

# McMaster University

## 2021 Student Food Experience Survey Report

### Introduction

Inadequate or insecure access to food, referred to as food insecurity, is a serious issue impacting post-secondary students in Canada (Silverthorn, 2016). This includes the inability to access adequate quality or quantity of food, or the uncertainty that one will be able to do so (Health Canada, 2020). Food insecurity negatively impacts student physical and mental health, as well as academic performance (Hattangadi et al, 2021; Maroto, 2015). Those most at risk of food insecurity are households with low incomes and limited assets (PROOF, 2020).

Prior to the COVID-19 pandemic, 1 in 8 households were food insecure in Canada (PROOF, 2020). The rate of food insecurity amongst post-secondary students is reported to be higher than amongst the general population, at almost 2 in 5 students (Silverthorn, 2016). Since the pandemic, food insecurity has been increasing in prevalence amongst the Canadian population. In a Statistics Canada survey during May 2020, 1 in 7 households reported experiencing food insecurity, representing a 39% increase from pre-pandemic data (Statistics Canada, 2020). Demand on community food organizations supporting people affected by food insecurity also increased significantly during the pandemic (Gooch et al, 2021).

As post-secondary institutions closed or limited campus services, students were faced with a sudden impediment in accessing former resources, including food banks, campus food services, and residence housing (Klemmensen, 2021). Unemployment has impacted youth disproportionately due to closures in the service sector and organizations laying off younger and newer employees first (Ricci, 2021). Youth unemployment rose by 6% from 2019 to 2020, almost double the rate amongst older Canadians (Statistics Canada, 2021). As a result, student food insecurity has likely been exacerbated during the pandemic (Laban et al, 2021; Meal Exchange, 2021).

During October 2021, Meal Exchange - a national charity - conducted a survey of students attending post-secondary institutions across Canada to better understand how students have been impacted by food insecurity during the pandemic and to inform programs and initiatives to improve student access to food. This report assesses survey responses from students attending McMaster University.

### Methods

#### Survey Design and Distribution

The *2021 Student Food Experience Survey* was designed by Meal Exchange to assess how students have been impacted by food insecurity during the pandemic and to inform programs and initiatives to improve student access to food. The online survey was conducted from October 4th - 29th, 2021. The survey was disseminated to McMaster Student union and the Food

Collective Centre to promote student participation via newsletters, listservs, and social media. The survey was also shared with over 250 employees at McMaster, including professors, program coordinators, co-op administrators, and residence services. Completion of the survey was voluntary and anonymous. As an incentive for participation, respondents had the option to submit their contact information in a separate form for a chance to win one of many \$25 grocery gift cards.

The survey was bilingual and available in both English and French. The survey included 34 questions collecting socio-demographic details and information on food access and food security from respondents. Socio-demographic questions included: gender, age, race, postal code, academic program, living arrangement, employment status, and financial sources for education and basic necessities. Questions to evaluate food access explored the following: food insecurity, use of campus meal plans, where food was regularly accessed, ways to improve food access, impacts of COVID-19, and ways students would like to be engaged in decision making regarding campus food.

**Food Insecurity Analysis**

Rates and status of student food security were calculated based on six questions adapted from the Household Food Security Status Module found in the Canadian Community Health Survey (CCHS) (see Table 1). These six questions were asked in reference to two time frames: the previous academic year (2020/21) and the current semester (Fall 2021). This method of assessing food security status was also used in Meal Exchange’s 2016 *Hungry for Knowledge* study (Silverthorn, 2016). Students were asked to answer the following questions with Never, Sometimes, Often, or Always:

**Table 1:** Questions used to assess food insecurity

Have any of the following situations applied during this semester so far (Fall 2021)? Did any of the following situations apply during the previous academic year (2020/21)?
1) I worried my food would run out before I got money to buy more
2) The food that I bought just didn’t last, and I didn’t have money to buy more
3) The cost of food prevented me from eating balanced or nutritious meals
4) I regularly relied on a few low-cost foods in order to avoid running out of money to buy more food
5) I skipped meals because I didn’t have enough money for food
6) I did not eat for an entire day because I didn’t have enough money for food

The survey respondents were categorized into one of three categories of food insecurity status: *Food Secure*, *Moderately Food Insecure*, and *Severely Food Insecure*. Food security status was

calculated by coding responses to the six food access questions. Affirmative responses (Sometimes, Often, and Always) were coded as 1, while negative responses (Never) were coded as 0. A tallied score was then assigned to each survey respondent. A score of 0-1 was coded as *Food Secure*, 2-4 as *Moderately Food Insecure*, and 5-6 as *Severely Food Insecure*. Table 2 from the *Hungry for Knowledge* study details how each status is defined.

**Table 2:** Definition of each food security status (Silverthorn, 2016)

Status	Definition
Food Secure Score: 0-1	Sufficient and adequate access to food that meets quality and quantity of needs.
Moderate food insecurity Score: 2-4	Significant food access issues, including income-related concerns and reduced quality and/or quantity.
Severe food insecurity Score: 5-6	Extreme food access issues, including income-related concerns and reduced quality and/or quantity

## Student Demographics

### McMaster Hamilton Campus Student Demographics

This survey was conducted at McMaster University, a public, fully accredited university with **four regional campuses**: downtown Hamilton, Burlington, Kitchener-Waterloo, and Niagara. There are 33,147 students at McMaster, of which:

- 82% are undergraduate students
- 14% are graduate students
- 14.5% are international students
- 81.9% of undergraduate students live in Ontario
- 3.6% of undergraduate students live outside Ontario
- 69% of graduate students live in Ontario
- 7% of graduate students live outside of Ontario
- 24% of graduates are international students

271 Hamilton campus at McMaster University students responded to the survey, of which 271 responses were deemed valid for analysis.

### Demographics of Student Respondents

**Enrollment Type:** Student respondents by their enrollment type

- 84% Full-time (n= 228 )
- 15% Part-time (n= 41 )
- 0.01% Other (n= 2 )

**Type of Student:** Student respondents by their enrollment type

- 65.3% Studying in home province (n= 177 )
- 0.05% Studying out of home province (n= 15 )
- 0.05% International (n= 15 )
- 0.001% Exchange/Year Abroad (n= 1 )

**Program Type:** Student respondents by their program type

- 0.03% Continuing Education (n= 8 )
- 0.04% Certificate (n= 10 )
- 0.10% Diploma (n= 28 )
- 0.011% Apprenticeship (n= 3 )
- 78% Undergraduate Degree (Bachelors) (n= 211 )
- 0.1% Graduate Degree (Diploma, Masters, PhD) (n= 25 )

**Gender Identity:** Student respondents self-identified their gender as:

- 66% Women (n= 178 )
- 23% Men (n= 62 )
- 1.8% Gender Fluid (n= 5 )
- 1.4% Non-Binary (n= 4 )
- 13% Other (n= 34 )

**Sexual Orientation:** 44% of students identified as part of the LGBTQ2S+, including:

- 3% Lesbian (n=7 )
- 2% Gay (n= 6 )
- 7% Pansexual (n= 3)
- 12% Bisexual (n= 32 )
- 7% Queer (n= 19 )
- 13% Prefer not to say (n= 34 )

**Age:** Student respondents by age group:

- 32% 16-19 (n= 87 )
- 47% 20-24 (n= 128 )
- 0.1% 25-29 (n= 27 )
- 1.5% 30-34 (n= 4 )
- 0.7% 35-39 (n= 2 )
- 0.7% 40-49 (n= 2 )

**Racial/Ethnic Background:** Student respondents self-identified their racial backgrounds as:

- 7% Indigenous (n= 19 )
- 7% Black (n= 19 )

- 41% East/South-East Asian (n= 112 )
- 2.6% Latinx (n= 7 )
- 6% Middle Eastern (n= 16 )
- 21% South Asian descent (n= 57 )
- 32% White (n= 87 )
- 0.7% Don't know (n= 2 )
- 1.4% Prefer not to answer (n= 4 )
- 0.3% Other (n= 1 )

**Living Arrangement:** Student respondents by living arrangements:

- 7.3% Alone in house/apartment (n= 20 )
- 10% Student residence (n= 29 )
- 57% With family (n= 154 )
- 39% With roommates (n= 107 )
- 4% With partner, no children (n= 11 )
- 1% With partner and child(ren) (n= 3 )
- 1% Prefer not to say (n= 3 )
- 0.3% Other (n= 1 )

Other is widowed with dependants

**Employment Status:** Student respondents identified their employment status as:

- 4% Full-time employment (n= 11 )
- 42% Part-time employment (n= 114 )
- 1.8% Self-employed (n= 5 )
- 9.6% Unemployed and actively seeking work (n= 26 )
- 29.5% Unemployed and not seeking employment (n= 80 )

**Primary Sources of Financing:** Student respondents by their top 3 sources of financing for education and basic necessities

- 48% Personal savings (n= 130 )
- 34% Employment (n= 92 )
- 64% Help from personal relationships (n= 173 )
- 31% Government student loans (n= 85 )
- 10% COVID government assistance (n= 28)
- 2.2% Bank or other loan (n= 6 )
- 7.4% Credit card (n=20 )
- 15.5% Scholarship, bursary or other merit-based funding package (n= 42 )
- 8.1% Bursary, financial aid or other needs-based support (n= 22 )
- 1.4% Other (n= 4 )

**Where Students Regularly Access Food:** Student respondents regularly accessed food from:

- 46% Campus dining hall or restaurant (n= 126 )
- 12% Free/pay-what-you-can meals on campus (n= 33 )
- 9.2% Free/discounted fresh produce and bulk food (n= 25 )
- 7% Campus food bank (n= 19 )

- 7.7% Food bank (in local community) (n= 21 )
- 60% Grocery store/delivery (n=163 )
- 11% Farmers market/CSA (n= 32 )
- 2.6% Meal kits (n= 7 )
- 51% Restaurant/café/take-out (n= 138 )
- 0.3% Unconventional methods (n=1 )
- 0.3% Harvested/grown (n= 1 )
- 1.4% Don't know (n= 4)

### **MCMASTER UNIVERSITY (Not Survey)**

**This data is extracted from the 2020-2021 McMaster Demographic Report**

**Enrollment Type:** Student respondents by their enrollment type

- 78% Full-time (n= 30,171 )
- 4.3% Part-time (n= 1,362 )

**Type of Student:** Student respondents by their enrollment type

- 84.7% Studying in home province (n= 25,816 )
- 0.038% Studying out of home province (n= 1,157 )
- 0.15% International (n= 4,560 )

**Program Type:** Student respondents by their program type

- 0.08% collaborative programs (n= 2,530.9 )
- 78.4% continuing education (n= 11,907 )
- 0.00257% Diploma/Certificate (n= 94 )
- 86.5% Undergraduate Degree (Bachelors) (n= 31,533 )
- 0.13% Graduate Degree (Diploma, Masters, PhD) (n= 4,823 )

**Gender Identity:** Student respondents self-identified their gender as:

- 55% Women (n= 17,198 )
- 44% Men (n= 13,908 )
- 1% Other (n= 5,343 )

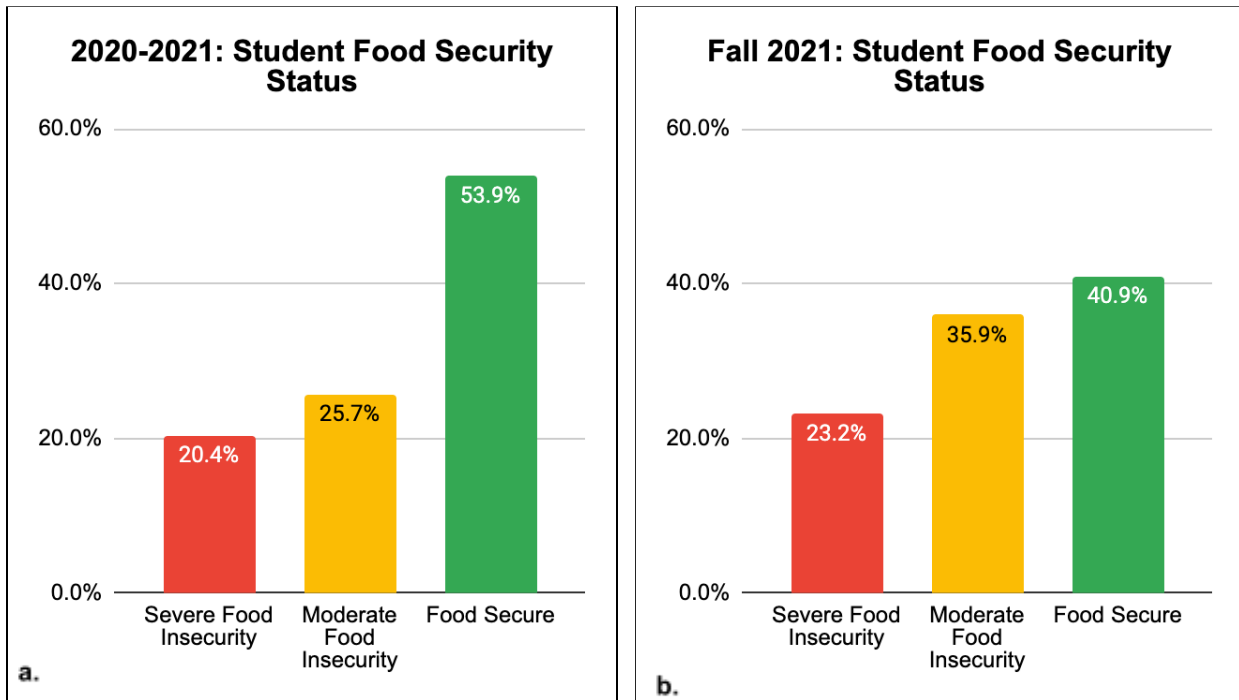
**Age:** Student respondents by age group:

- 14% 16-19 (n= 35 )
- 25% 20-24 (n= 68 )
- 7.3% 25-29 (n= 20 )
- 0.7% 30-35 (n= 2 )
- 0.7% 35-39 (n= 2 )
- 0.7% 40-49 (n= 2 )
- 0.003% 50-59 (n= 1 )
- 0% 60+ (n= 0 )

## **Results & Discussion**

## Student Food Insecurity Prevalence & Severity

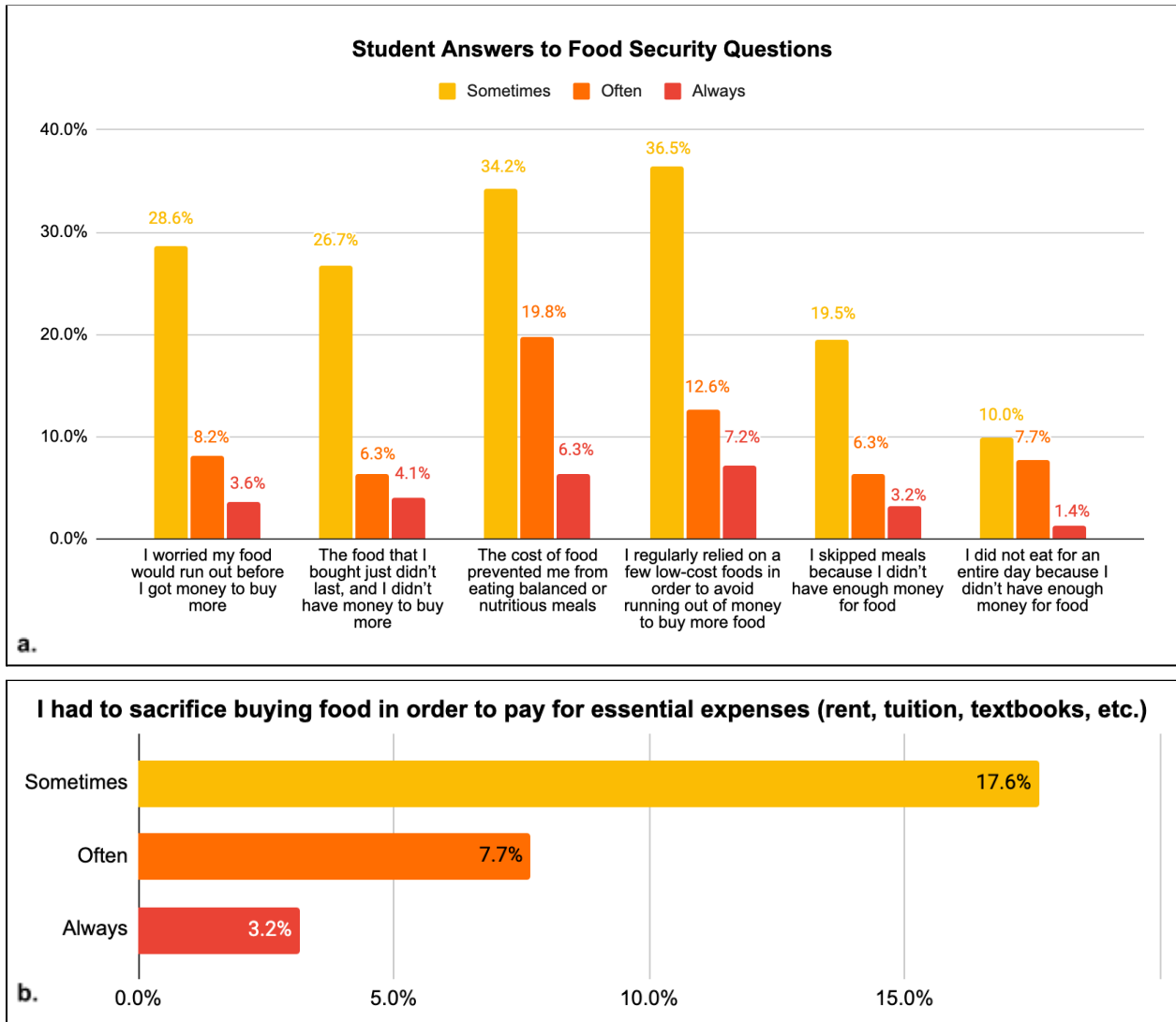
The findings indicate that food security is a serious issue facing students at McMaster during the COVID-19 pandemic. Based on the coding system described in figure 1, 46.1% of survey respondents face some level of food insecurity 25.7%, (n= 69 ) moderately and 20.4%, (n= 55 ) of respondents severely food insecure in the 2020-2021 school year. Only 53.9% of respondents, (n= 146 ) are food secure (see Figure 1a). When looking at the current Fall 2021 semester, 59.1% of survey respondents face some level of food insecurity 35.9%, (n= 97 ) moderately and 23.2%, (n= 63 ) of respondents severely food insecure (see Figure 1b).



**Figure 1:** Student food security status breakdown. Figure 1a. Displays student food security status during the 2020-2021 school year. Figure 1b. Displays student food security status during the current Fall 2021 school year.

Of the six food access experiences used to determine food insecurity, the factors most commonly experienced by students were *the cost of food prevented me from eating balanced or nutritious meals* and *I regularly relied on low cost food in order to avoid running out of money to buy more food*. While, *the food that I bought just didn't last* and *I didn't have enough money to buy more* was the least common experience faced by the survey respondents (see Figure 2a).

In addition to these six questions, students were also asked *how often students had to sacrifice buying food in order to pay for essential expenses*. 3.2% ( 7 of 221 ) of students selected *Always*, 7.7% ( 17 of 221 ) of students selected *Often* and, 17.6% ( 39 of 221 ) of students selected *Sometimes* (see Figure 2b).

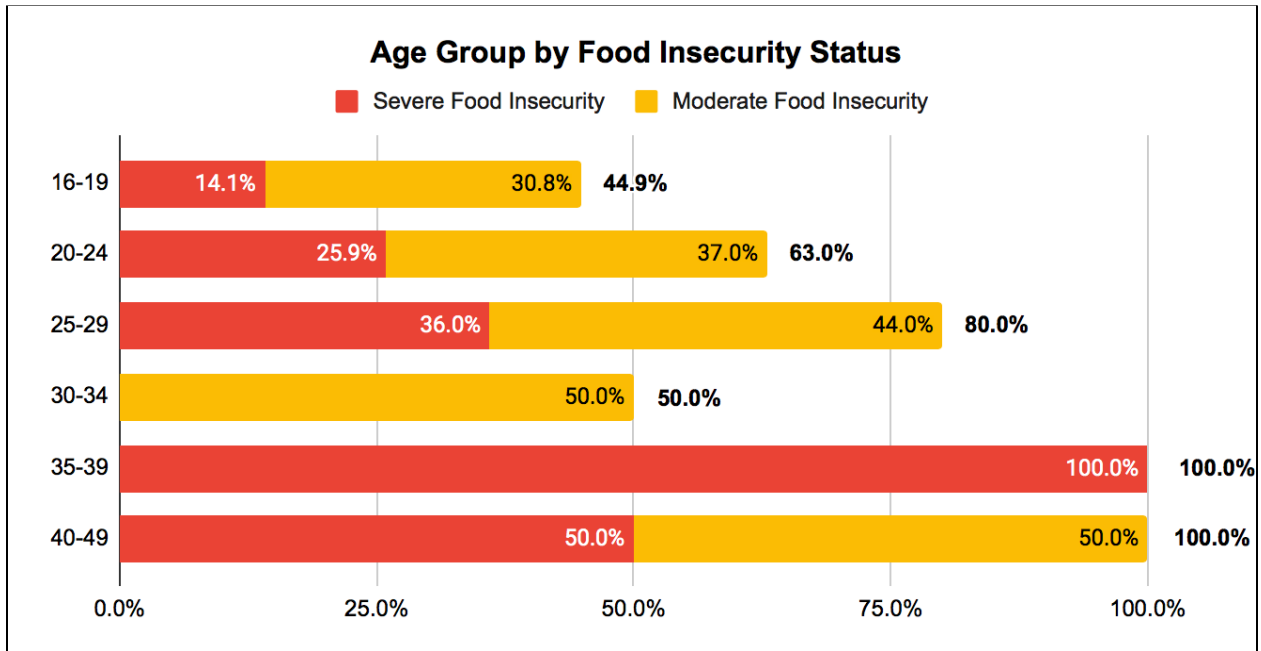


**Figure 2:** Breakdown of student answers to food access questions derived from the CCHS. Figure 2a. Food access questions used to determine level of food insecurity. Figure 2b. How often students had to sacrifice buying food in order to pay for essential expenses (rent, tuition, textbooks, etc.).

### Examining student food insecurity by various demographic factors

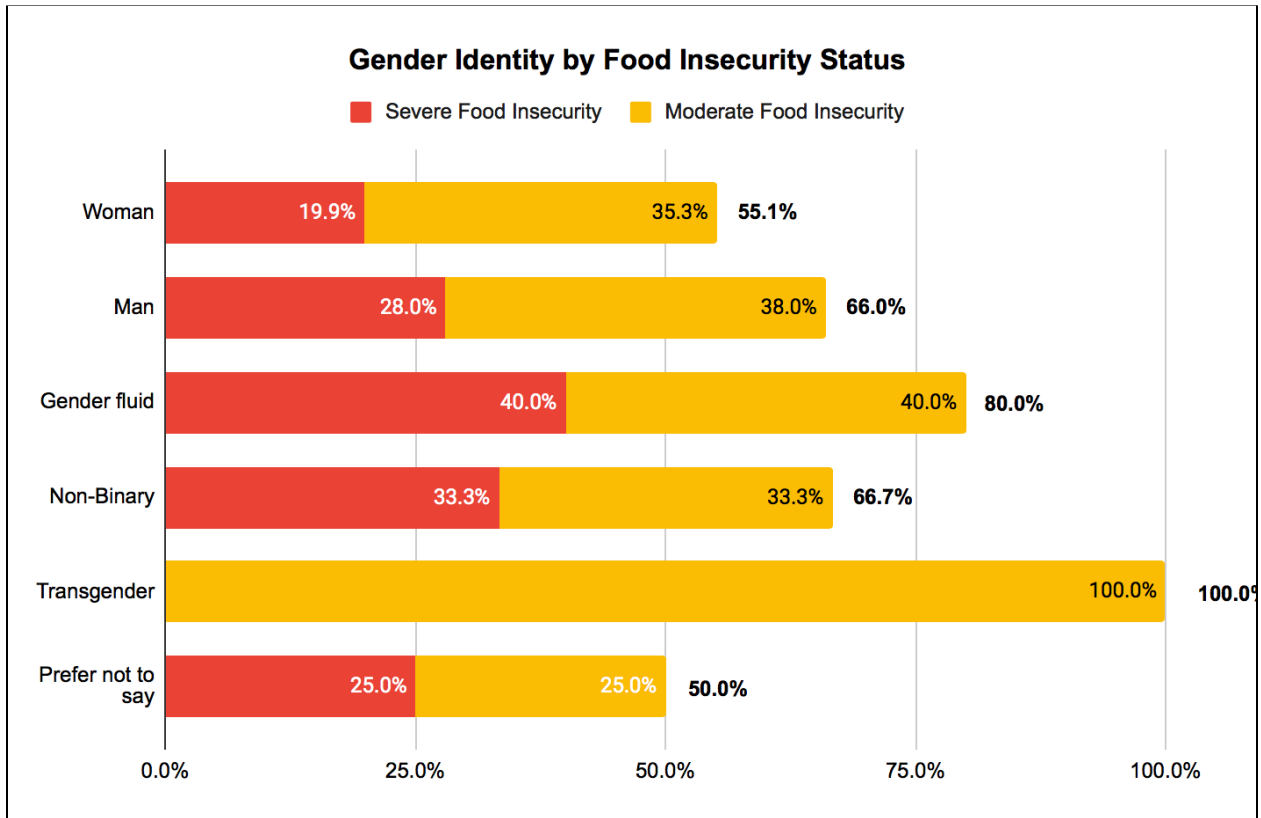
**Age:** The prevalence of food insecurity is highest among those aged 35-29 with 100% ( 2 of 2 ) of students in that age bracket being 100% being severely food insecure. The second group with highest food insecurity is aged 25-29 with 36.0% being severely food insecure and 44.0% being moderately food insecure. The third highest food insecurity is aged between 20-24 with 25.9% and 37.0% being moderately food insecure. The lowest rates of food insecurity among 16-19 with an overall rate of (44.9%) food insecurity (see Figure 3).





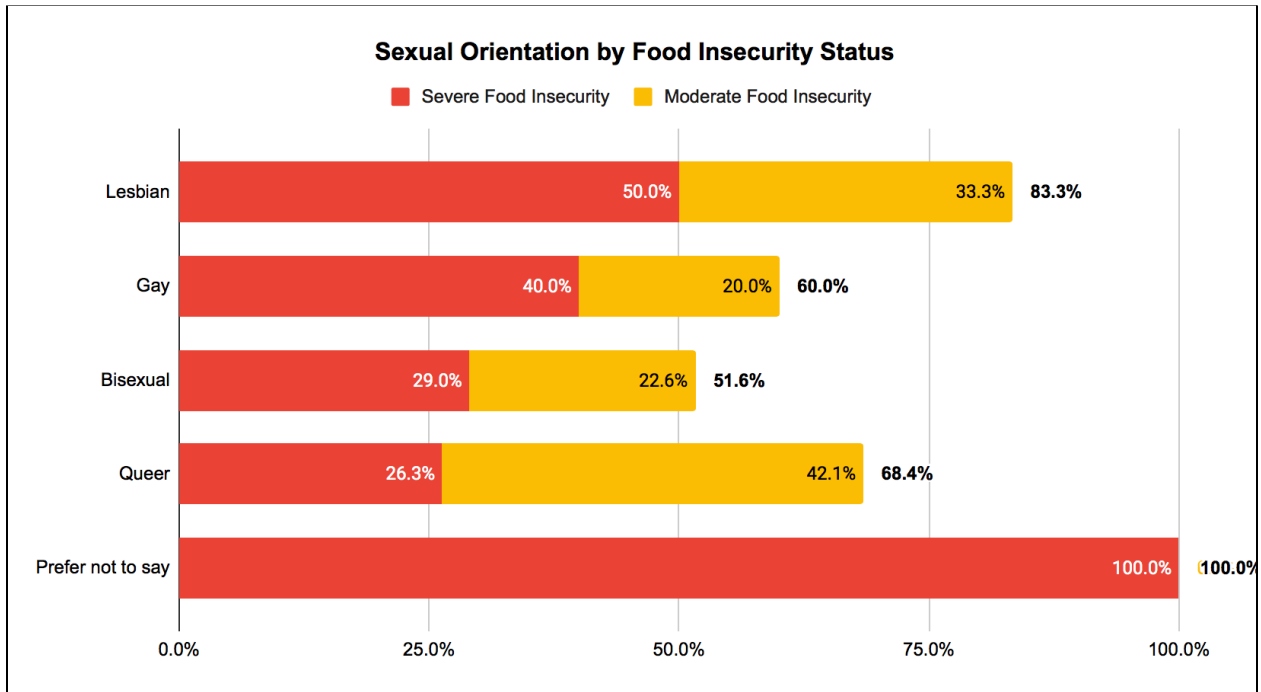
**Figure 3:** Breakdown of age group by food security status. Each bar represents the percentage of students experiencing levels of food insecurity within their age group. Bars have been weighted to represent food insecurity status out of 100% of respondents who selected that age group. For example, out of the respondents who are 16-19 years old, 44.9% are food insecure (14.1% severely food insecure and 30.8% moderately food insecure).

**Gender Identity:** The highest percentage of food insecurity is seen among transgender individuals, who reported 100% impacted by food insecurity. The second highest percentage of food insecurity, 80.0%, was seen in students that identify as gender fluid. Of those impacted by food insecurity 40.0% ( 4 of 5 ) of the respondents who identified as gender fluid face moderate food insecurity, 40% ( 2 of 2 ) gender fluid face severe food insecurity. The third highest group that face food insecurity are Men with 66.0% face insecurity. Of those impacted by food insecurity 28.0% faced severe food insecurity and 38.0% faced moderate food insecurity. The lowest rates of food insecurity among women with an overall rate of (55.1%) food insecurity (see Figure 4).



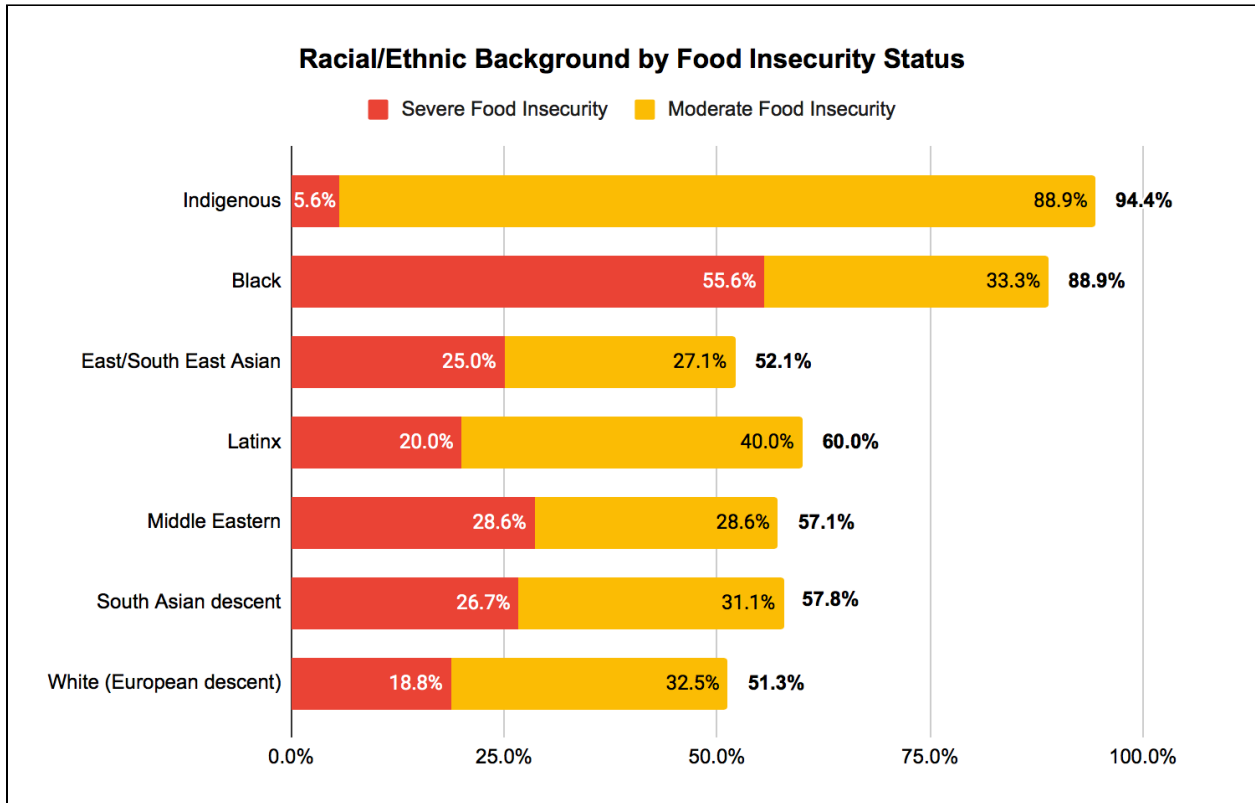
**Figure 4:** Breakdown of food insecurity status by gender identity. Each bar represents the percentage of students experiencing levels of food insecurity within that gender identity. Bars have been weighted to represent food insecurity status out of 100% of respondents who selected that gender identity. For example, out of the respondents who identified as gender fluid, 80% are food insecure (40% severely food insecure and 40% moderately food insecure).

**Sexual Orientation:** The highest percentage of food insecurity, 83.3%, was seen in students that identify as lesbian. Of those impacted by food insecurity, 50% ( 3 of 6 ) of the respondents who identified as a lesbian face severe food insecurity, while 33.3% ( 2 of 6 ) lesbian face moderate food insecurity. The second highest percentage of food insecurity, queer individuals with overall rate of 68.4% food insecure. Of those impacted by food insecurity, 26.3% ( 5 of 19 ) of the respondents who identified as queer face severe food insecurity, while 42.1% ( 8 of 19 ) queer face moderate food insecurity. The lowest rates of food insecurity among bisexual with an overall rate of (51.6%) food insecurity (see Figure 5).



**Figure 5:** Breakdown of food insecurity status by sexual orientation. Each bar represents the percentage of students experiencing levels of food insecurity within that sexual orientation. Bars have been weighted to represent food insecurity status out of 100% of respondents who selected that orientation group. For example, out of the respondents who identified as gay, 60% are food insecure (40% severely food insecure and 20% moderately food insecure).

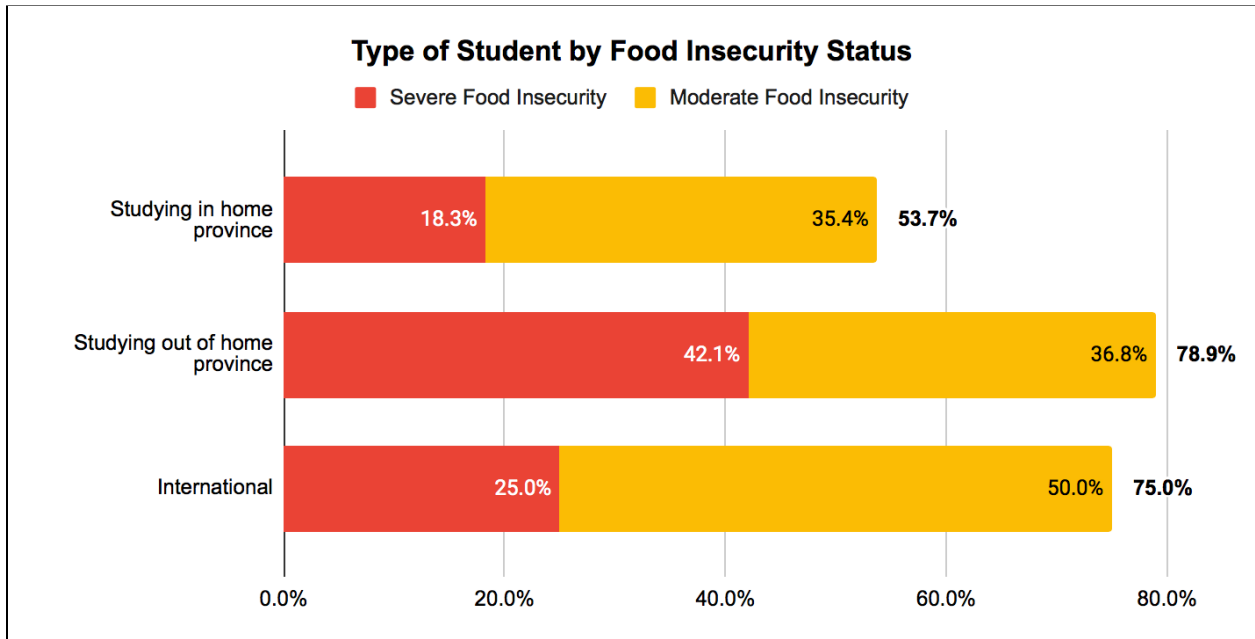
**Ethnic/Racial Identity:** PROOF's 2017-2018 *Household Food Security in Canada* study found that the prevalence of household food insecurity differs by Indigenous status and racial/cultural group. The highest percentage of food insecurity, 94.4%, was seen in students that are indigenous. Of those impacted by this, 88.9% ( 16 of 18 ) of the respondents who identified as indigenous face moderate food insecurity, while 5.6% ( 1 of 18 ) indigenous face severe food insecurity. The second highest percentage of food insecurity, 88.9%, was seen in students that are black. Of those impacted by this, 55.6% ( 10 of 18 ) of the respondents who identified as black face severe food insecurity, while 33.3% ( 1 of 18 ) black face moderate food insecurity. The lowest rates of food insecurity among White individuals with an overall rate of (51.3%) food insecurity (see Figure 6).



**Figure 6:** Breakdown of food insecurity status by racial/ethnic background. Each bar represents the percentage of students experiencing levels of food insecurity within their racial/ethnic group. Bars have been weighted to represent food insecurity status out of 100% of respondents who selected that racial/ethnic group. For example, out of the respondents who identified as Middle Eastern 57.1% are food insecure (28.6% severely food insecure and 28.6% moderately food insecure).

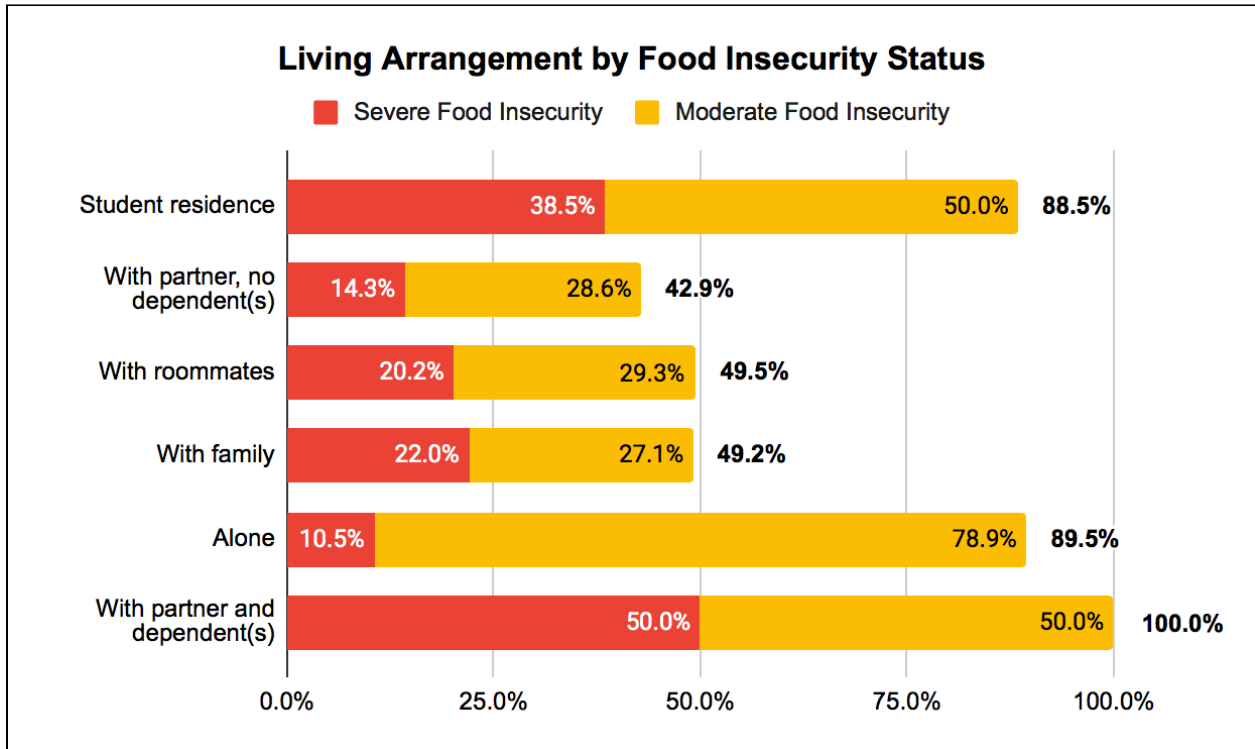
**Type of Student:** The highest percentage of food insecurity, 78.9%, was seen in students that are studying out of province. Of those impacted by this, 36.8% ( 7 of 19 ) of the respondents who identified as studying out of province face moderate food insecurity, while 42.1% ( 8 of 19 ) studying out of province face severe food insecurity. The second highest percentage of food insecurity, 75.0% was seen in students who are international. The lowest rate of food insecurity, with an overall rate of 53.7% seen in students that are studying in home province (see Figure 7).

These findings are in line with those published by Maynard et al (2018), which found that international students are particularly vulnerable to financial precarity and food insecurity for reasons including high tuition fees and costs of living, as well as difficulties navigating the Canadian banking system and transferring money from their home country. On average, international students pay \$25,589.00 per year for a general arts degree in Canada, which is nearly four times the tuition of domestic students (Canadian Federation of Students, 2021).



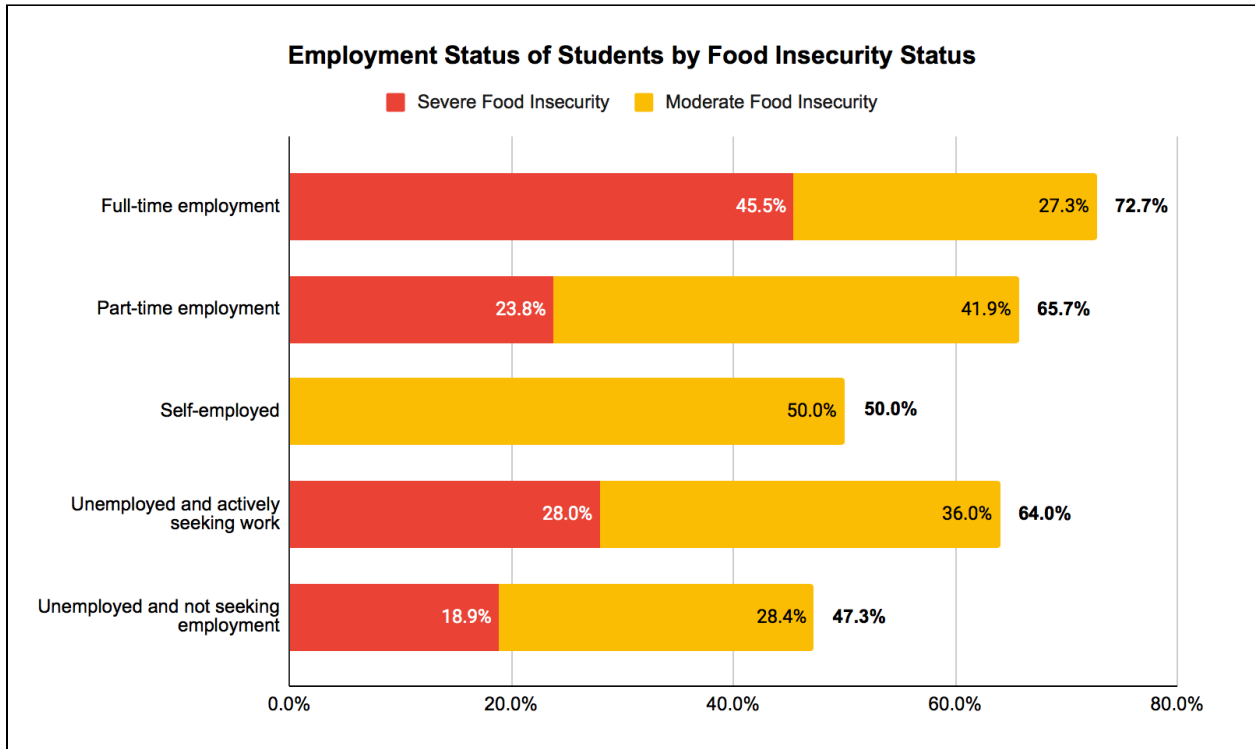
**Figure 7:** Breakdown of food insecurity status by student type. Each bar represents the percentage of students experiencing levels of food insecurity within their student type group. Bars have been weighted to represent food insecurity status out of 100% of respondents who selected that student type. For example, out of the respondents who are international students, 75% are food insecure (25% severely food insecure and 50% moderately food insecure).

**Living Arrangement:** The highest percentage of food insecurity, 100%, was seen in students that live with partners and dependents. Of those impacted by living partners and dependents, 50% ( 2 of 2 ) of the respondents who identified as living with partner and dependents face moderate food insecurity, while 50% ( 2 of 2 ) face severe food insecurity. The lowest rates of food insecurity among individuals living with partners and no dependents with an overall rate of (42.9%) food insecurity (see Figure 8).



**Figure 8:** Breakdown of food insecurity status by living arrangements. Each bar represents the percentage of students experiencing levels of food insecurity within their living arrangement. Bars have been weighted to represent food insecurity status out of 100% of respondents who selected that arrangement group. For example, out of the respondents who are living with roommates, 49.5% are food insecure (20.2% severely food insecure and 29.3% moderately food insecure).

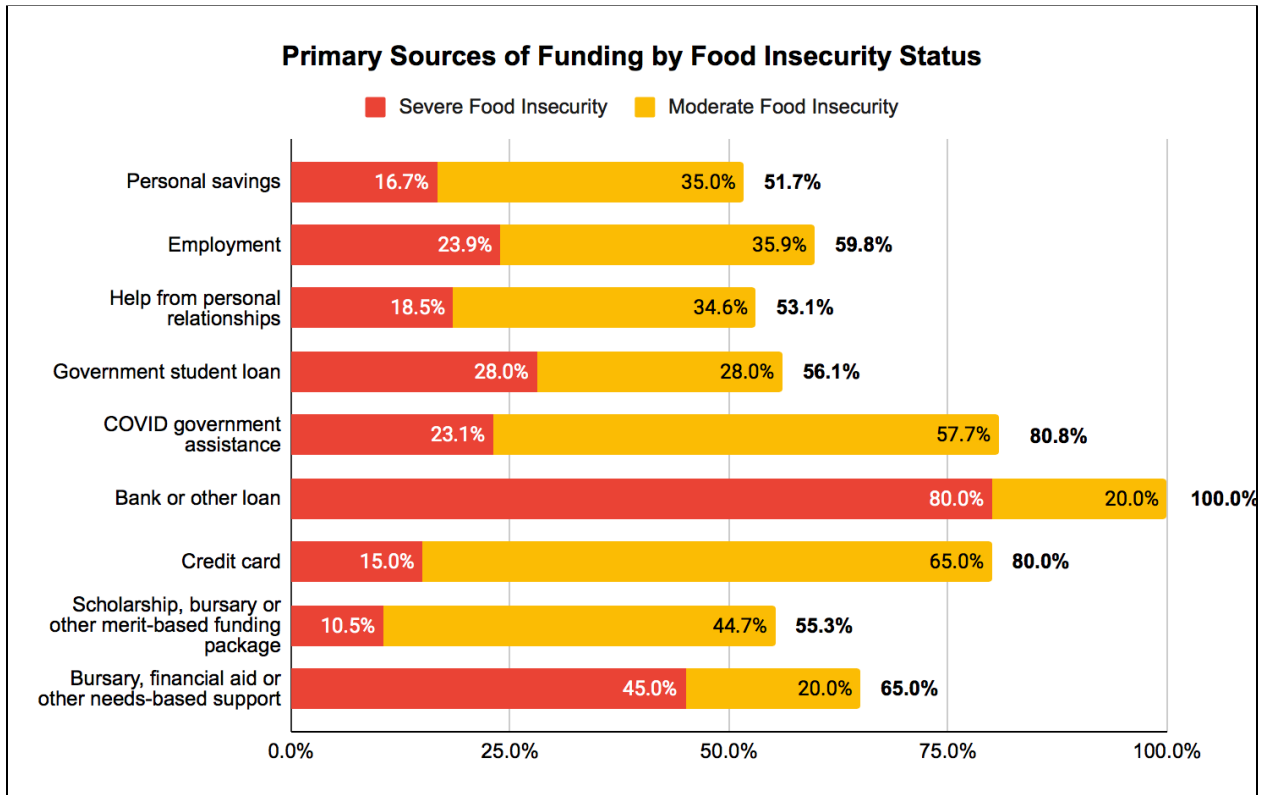
**Financial Status:** The highest percentage of food insecurity, 72.7%, was seen in students that had full time employment. Of those impacted by this, 27.3% ( 3 of 11 ) of the respondents who identified as full-time employment face moderate food insecurity, while 45.5% ( 5 of 11 ) full-time employment face severe food insecurity. The lowest rates of food insecurity among unemployed and not seeking employment with an overall rate of 47.3% food insecurity (see Figure 9).



**Figure 9:** Breakdown of food insecurity status by employment status. Each bar represents the percentage of students experiencing levels of food insecurity within their employment group. Bars have been weighted to represent food insecurity status out of 100% of respondents who selected that employment group. For example, out of the respondents who are employed full-time, 72.7% are food insecure (45.5% severely food insecure and 27.3% moderately food insecure).

The highest percentage of food insecurity, 100%, was seen in banks or other loans. Of those impacted by this, 20.0% (1 of 5) of the respondents who identified as a bank or other loans face moderate food insecurity, while 80.0% (4 of 5) bank or other loans face severe food insecurity. The second highest rate of food insecurity are found among covid government assistance students, with an overall rate of 80.8%. The third highest percentage of food insecurity are found among bursary, financial aid, or other needs-based support. The lowest rates of food insecurity among personal savings with an overall rate of 51.7% food insecurity (see Figure 10).

Maynard et al (2018) explain that a common issue precipitating food shortages among students is the mismatch between student loan amounts and tuition and living costs. The levels of financial assistance allotted to students via government loans are based on assumptions regarding parental financial support, which is not universally available or sufficient due to other demands on families' resources.

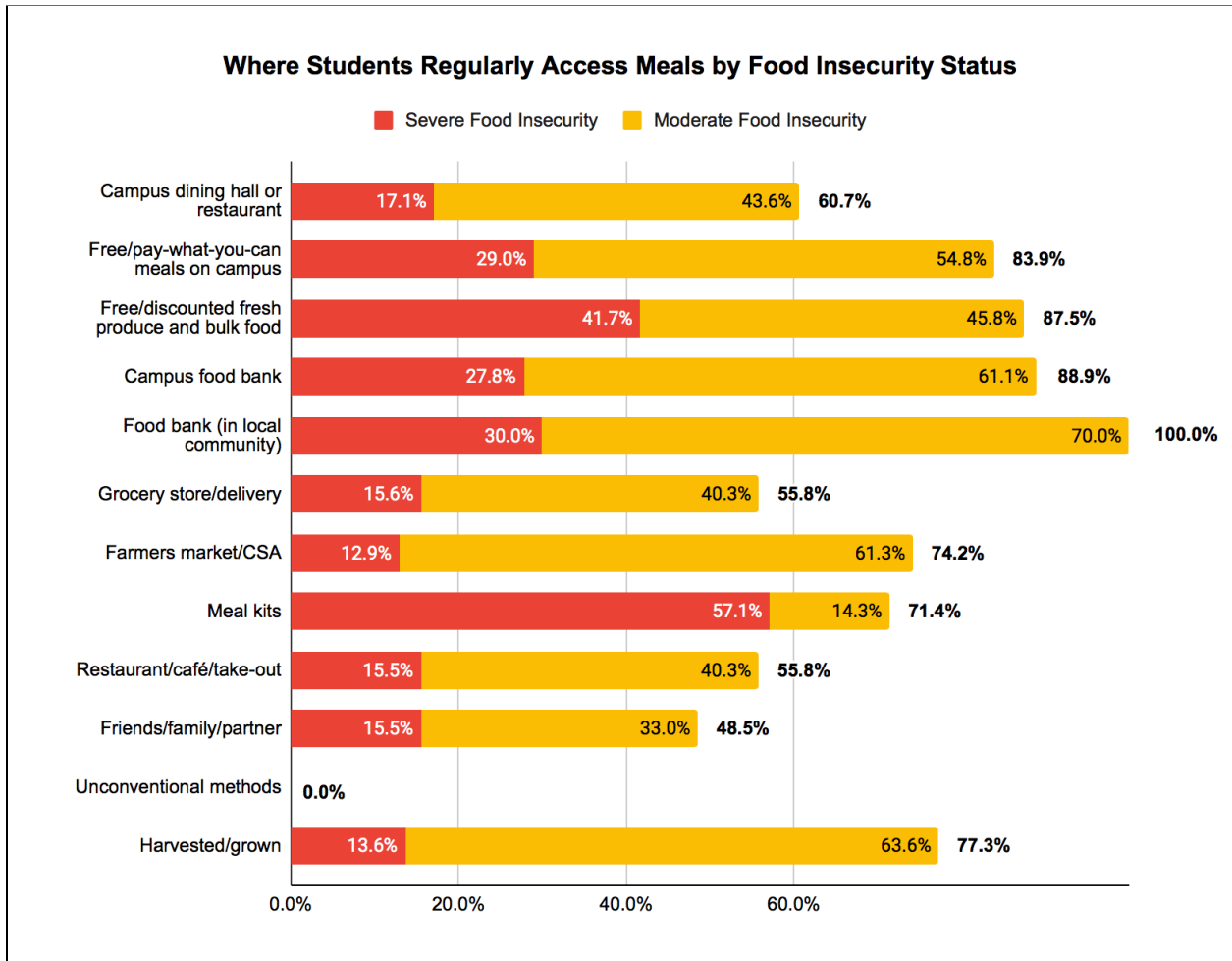


**Figure 10:** Breakdown of food insecurity status by source of funding. Each bar represents the percentage of students experiencing levels of food insecurity within their funding source group. Bars have been weighted to represent food insecurity status out of 100% of respondents who selected that funding source. For example, out of the respondents who relied on personal savings for funding, 51.7% are food insecure (16.7% severely food insecure and 35% moderately food insecure).

## Student Food Experience

**Regular Food Access:** The highest percentage of food insecurity, 100.0%, was seen in students that regularly access food through food banks in their local community. Of those impacted by this, 70% (14 of 20) of the respondents who identified as accessing food banks in their local community face moderate food insecurity, while 30% (6 of 20) accessing food banks in their local community face severe food insecurity. The second highest percentage of food insecurity, 88.9%, was seen in students that regularly accessed the campus food bank at McMaster University. Of those impacted by this, 61.1% (11 of 18) of the respondents who identified as accessing campus food banks face moderate food insecurity, while 27.8% ( 5 of 18 ) accessing campus food banks face severe food insecurity. The lowest rates of food insecurity among friends/family/partners with an overall rate of 48.5% food insecurity (see Figure 11).

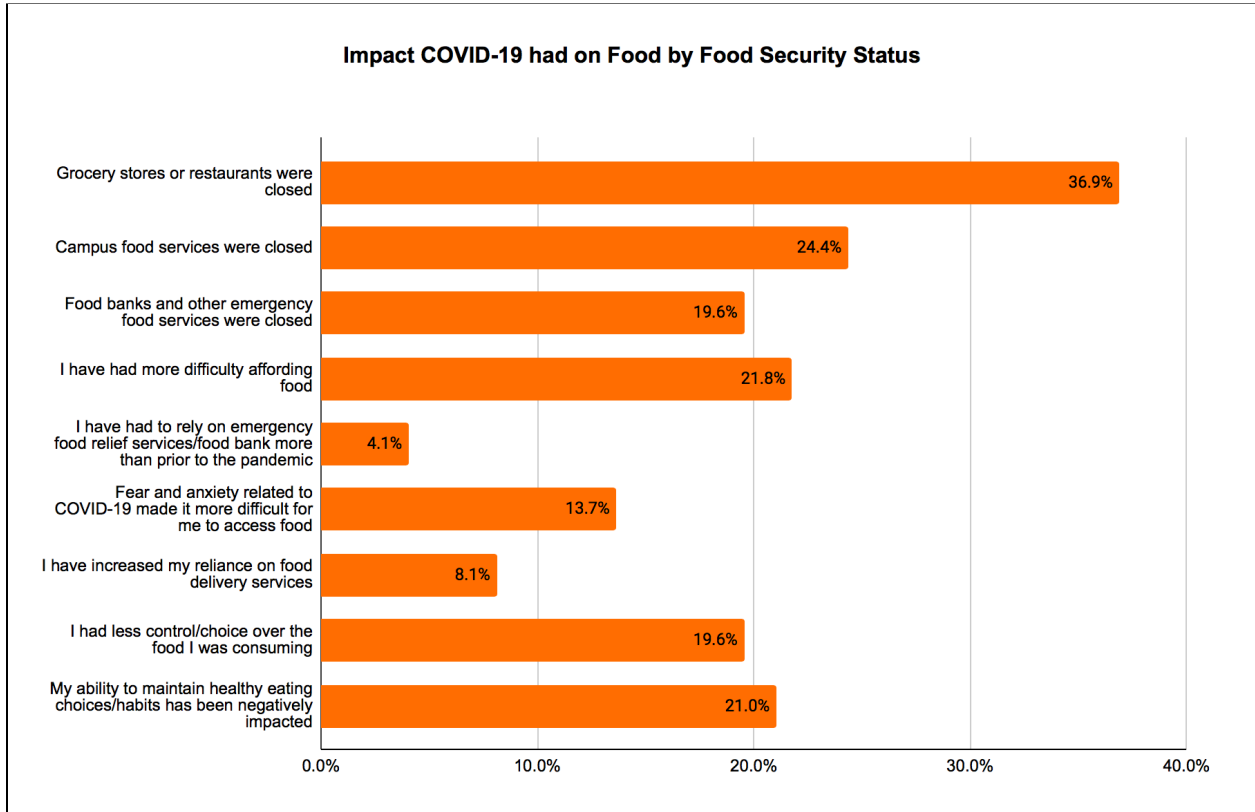




**Figure 11:** Breakdown of food insecurity status by where students accessed their meals. Each bar represents the percentage of students experiencing levels of food insecurity within the group where they accessed meals. Bars have been weighted to represent food insecurity status out of 100% of respondents who selected that group. For example, out of the respondents who regularly accessed meals via meal kits, 71.4% are food insecure (57.1% severely food insecure and 14.3% moderately food insecure).

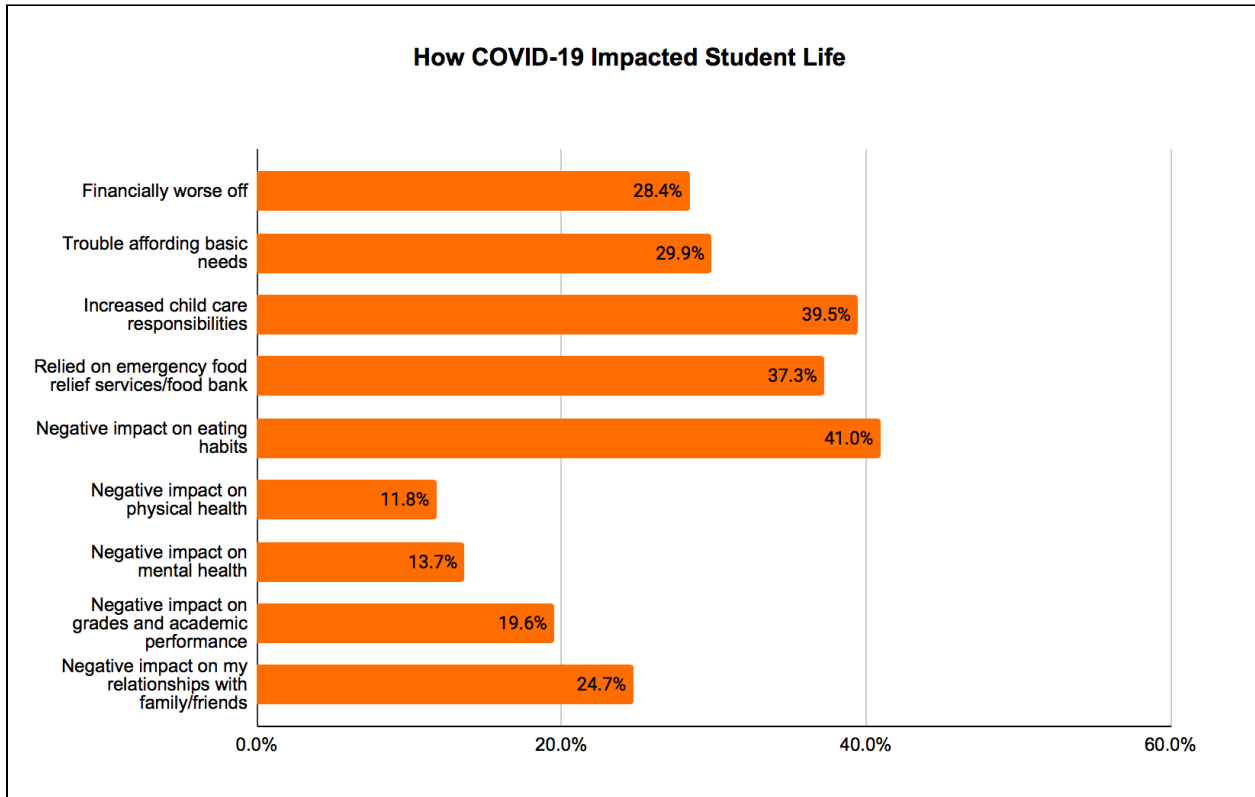
### Impacts of COVID-19 on Food Access and Student Wellbeing

The COVID-19 pandemic continues to have a direct impact on student food insecurity. Most respondents, 36.9%, were impacted by Grocery stores or restaurants that were closed. Of those impacted by Grocery stores or restaurants that were closed, 36.9% (46 of 100) of respondents face moderate food insecurity. The second highest respondents, 24.4%, were impacted as a result of campus food services being closed down. Of those impacted by campus food services shut down, 24.4% (27 of 66) of respondents face moderate food insecurity. The third highest respondents, 21.8% were students who had experienced more difficulty affording food. Of those respondents, 21.8% (21 of 59) face moderate food insecurity. While 4.1% (7 of 11) of people who had to rely on emergency food relief have faced severe food insecurity (see Figure 12).



**Figure 12:** Percentage of how COVID-19 impacted student's relationships with food.

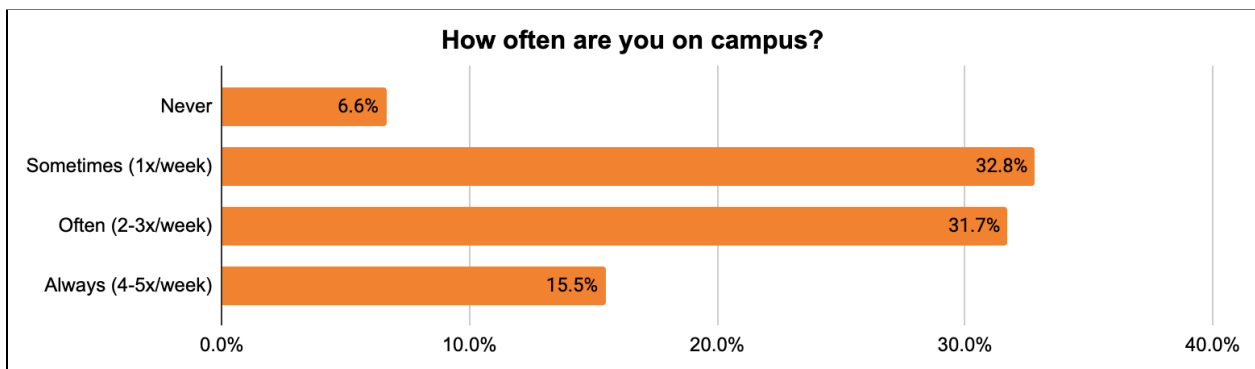
The survey results also showed that food insecurity was not the only issue that has been exacerbated by the pandemic. When asked how COVID-19 has impacted their lives, (73 of 111) respondents 41.0%, reported that their eating habits have been negatively impacted. The second highest impact COVID-19 is due to increased child care responsibilities, which is 39.5% of respondents. The third highest is 37.3% where respondents relied on emergency food bank relief services.



**Figure 13:** Percentage of how COVID-19 impacted student's overall life.

### Student Priorities for Food

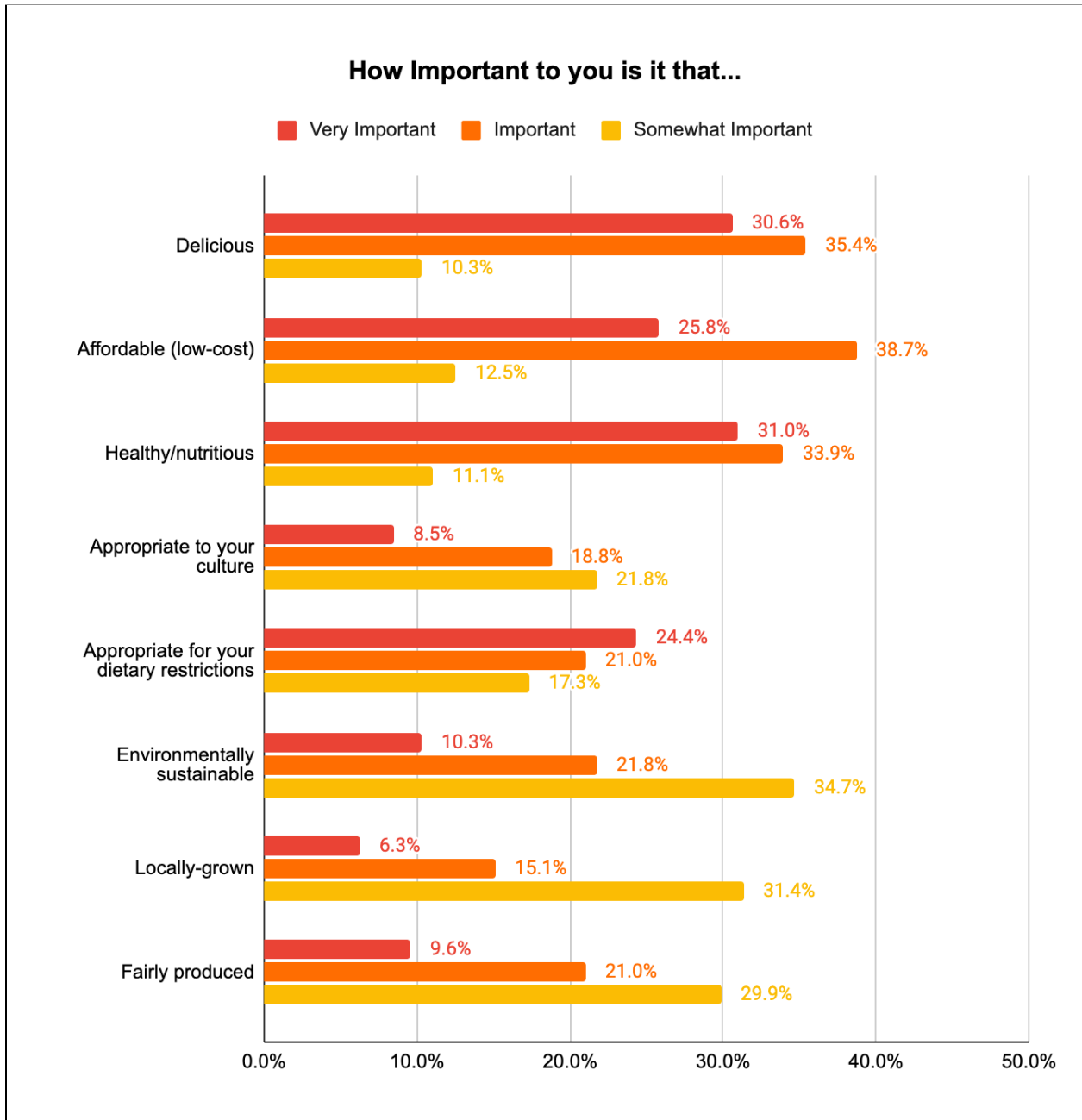
Students were asked how frequently they were on campus on a weekly basis. 32.8% of respondents were on campus once a week. The second highest were students who were often on campus a week, 31.7% of respondents (86 of 271). The lowest frequency was never 6.6% of respondents (18 of 271), were on campus (See Figure 14).



**Figure 14:** How often students are on campus.

Students were asked to rate the level of importance of eight different factors of food they eat with *Not important*, *Somewhat Important*, *Important*, or *Very Important*. Figure 15 shows the breakdown of the responses outlining the percentage of students that found each factor *Very*

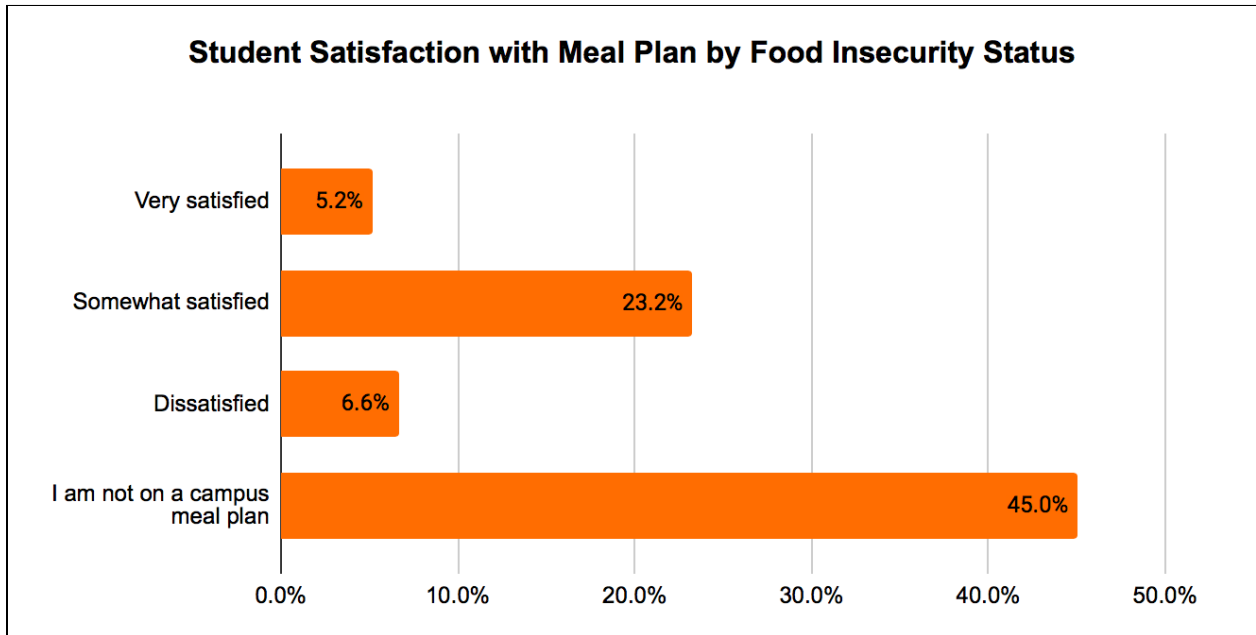
*Important, Important, and Somewhat Important.* Students found affordable the most important at 25.8% of respondents (n= 70 ) finding it *Very Important*, 38.7% of respondents, (n= 105 ) finding it *Important*, and 12.5% of respondents, (n= 34 ) finding it *Somewhat Important*. This is followed by delicious with 35.4%, (n= 83 ) of respondents finding it of importance, and healthy/nutritious at 33.9% of respondents, (n= 96 ) of respondents finding it of importance (See Figure 15).



**Figure 15:** Student priorities for food.

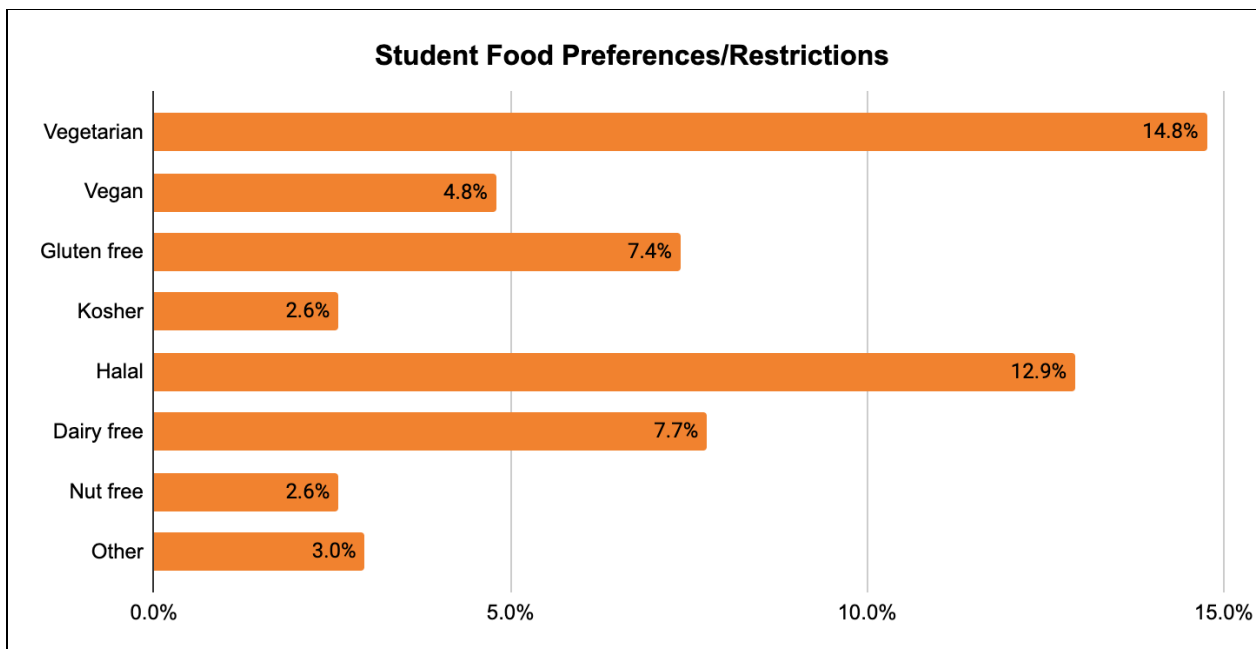
Students were also assessed on their satisfactions with their campus meal plan. 5.2% of respondents, (n= 14 ) are *Very Satisfied* with their campus meal plan, 23.2% of respondents, (n= 63 ) are *Somewhat Satisfied* with their campus meal plan, 6.6% of respondents, (n= 18 ) are *Dissatisfied* with their campus meal plan, and 45.0% of respondents, (n= 123 ) are not on their

campus meal plan (See Figure 16).



**Figure 16:** Percentage of students satisfied with their meal plan.

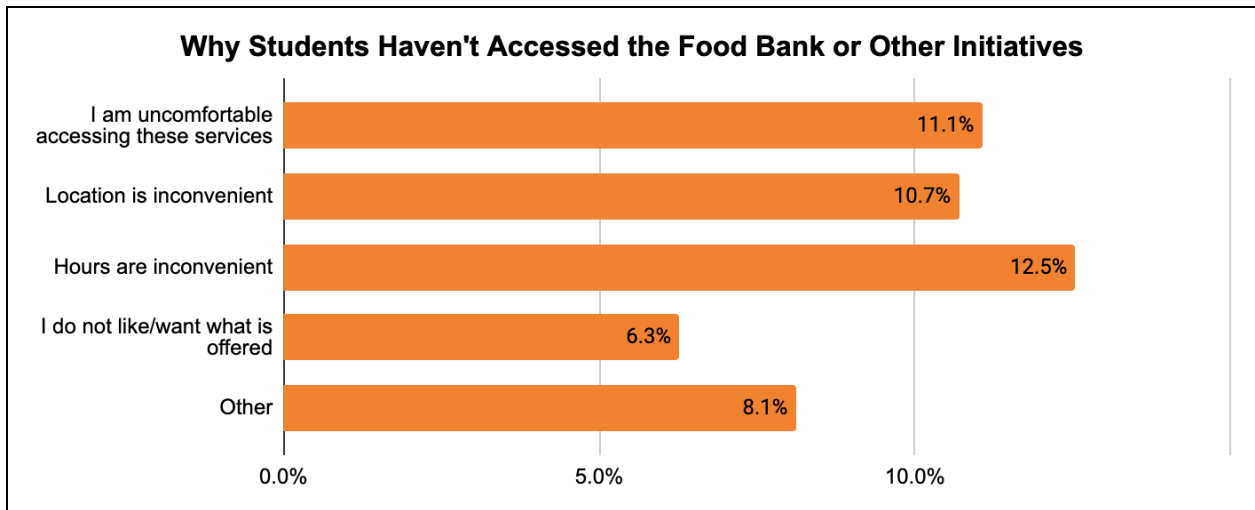
Student food preferences and restrictions may impact their access to food, particularly if there is a limited availability of options that meet their needs. When looking at the most prevalent food restrictions and preferences, 14.8% of respondents, (n= 40 ) are vegetarian, 12.9% of respondents, (n= 35 ) are halal, and 7.4% of respondents, (n= 20 ) are gluten free (See Figure 17).



**Figure 17:** Students' food preferences/restrictions.

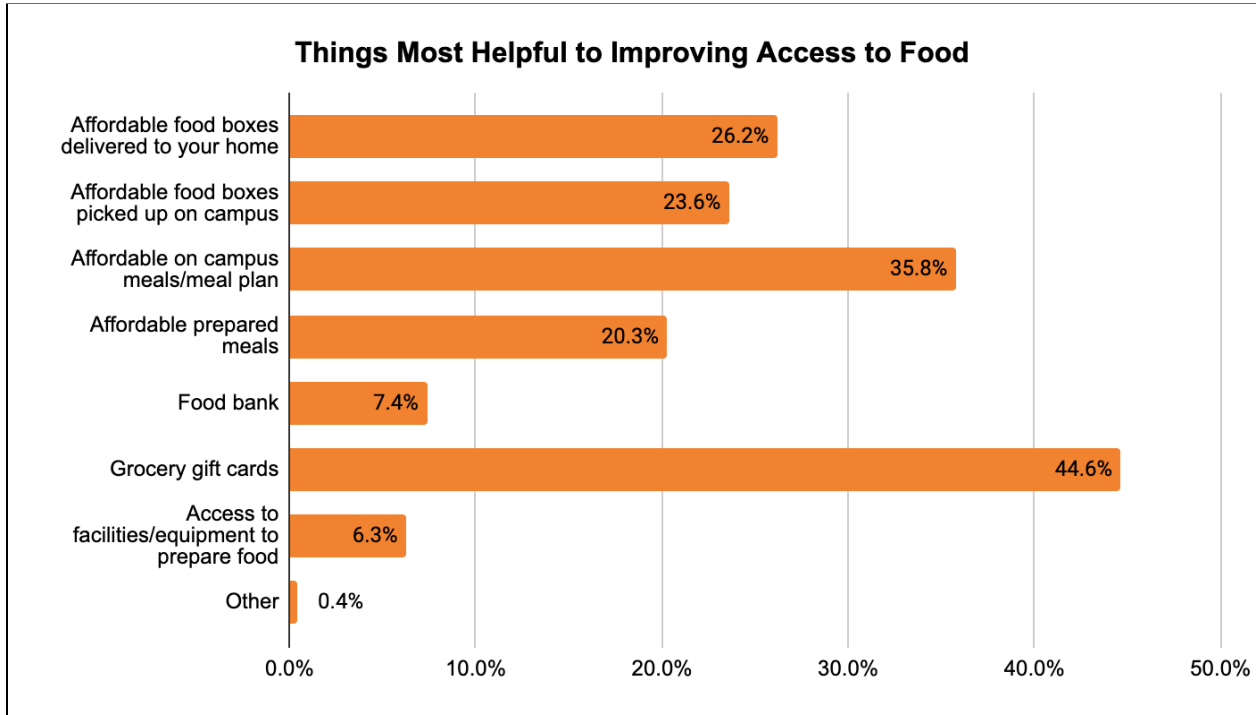
### Ideas for improving access to food

While food banks and other food initiatives are available to help those that are food insecure meet their needs, there are various reasons they may not be accessing these services. When looking at the most common reasons why students have not accessed food banks and other good initiatives, 12.5% of respondents, (n= 34 ) stated that the hours are inconvenient, 11.1% of respondents, (n= 30 ) stated that they are uncomfortable accessing these services, and 8.1% of respondents, (n= 22 ) stated are other reasons not mentioned (See Figure 18).



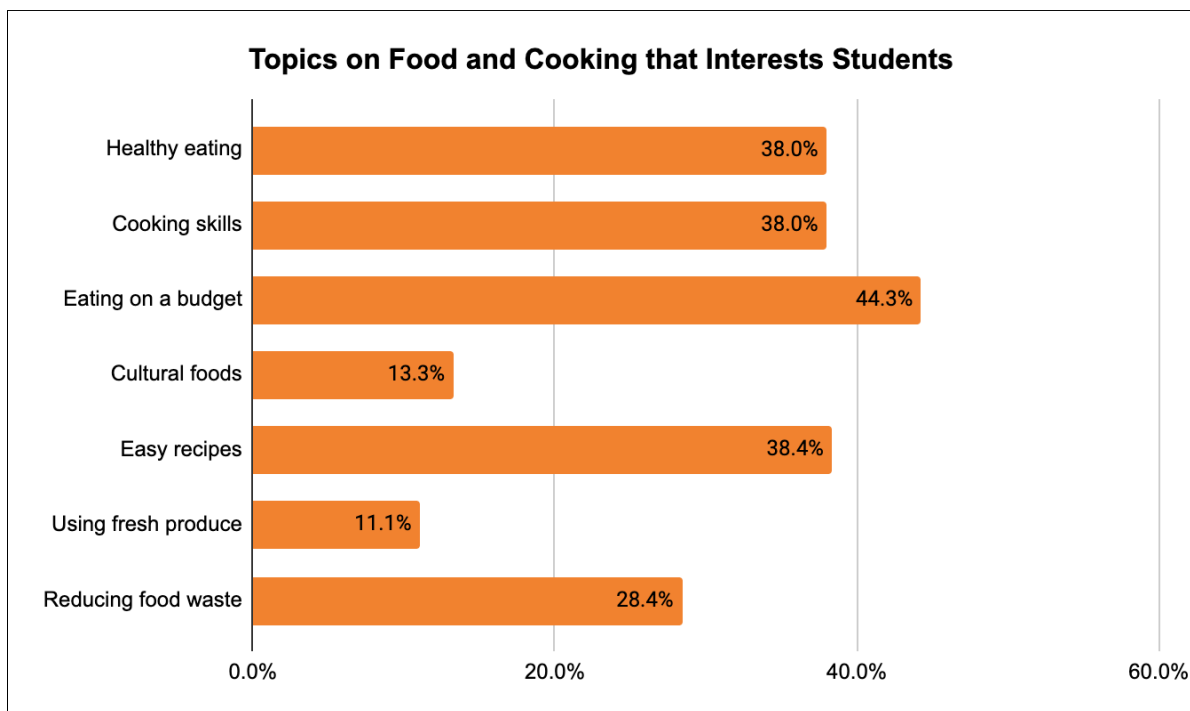
**Figure 18:** Reasons why students haven't accessed food banks and other food initiatives.

Grocery gift cards were the most chosen option to help improve student access to food when students were asked to select three items from a predefined list of factors that would be most helpful in improving their access to food. “Grocery gift cards” was the top item, selected by 44.6% of the survey respondents, (n= 121 ). This was closely followed by “affordable campus meals or meal plans”, which was selected by 35.8% of respondents, (n= 97 ) and then “affordable food boxes delivered to home” and “affordable food boxes picked up on campus” (see Figure 19).



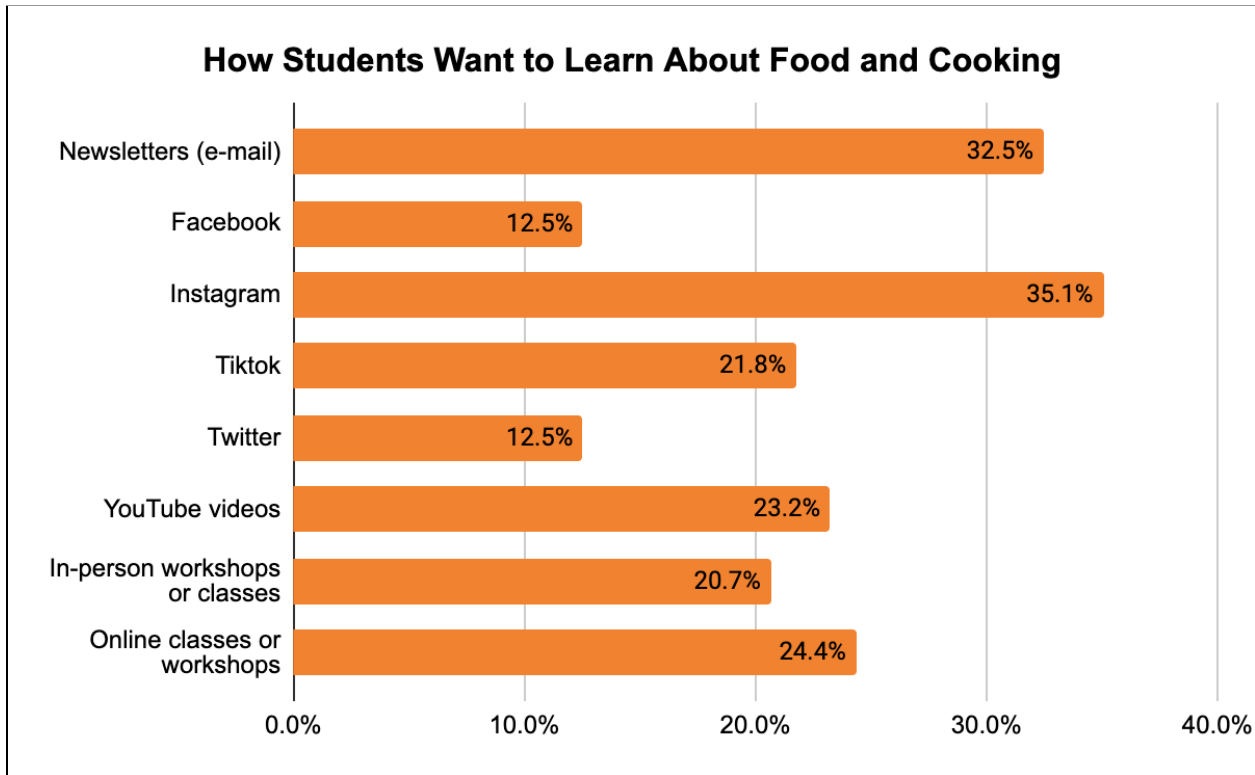
**Figure 19:** Top 3 things that would be most helpful in improving student access to food.

Eating on a budget is most interesting to students when asked which topics of educational information about food and cooking they would like to know more about. “Eating on a budget” was the top item, selected by 44.3% of the survey respondents, (n= 120 ). This was closely followed by “easy recipes”, which was selected by 38.4% of respondents, (n= 104 ) and then “cooking skills” and “healthy eating” (see Figure 20).



**Figure 20:** Top 3 topics on educational information about food and cooking that student respondents are interested in.

Students selected three preferred methods of communication from a predefined list; Instagram was the students’ top medium for receiving educational information about food and cooking. “Instagram” was the top item, selected by 35.1% of the survey respondents, (n= 95 ). This was closely followed by “newsletters through email”, which was selected by 32.5% of respondents, (n= 87 ) and then “online classes or workshops” and “youtube videos” (see Figure 21).



**Figure 21:** Top 3 methods that students want to receive educational information about food and cooking.

### Survey Limitations

Firstly, the Student Food Experience Survey is self-reported. The voluntary and anonymous nature of the survey means that there are potential sources of bias that may have impacted the results. There is a possibility of having selection bias, since the study was distributed through student networks, the sample population for this survey may not be completely representative of the student body. Additionally, since the study was conducted on only 271 of the 33,147 students attending McMaster University, the results are not statistically significant to represent overall food insecurity prevalence rates among post-secondary students. Lastly, due to the small financial incentive offered upon completion of the survey, food insecure students may have been more likely to respond to the survey. As a result, the percentage of food insecure students may be over reported leading to an overestimation on the food insecurity prevalence among our study populace.

Student outreach limitations:



- Not all teachers were able to share the survey with their students
- This survey reflects a small number of students at McMaster
- This survey was promoted through online resources such as newsletters and emails as the campus was closed due to COVID-19
- The time frame of the survey was limited

## Summary and Recommendations

These survey results indicate that 59.1% students who responded to this survey at McMaster are facing food insecurity and we recommend that McMaster takes action to address this issue. In particular, the following groups of students are most impacted by food insecurity:

- LGBTQ+
- Students with dependents
- Students out of home province

We recommend that major stakeholders, including students, convene to discuss student food insecurity and come up with actionable, immediate and long-term solutions to address food insecurity issues. We recommend further consultation with the student community, particularly those most impacted by food insecurity, in order to further develop appropriate interventions. If committees or working groups are formed in order to address food insecurity, we highly recommend that student leaders be regularly and meaningfully invited to participate in decision making.

Of the students who filled out this survey, Grocery gift cards and convenient operating hours for the campus's food bank were ranked as top priorities to address food insecurity (See Figure 19). Based on survey results and student consultation, the following initiatives could be implemented to improve student food access:

- Consulted via surveys
- Participate in meetings and/or committees
- Social media
- Participate in focus groups

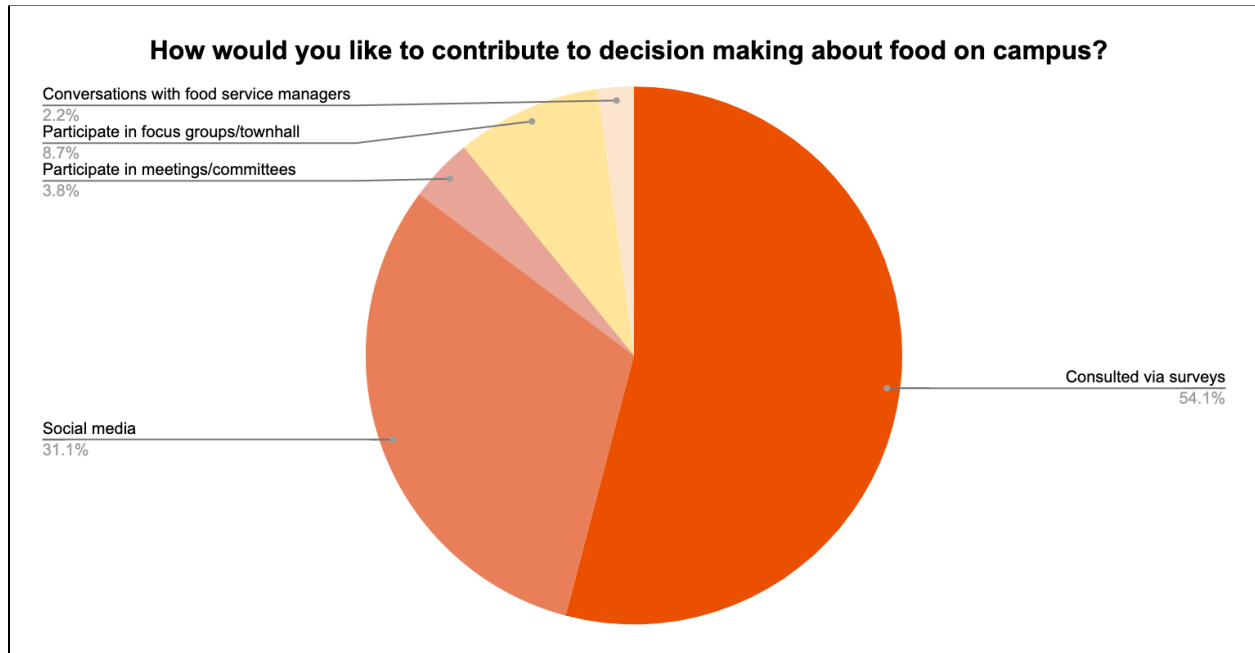


Figure 22: Ways student respondents would like to contribute to decision making on campus

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