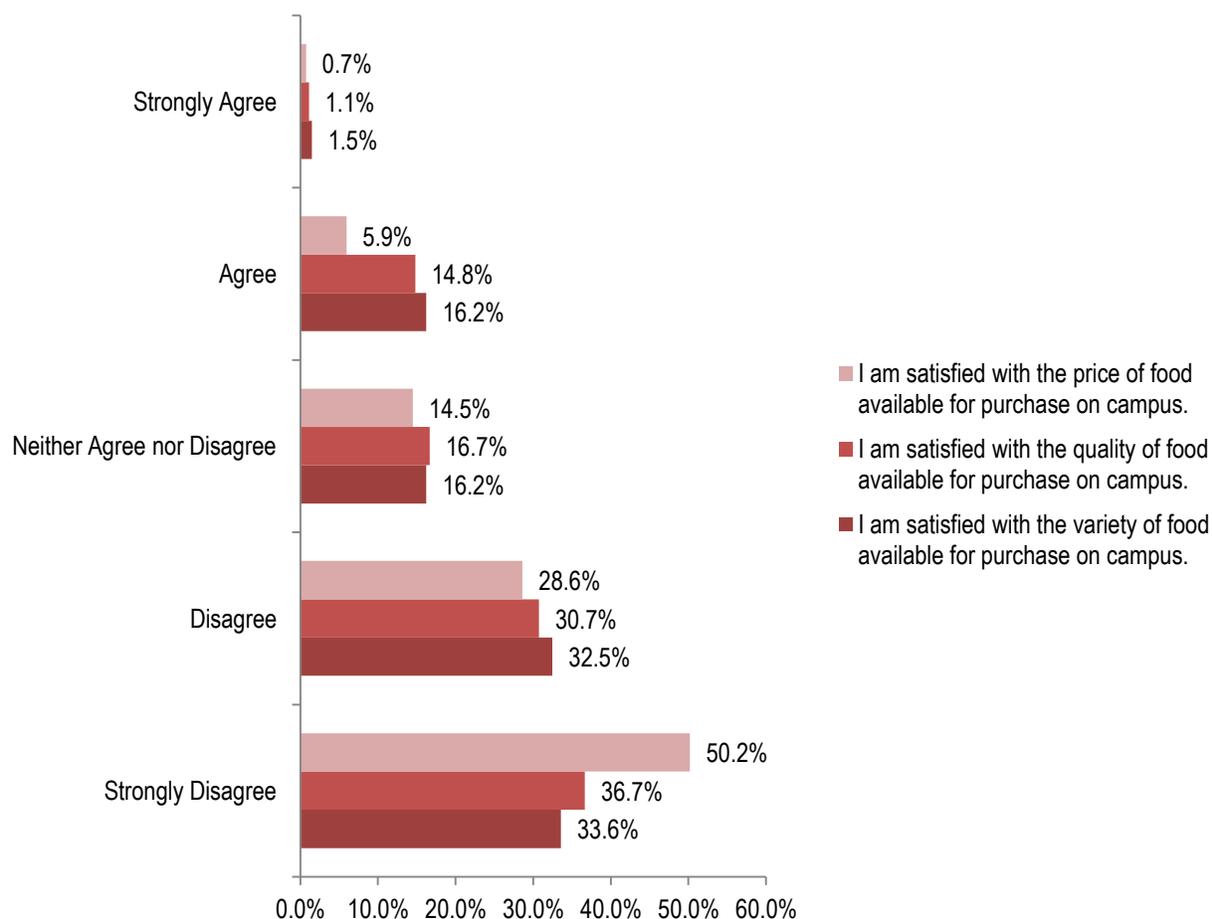


Students experiencing food insecurity reported overall dissatisfaction with the food options available within the campus foodscape; two-thirds stated that they were dissatisfied with the variety (66.1%) and quality (67.4%) of food available to purchase on campus. Three-quarters (78.8%) of students stated that they were dissatisfied with the cost of foods available for purchase on campus (Figure 31).

**Students experiencing food insecurity were significantly less satisfied with the campus foodscape than their food secure peers.** Specifically, students experiencing food insecurity reported being less satisfied with:

- the variety of foods available to purchase on campus ( $t(610) = 3.70, p < .001, r = -.14$ );
- the quality of foods available to purchase on campus ( $t(618) = 4.85, p < .001, r = -.19$ );
- the price of foods available to purchase on campus ( $t(610) = 8.40, p < .001, r = -.31$ ).

**Figure 31. Perceptions of Foods Available on Campus Among Students Experiencing Food Insecurity (n = 271)**



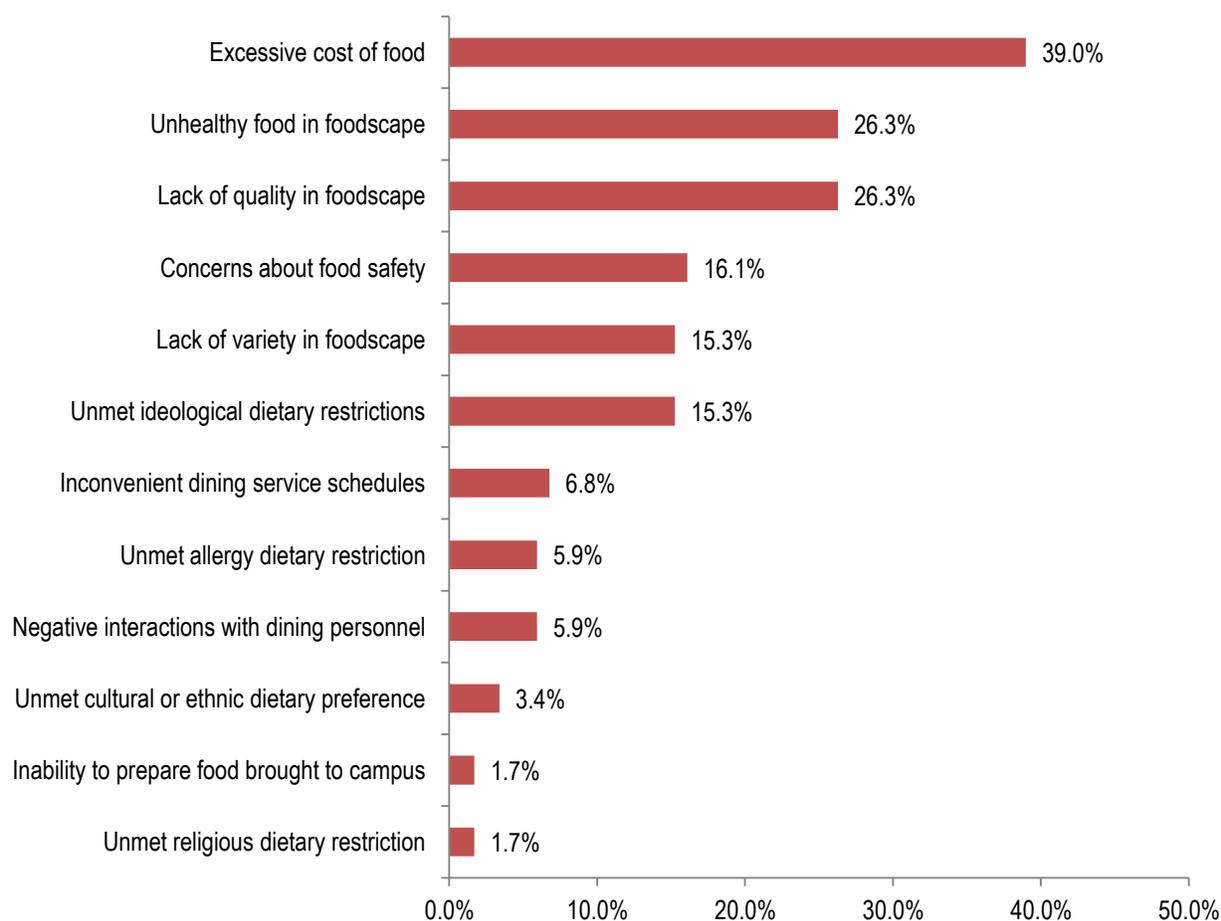
Students experiencing food insecurity raised additional concerns about the campus foodscape when prompted; 118 students experiencing food insecurity provided additional feedback (Figure 32).

Students reiterated that the food available for purchase on campus was of a dissatisfactory quality (26.3%), and was too unhealthy (26.3%) to consume regularly. Students reiterated that they considered the food available on campus to be too expensive for them to purchase regularly (39.0%), with some students suggesting that their meal plan swipes were not able to purchase desired or seemingly-complete meals from the different vendors on campus.

Some students expressed concerns that the foodscape could not accommodate the varied dietary preferences or restrictions that they had (24.6%), and stated that the foods available on campus were repetitive or not varied enough to eat regularly (15.2%).

Students additionally suggested having concerns about food safety on campus, with multiple students reporting having experienced adverse reactions to consuming foods available on campus, or expressing concern over observed food safety practices on campus (16.1%).

**Figure 32. Negative Experiences within the Campus Foodscape Among Students Experiencing Food Insecurity (n = 118)**



 **Discussion and Recommendations**

Of the 628 students surveyed, 274 (43.6%) of them reported experiencing food insecurity.

Students experiencing food insecurity were more likely to be younger than their food secure peers; however, the difference in age has only a minimal effect ( $r = .11$ ) on food security status. While there was a significant difference by age, there was no difference observed between grade levels. It is possible that younger college students have less experience in successfully navigating a foodscape on their own, compared to their older peers.

There was no significant difference in food security status based upon course load, level of employment, place of residence, or meal plan participation when observed alone; however, students facing food insecurity were more likely to have exhausted their meal plans if they had purchased one ( $r = .34$ ). This observation suggests that grade level, course load, place of residence, or level of employment, when observed independently, may not be indicative of student food insecurity, while meal plan exhaustion may be correlated with, or a potential indicator of, student food insecurity. It is recommended that student meal plan exhaustion be examined further.

Similar to observations of other academic grade levels (i.e., K-12), academic performance is significantly reduced for students experiencing food insecurity; however, it was observed that food insecurity may have a less severe effect on academic performance at this grade level ( $r = -.08$ ). This suggests that there may be some presently-unidentified protective factors or resilience among college-aged students that mitigates the effect of this drop in academic performance. It is recommended that this potential resilience, or other protective factors, be examined further.

Students experiencing food insecurity were significantly less likely to have been aware of the Red Hawk Pantry; while only a small observed difference ( $r = -.11$ ), that there was any negative association suggests that the service may not be advertised as effectively as it could be to students that may be in need of food assistance. There were additionally students who suggested being food secure that reported using the Red Hawk Pantry. It is possible that students utilizing the Red Hawk Pantry are no longer at risk of being food insecure because of the support that they receive from the pantry, thus explaining food secure students that use the pantry; this observation does not inherently suggest that students are using the Red Hawk Pantry inappropriately, or when they may not need to do so. The overall low rate of use of the service however, requires further investigation, as only half of all respondents (54.6%) were aware that the service was available, and less than 1 in every 10 respondents had used the service (9.3%). Further, there was no significant difference observed in the use of the Red Hawk Pantry, which suggests that students experiencing food insecurity may not be benefiting any more from of the food pantry than their food secure peers due to overall low rates of use. It is recommended that support services maintained on the campus evaluate and increase their current advertising to the student body.

Students experiencing food insecurity were significantly more likely to have difficulty getting food to eat during the school day. Students experiencing food insecurity reported having a more difficult time preparing meals to eat during the school day ( $r = -.25$ ), purchasing meals off campus to eat on campus ( $r = -.23$ ), and purchasing meals on campus ( $r = -.30$ ). They also reported not having enough time to eat meals during the school day due to class schedules, with students experiencing food insecurity having a more difficult time eating breakfast ( $r = -.32$ ), lunch ( $r = -.21$ ), and dinner ( $r = -.16$ ), and reported having to eat during instructional class time ( $r = -.12$ ).

Other K-12 school environments typically participate in the National School Breakfast and Lunch Programs, and their mandated institutional nutritional policies. These national programs work to facilitate and support alternative affordable pricing to students on an as-needed basis, to allow students to receive a meal during the school day; an additional component to program participation is the mandated adherence to nutritional guidelines for all foods served during the school day. Higher academic institutions are not invited, nor eligible, to participate in these programs; as a result, the institutions do not receive support to allow students easier access to meals, nor are they required to hold any federal nutritional standards to the foods offered for sale on their campus. The university environment may additionally play a role in restricting a student's ability to eat at regular meal times, compared to other academic settings. This may be a result of the irregularity in daily course scheduling, or other unique factors impacting university students, and should be examined further.

The authors appreciate that a lack of Federal or State programming for universities may add a degree of complexity to addressing student nutrition; however, a lack of external support should not dissuade the University, and its contracted food services providers, from exploring possible solutions to increase student access to affordable and nutritious meals during their time on campus. That being said, this observation should not be misinterpreted as placing blame upon the institution, or its food service contractors, as our institution is far from alone in facing a growing prevalence of students experiencing food insecurity. Ultimately, the current design of a university campus may not be one of nutritional support, as is typically the case for students at other grade levels (i.e., K-12), who attend institutions that are receiving considerable mandated Federal or State support.

Students experiencing food insecurity were significantly more likely to report that the food available on campus was too expensive ( $r = -.31$ ); they also reported dissatisfaction with the quality ( $r = -.19$ ) and variety of foods available to purchase ( $r = -.14$ ). Students experiencing food insecurity additionally suggested being less satisfied with the costs of foods available (39%) among additional comments provided. While only a small effect, there was a significant difference in opinions of the campus foodscape between food secure and food insecure students, with students experiencing food insecurity appearing to have a less positive opinion of the foodscape overall, with cost being an anticipated point of contention. Differences in other perceptions of the foodscape however, may suggest that there is a lower level of self-efficacy experienced among students experiencing food insecurity.

## Actionable Next Steps

Below is a list of actionable next steps that may be taken by the Montclair State University Campus Community Garden, the Montclair State University chapter of the Food Recovery Network, the Red Hawk Pantry, and other interested entities of the University, in order to better address student food security. The list is ordered from immediately pressing or simple solutions to more long-term or complex solutions.

### 1. Coordinate awareness campaigns for service-providing groups on campus.

Student awareness of the Red Hawk Pantry was observed to be relatively low, with only half of students being aware of the pantry; many students that were aware of the resource were not aware when or where they could access the resource. In addition to survey responses, it was noted that there is only minimal signage available that directs students to the location of the Red Hawk Pantry; neither the observed student center floor maps, nor the campus map, indicate where the Red Hawk Pantry is located. As the Red Hawk Pantry is the oldest of the above services (established in 2016), it might be expected that the newer Montclair State University Campus Community Garden and the Food Recovery Network (both established in 2018) might have even less visibility. It is recommended that these organizations coordinate to increase student and faculty awareness of the growing issue of student food insecurity and the work being performed to mitigate it.

### 2. Coordinate to increase the use of existing services on campus.

Only 1 in 10 respondents used the Red Hawk Pantry, while 4 in 10 respondents are expected to be in need of food assistance. Additionally, the work performed by the Montclair State University Campus Community Garden and the Food Recovery Network, as it is related to increasing student food security, is reliant on students using the Red Hawk Pantry as a point of contact for receiving food assistance.

Further, of the students experiencing food insecurity, 4 in 10 respondents stated that they did not want or need food assistance from the Red Hawk Pantry, despite being classified as being food insecure. Efforts should be taken to better understand the nature of the need of students facing food insecurity, and how to best reach the food insecure student body.

### 3. Coordinate efforts around anticipated areas of need.

Concerning scheduling time for meals, the majority of respondents experiencing food insecurity suggested not having enough time to eat breakfast prior to classes in the morning. The majority of students experiencing food insecurity additionally suggested not having difficulty purchasing food on campus, and not exhausting their meal plans. As such, time may be a more restrictive factor than accessibility. It is recommended that the above organizations work with University Dining Services to implement alternative breakfast options for students on campus, such as those presently implemented in other educational settings.

 **Conclusion**

The data suggest that presently over 4 in every 10 students who responded to the survey may be experiencing food insecurity during the academic semester, and that student food security may be worse for students during the academic semesters, when compared to their food security during the academic recess.

This audit sought to update and standardize the rudimentary data collected in 2016 prior to the opening of the Red Hawk Pantry. As a function of this standardization, results from the 2016 survey at Montclair State University may not be directly comparable to results from this 2019 survey, as different measurements were used; however, this data can be compared to other data using this standardized tool, and progress against this standardized baseline can now be measured.

Conservatively, if we are to count all respondents of the 2016 survey who indicated being in need of food at least once per month as food insecure, we might compare the 37% food insecurity prevalence in 2016 to 43.6% food insecurity prevalence in 2019. Conversely, we may more reliably compare persons who reported no food insecurity; 46% of respondents reported no problems with food access in 2016 as compared to 38.7% with no problems with food access in 2019. It may be difficult to determine if food insecurity has indeed gotten worse for students at Montclair State University, or if the data now just more accurately reflect the needs of our students.