

# **What are the Obstacles in Establishing a Food Insecurity Program at a Post-Secondary Institute?**

**by**

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## Declaration of Committee

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## Ethics Statement

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or

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## **Abstract**

Student food insecurity is a growing problem at post-secondary institutes in Canada. This lack of food impacts students' physical health, mental health, and academic performance in negative ways. Post-secondary institutes have begun to establish food insecurity programs to combat this problem. For my research, I examined the obstacles to establishing food insecurity programs at two post-secondary institutions. Employees and managers at two large western Canadian post-secondary institutes food insecurity programs were interviewed to understand their experiences in establishing their institutes programs.

The obstacles to developing a food insecurity program include: a lack of human resources, obtaining institutional buy in, having external partnership dependencies, a lack of transportation resources, lack of long-term planning ability, uncertainty of food supply, and a lack of clear mission goals. Current food insecurity programs are operating on a reactionary footing due to these obstacles and need to develop strategies for long term sustainability.

**Keywords:** funding; institutional buy in; partnerships; planning, resources; transportation

## **Dedication**

This body of work would not have been completed without the support of my wife Renee. For all your help, patience, and guidance in this process, I thank you. I would not have made it without you.

To all the student association staff ,volunteers, institutional employees, and managers that go well beyond what can be expected of anyone, I thank you. Thank you for all your efforts in supporting students. Thank you for your caring and commitment. Without you these food programs would not exist.

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## List of Terms

Campus Garden	A garden located on campus for student to grow fresh food.
CUFBA	The College and University Food Bank Alliance is part of the California Colleges Health and Wellness Programs. CUFBA was created to support existing and new campus food banks and pantries initiatives in California post-secondary schools.
Descriptive Qualitative Study	Research that uses the experiences of participants to formulate theories or conclusions (Creswell & Creswell 2023).
Food Insecurity	Food insecurity is the inability to acquire or consume an adequate diet quality or enough food in socially acceptable ways, or the uncertainty that one will be able to do so. (Government of Canada, 2020).
Food insecurity programs	Services developed at post-secondary institution to distribute food to students experiencing food insecurity.
Meal Exchange	Meal Exchange was founded in 1993 to support initiatives and strategies to combat food insecurity on Canadian post-secondary campuses.
Positionality	A researchers' world view that influences their research methods. (Creswell & Creswell, 2023).
Subjectivity	Subjectivity represents a researcher's beliefs and positionality. (Braun & Clarke ,2022).

## Introduction

One day during the spring of 2023, there was a small box of food left outside a student life office of a western Canadian post-secondary institute. This box was filled with canned goods, rice, pasta, pastas sauce, and dry beans. It totaled approximately \$150 worth of food. Initially, I thought that a student had left their groceries out and the other students were slowly taking the food. I did not think about it again until two weeks later when I read that the institution was announcing a new food insecurity program at our campus. I was very confused. What was food insecurity? I had never heard of this before. I wanted to find out more.

The Canadian government defines food insecurity as “the inability to acquire or consume an adequate diet quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so” (Government of Canada, 2020, para 1). Considering the size of the food basket, I wondered how many students could be helped with that small volume of food? I wondered why the institute could not do more. This was a very personal problem for me, was I missing something so important that was causing my students to fail? I never considered that food insecurity could be part of the reason my students were not passing my courses. One question about food insecurity that particularly bothers me: are my students starving?

As I explored our campus’s food insecurity program, I wondered why it was only open one day a week. Neighboring post-secondary institutions showed a comparable situation: food insecurity programs that are only open one day a week, and some for only a few hours a week. How can these limited resource combat food insecurity? These early observations formed my research problem, “what is stopping my campuses food insecurity program from doing more to help students?”

As I learned more about food insecurity programs, I found that an answer to my research problem was elusive in the research literature review. There was extensive literature confirming the existence and effects of food insecurity on post-secondary students, but there was little research on the obstacles to establishing food insecurity programs. Several authors expressed a need for more research in establishing food insecurity programs and best practices (Broton & Cady, 2020; Cady, 2020; Murphy et al., 2022; Ulleveig et al., 2021). This was frustrating, but encouraging, my research

problem is justified by the literature review, and this type of research is important for all those who will be establishing future food insecurity programs.

From the literature review and my research problem, I developed my research question: "What are the obstacles in establishing a food insecurity program at a post-secondary institute?"

## **Literature Review**

Creswell and Creswell (2023) suggest qualitative researchers use multiple perspectives and identify the factors surrounding an issue to understand how the factors interact differently to affect the larger picture of an issue. This provides a complex accounting of the problem. To achieve a complex accounting of food insecurity programs, I conducted literature reviews in three areas: literature surrounding the existence of food insecurity, literature covering the effects of food insecurity on post-secondary students, and literature surrounding barriers to establishing a food insecurity programs in post-secondary environments.

The literature surrounding the existence and effects of food insecurity is extensive. Several of the studies are Canadian-specific, others are from demographically similar countries to Canada. These studies all point to the alarming effect of food insecurity on students' wellbeing and academic performance (Brownfield et al., 2023; Langford et al., 2022; Maynard et al., 2018; Meal Exchange, 2016, 2021; Richards et al., 2023; Tin et al., 2022).

Of the literature reviewed, I found the most significant to Canada, in terms of volume of data, scope and applicability, to be written by Meal exchange (2012). Meal Exchange is a national registered charity that empowers youth to engage, educate, and mobilize their communities to develop just and sustainable food systems. Meal Exchange has extensively studied food insecurity in Canada at the post-secondary level for many years. The 2021 report is the follow up to a similar report authored by Silverthorn (2016) for Meal Exchange in 2016. Both Meal Exchange Reports from 2016 and 2021 tabulate vast amounts of Canadian statistical data about food insecurity harvested from Canadian universities. The data included demographics, food preferences, food importance, levels of dependency, and student financial positions, and

are invaluable in providing an overall picture of student food insecurity on Canadian campuses.

The Meal Exchange (2021) report analyzed data from over 6167 students from 13 different post-secondary institutes across Canada. Well over half of these post-secondary students reported experiencing food insecurity. Twenty percent were “severely food insecure,” another 36.2% were “moderately food insecure,” and 43.1% reported themselves as “food insecure” (see Table 1 for definitions). The data show that food insecurity is a growing problem on campuses across Canada. Students with severe food insecurity rose from 8.3% in 2016 to 20.7 % in 2021, an increase of 249% in just five years (Meal Exchange, 2021).

**Table 1 Food Insecurity definitions (Meal Exchange 2021)**

Food secure Score 0-1	Sufficient and adequate access to food that meets quality and quantity 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.

My literature review led me to understand that there are several different issues regarding food insecurity. One of the issues affecting food insecurity is how these studies were conducted. The data can be affected by a range of factors, and they are difficult to control in an experimental setting (Tin et al., 2021). There are sociodemographic factors such as first generational college students which tend to have a higher prevalence for food insecurity due to the family’s economic status. Students that live at home in these situation are not eligible for student grants in some instances, making funds available to buy food less available. (Langford et al., 2022). There are student academic and mental health challenges to consider. Food insecurity is linked to depression. (Brownfield et al., 2023; Lankford et al., 2022; Maynard et al., 2018; Meal Exchange, 2016, 2021; Richards et al.,2023; Tin et al., 2021). What is not clear is which is the causal factor in this depression. Is the depression caused by not eating well or is one not eating well because they are depressed, leading to positive indications of food insecurity in a food study. These factors are difficult to clarify in food insecurity studies.

Student funding issues (Maynard et al., 2021), and government policies issues (Brownfield et al., 2023; Lankford et al., 2022; Maynard et al., 2021; Meal Exchange, 2016, 2021; Richards et al., 2023; Tin et al., 2021) also play a role in food insecurity. Government student loan application processes are difficult to navigate, and students are not always eligible for student loans, making food insecurity far more likely. These different issues make studying the cause of food insecurity challenging.

Where the literature surrounding the existence and effects of food insecurity was extensive, I found the literature on the barriers to establishing food insecurity programs lacking. This observation was echoed by Broton and Cady (2020), Murphy et al. (2022), and Ulleveig et al. (2021). They all mention the lack of relevant literature on establishing food insecurity programs in their discussions. One of these studies made this point very clearly. Murphy et al. conducted a scoping review to identify best practices and effective approaches to food insecurity programs to assist the University of British Columbia in the development of a new food insecurity program. They reviewed 4637 studies and found that only four studies, or .086%, contained the criteria to be considered as relevant to their purpose. Murphy et al. concluded that the lack of evidence on which type of food insecurity programs are the most effective, and what the best practices are when establishing a food insecurity program are major gaps and presents barriers to implementation of food insecurity programs.

One study that touched on the establishment and best practices of food insecurity programs, was Ulleveig et al.'s (2020) report which reviewed the establishment of a campus garden in 2016, and a food insecurity program in 2017. Ulleveig et al. concluded that when considering future food insecurity programs, institutions develop strategies that involve financial support from their institution, collaboration with local organizations and have dedicated organized staffing. Ulleveig et al. specifically highlighted the need to have leadership buy-in, conduct a needs assessment at the very beginning of the process and have a well-executed plan to develop and design a food insecurity program which involves key stakeholders and staff. These strategies are all critical to success.

Another extensive work on food insecurity is Broton and Cady's (2020) edited book. This 300-page volume has a diverse set of contributing authors, each working to combat food insecurity. Broton and Cady offered a critique of the existing literature in

that it consists of short student feedback forms or testimonials. Information, although vital to program improvements, does little to gauge which types of interventions are best. Echoing Murphy et al., (2022) and Ulleveig et al., (2021), Broton and Cady also agree that more work is needed to understand the benefits of food insecurity programs and best practices for operation.

The Colleges and University Food Bank Alliance (CUFBA) is part of the California Colleges Health and Wellness Programs. CUFBA was created to support existing and new campus food banks and pantries initiatives in California post-secondary schools. As of 2020, CUFBA was not aware of any significant rigorous study that had been conducted or was being conducted to measure the efficacy of providing students food through a food program (Cady, 2020).

Cady (2020) lays a framework for the best practices when establishing a food insecurity program. They include support from leadership, partnering with a non-profit, having a dedicated operating and storage space, appropriate staffing, data driven approach, a sustainability plan, and a referral network. Cady reports that most food insecurity programs had a budget that suggested insignificant investment by the institutions. The largest obstacles are lack of resources – funds, food, and volunteers. Cady also indicates that there is a lack of research in food insecurity program efficacy, commenting that there is a large gap in the national work examining the effectiveness of food insecurity programs on improving student success.

The discussions and conclusions were all interesting to me considering my own experience. In the months leading up to the deployment of my institution's food insecurity program, I was the department head at a satellite campus. I do not recall taking part in any stakeholder consultation, budget allocation meetings, or resource planning meetings. In fact, to most of the teaching faculty and department heads at the satellite campus, the roll out of the food insecurity program was a complete surprise. This seems to go against Ulleveig et al.'s recommendations of involving all stakeholders. I began to wonder if policies and practices were responsible for the small scope of the food insecurity program at this satellite campus.

Whether the topic is the existence of food insecurity, the effects of food insecurity, or the barriers to establishing a food insecurity program, Broton & Cady,

(2020); Brownfield et al. (2023); Cady, (2020); Lankford et al., (2022); Maynard et al., (2018); Meal Exchange, (2016, 2021); Murphy et al., (2018); Richards et al., (2023); Tin et al., (2022); and Ulleveig et al., (2021) all agree that hunger is associated with poor academic performance and poor student health.

From my review of the literature on the existence of food insecurity, the effects of food insecurity, and barriers to establishing a food insecurity program, I came to three main conclusions. First, there are sufficient in-depth studies to conclude that food insecurity exists and is a problem at every institution in Canada (Broton & Cady, 2020; Brownfield et al., 2023; Cady, 2020; Lankford et al., 2022; Maynard et al., 2018; Meal Exchange, 2016, 2021; Murphy et al., 2018; Richards et al., 2023; Tin et al., 2022; Ulleveig et al., 2021). There is little to be gained from proving this again. Second, the efficacy of food insecurity programs is in question (Cady; Broton & Cady; Murphy et al.). Unfortunately, the scope and time needed to explore the efficacy of food insecurity programs is beyond the reach of this research and I did not pursue this further. Third, exposed by Murphy et al.; Ulleveig et al.; Broton and Cady, and Cady, is a lack of research that exists on implementation and best practices in establishing a food insecurity program.

## **Methodology**

For my study I chose a qualitative research approach, with a case study design, participant interviews to collect data and a descriptive method to analyze that data. This research methodology was based on my constructivist world view and nature of the research problem. Journaling was conducted as a reflexivity method to account for researcher biases.

## **Constructivist Worldview Approach**

Creswell and Creswell (2023) identify a constructivist as someone who believes that the world around them exists in large part because of the experiences people have, and how those experiences affect how they interact with the world. Being a constructivist means that to understand the world around me, I need to understand peoples' reactions to situations they encounter in their daily lives. Given that the answer to my research question would be based on the experiences of others, I chose a qualitative research

approach, which, according to Creswell and Creswell, is based on exploring the experiences of others and making meaning of their experiences

## **Case Study Research Design**

A case study is a research design in which the researcher develops in-depth analysis of specific case situations (Creswell & Creswell, 2023). Understanding the obstacles of a food insecurity program is an ideal case study design situation. Two different cases of food insecurity programs were studied. A rich understanding of each case was developed to answer the research question.

## **Descriptive Method**

A descriptive method, as described by Creswell and Creswell (2023), is an approach to analysis where the researcher stays close to the data, uses limited frameworks and interpolation for explaining the data, and catalogues the data into themes.

## **The Research Question**

The lack of research revealed by the literature review encouraged me to pursue a research question that will provide valuable information to future food insecurity programs and add to the existing body of literature. The research question I developed was, “what are the obstacles in establishing a food insecurity program at a post-secondary institute?”

## **Researcher Bias and Reflexivity**

To understand what I was bringing to my research, and how my experiences influence my research, I engaged in reflexivity, a process in which a researcher details their past experiences with the research setting and identifies how those experience might affect the research (Braun and Clark, 2022).



From my reflexivity, I understand that because I have over ten years of experience at the post-secondary level, I have a perceived bias towards post-secondary. I have experienced the difficulties in making changes at the post-secondary level and because of this, I have a perceived bias on the way the post-secondary institute operates when making policy or operational changes. I have often found these processes cumbersome, slow, and ineffective at responding to challenges quickly. Opening a food insecurity program is a large policy and operational change for a post-secondary institute to undertake. My experiences with process might have led me to form a biased roadblock in my research. To avoid this and further understand my personal bias better, I also followed the recommendations of Cox (2012), and I undertook Maxwell's personal identity memo, which is a process of reflection on my experiences and how they might affect my research. From that exercise I have concluded that the first thing I need to do is not look for a solution. By nature, I am a fixer. Something that can cause me to rush to plug the dam without understanding why the dam is leaking. Knowing this helped me to not rush to conclusions quickly, and work to better understand what the data was telling me.

Knowing my bias was only the first step. To keep my bias from my research I needed to employ a method to keep my bias in check. The mechanism employed to achieve that was Braun and Clarke's (2022) reflective journaling process. This journaling process allowed me to continually reflect on my biases, reflect on my relationship to the data and reflect on the entire process of doing a qualitative analysis. I found this process liberating and it helped me to understand myself and the research process better. I also found through the journaling process that my personal bias is both a weakness and a strength. I discovered I had an ability to understand the experience the respondents spoke of during the interviews. I was able to cross check with respondents when they indicated an experience, such as a problem with policy or procedures, I was familiar with. I found through journaling that I agree with Braun and Clarke when they suggest that a researcher should embrace their subjectivity, as coding for themes is a subjective process shaped by what we bring to it, as such subjectivity (positionality) is a strength, not a weakness in a study, and it should be embraced as a resource to be used (Braun and Clarke, 2022).

## Research Site

The two institutions for my study were chosen because they were of comparable student body size, share similar demographics, and have similar sized food insecurity programs. Both institutions have between forty to fifty thousand students. Both institutions are located in the same large western Canadian city. Both food programs are open a few hours a week. Both food programs cover multiple campuses. The food insecurity programs at both institutions grew substantially after the COVID-19 pandemic. Both food insecurity programs grew from something different than what they are now. The growth and changes in services were due the increase in demand from students that were in need of help with food insecurity. Neither institution had planned for the increase in food operations. The changes were reactionary at both institutions, the rapid growth in student demand was not foreseen at either institution. Both institutions have been overwhelmed by the rapidly increasing scope of need.

One institution's food insecurity program is run by the Student Association, an entity separate and independent of the institution. Funded by student fees, grants, and donations. The Student Association food program receives no funding from the institution. The staff at this program have other duties that are associated with the Student Association. Running a food program is something that began as a side responsibility and has grown to consume most of their time, even while still required to perform other duties.

The other food program is run by one institutional staff manager through a community engagement office. This individual has additional duties as well, and food insecurity is not the only program they are overseeing. There is no funding for this program other than the salaries of the employee who runs the program.

Both food insecurity programs rely on food donations and local food banks as sources of food. One institution has an external funder that provides a yearly donation of twenty thousand Canadian dollars, which allows for shortages in food to be purchased at a local Costco. This donation will run for four years. It is not known if it will be renewed.

Both institutions share a similar weekly process of driving to the food bank to pick up what food is available, return to campus and store the donations. The next few days

are spent organizing, making food bags, and doing inventory on what was available for the week's operations. Costco shopping runs need to be fitted into the week to purchase what food might be deficient in the weekly supply of donations. One day a week is spent traveling to satellite campuses for food insecurity work at those locations. These routines repeat week after week

Everyone involved in these food insecurity programs have additional duties, *working off the side of my desk on food insecurity* was a common comment amongst respondents. The employees at both institutions feel they are doing all they can to keep up with the demand and feel that they are doing far more than their jobs initially entailed. Both institutions have seen a drastic increase in food program use by an ever-increasing number of students. Both food programs have employees that expressed they are reaching a breaking point if they continue in their current form. If there was one word to express the feelings of the food program staff at both institutions it is "trepidation" - trepidation about the future of their food insecurity programs.

## **Research Participants**

The participants for my research were chosen for their experience in running food insecurity programs. Six respondents were chosen from two large western Canadian post-secondary institutions. The respondents consisted of three student association representatives, one institutional manager for a food program, one institutional manager that deals with student services, and one was on the food advisory committee a student Financial Aid Manager.

The participants have firsthand experience with food programs or students in financial difficulties needing food or financial aid to purchase food. I chose this number of participants because I was following the theory of a descriptive method, which is most often used when seeking to obtain a rich, deep, detailed understanding, from a small group of people (DeCarlo et al, 2022).

There were no researcher-participant relationships that presented ethical concerns for my research. I am not employed in a food insecurity program, nor do I hold supervisory position over any of the respondents. I am employed at one of the institutions involved, in an academic role, not an administrative or managerial role. There

were no prior relationships before this research project with any of the respondents. This researcher-participant relationship was a benefit to my research as the respondent could speak freely without any fear of authority over them.

## **Ethical Responsibilities**

The research was approved by both institutes ethics boards. Prospective respondents were contacted by email and respondents signed consent letters which fully explained the research methods and goals. Participants were de-identified for privacy. Data for the study was stored on SFU secure storage facilities. A requirement of the ethics committees of one of the participating institutes in the research was that all respondents be asked if they wished to be quoted directly, indirectly, or not quoted at all. Only one respondent chose to be quoted directly or indirectly. The rest chose not to be quoted in anyway. Respondents had the option to withdrawal their participation at any time during the research. No participants chose to withdrawal from the research.

## **Rigor and Trustworthiness**

Rigor is the term used to encompass the processes used in collecting, analyzing, interpreting, and drawing conclusions in qualitative research. Good rigor is based on sound qualitative research, which provides a sense of trustfulness to the reader of the research (DeCarlo et al., 2022).

Sthal and King (2020) explain that Lincoln and Guba's measurements of credibility, transferability, dependability, and confirmability can be used to gauge a researcher's trustworthiness.

### **Credibility**

For my research credibility, I used three primary methods. Prolonged engagement, triangulation, and member checking.

Prolonged engagement: is having a long-term exposure to a life cycle of a process (Sthal and King, 2020). I have been employed at one of the institutions partaking in the research and have been watching the food insecurity program develop over the past year. This has exposed long-term development experience with the food program. This allowed me to observe the food program for more than a year.

Environmental triangulation: is using more than one situation or context to study a problem (Sthal and King, 2020). I collected data from two different food insecurity programs from two similar sized institutions. I also interviewed various levels of staffing and managerial positions, and different student association and institutional positions. This offered me an opportunity to compare responses, separate from a single institutional or positional level influence. The data were consistent across both institutions and respondent levels.

Member checking: is a process where my understanding and conclusion are checked with the respondents for accuracy (Sthal and King, 2020). This was used several times in the interview process and writing phase. During the interviews, respondents were asked if my understanding of their answer was correct. During the writing phase, several sections of the discussion were sent to several respondents to confirm that they agreed with my analysis. This was done by email, or in one case, a face-to-face writing review was conducted for conformation of credibility.

## **Transferability**

Transferability is the ability to transfer research findings from one context to another. This can only be done in qualitative research by offering a thick description of the research setting. In this way, similar situations can be sought out where the findings might be comparable (Sthal and King, 2020). A thick description of my research environment is offered in the preceding section to aid in helping readers determine the extent to which my study findings might have relevance in other contexts (transferability).

## **Dependability**

For my research I confirmed my transcription with my respondents, I maintained a constant coding list and had consistency across my interviews (Creswell and Creswell

2023). I also used peer debriefing to review my writing. Two qualitative research peers were asked to review my research and conclusions for trustworthiness and rigor. As a method of bracketing, the process of keeping my research free of my biases, I used reflexivity journaling as suggested by Braun and Clarke (2023).

## **Confirmability**

Having a bias towards post-secondary institutions being slow to adapt change means it would be possible I might lean towards finding the obstacles to food insecurity programs at post-secondary to be post-secondary processes. It was important that I reflected on this during the data analysis, discussion and conclusion phases of my research. To combat my bias and to add conformability to my research I relied on reflexivity. I analyzed respondents' answers and reflected on my interpretation of those answers. I ask myself if more than one respondent shared specific views. Was I misinterpreting those views or were they supported by the data? Many respondents indicated a lack of space as an obstacle. My first thought was 'this is because of the way space is allocated on campus'. I have had trouble in relocating space due to policies in the past. It would be natural for me to assume that obstacles to space availability was institutional policies. Reflecting on this allowed me to realize that not one respondent mentioned space allocation *policies* as an obstacle, rather just a *lack of space* as an obstacle. This process of Reflexivity brought clarity and deeper understanding of my research data. Reflexivity was a valuable tool in ensuring conformability of my research.

## **Collection and Analysis Data**

Interview questions were conducted on Teams and transcribed for analysis. Interview questions were designed to allow the participants to discuss their own experiences, with room to elaborate and fully explain their answers. This was done to gain the best understanding of the participants' experiences. The questions were guided my literature research and the similarities in conclusion in the literature research. The questions were evaluated by peer review in class and by consultation with one of the food insecurity program managers to discuss and review if the questions would capture all the experiences of starting a food insecurity program.

## **Participants' Voices**

All respondents were given the options to choose whether to be quoted or not. All respondents except one, chose not to be quoted. I have chosen to summarize in general terms their voices while respecting their wish to remain deidentified and not quoted.

The requirement to offer the respondents the option to not be directly quoted presented some difficulties in the research. As such I spent a great deal of time conferring with the respondents as to the meaning of their responses and reviewed the transcripts many time to make sure I understood and contextualized their responses correctly.

The following were the most common and agreed upon respondent answers to interview questions. There were no outlier or unique answers by the respondents. Both institutes shared a remarkable similarity in operations, obstacles, and responses. This section is intended to offer a de-identified overview of participant responses in an effort to fulfill the requirements placed on me by an ethics office. A more detailed interpretation of themes found in the complete data set follows in the Findings section on page 19.

### **1. Can you describe the obstacles you encountered when you first started the food program?**

Difficulty sourcing food was a common response. It was difficult for the food programs to acquire food when enlarging their programs. Both food programs were existing in a much smaller form before shifting to food insecurity operations. Both institutions were offering community lunches or social breakfast and had to shift from these social type events to more food insecurity needs. This enlarged the scope of their food stock requirements. It was difficult to establish partnership with external food banks to get enough food to offer consistent service. Both programs rely on food donations from community food programs like the GVFB. There is a limited amount of food at these food banks. Both institution have to do the best they can to get as much food as they can every week. Keeping good relations with external food banks is a priority for both institutes.

**2. What has been the biggest obstacle you have encountered from an institutional point of view?**

There was a recognition by all respondents of close and supportive working relationship between the food insecurity programs and the institutions in which they operate. This relationship takes the form of employee food drives organized by the institution, the institution forming steering committees to examine the problems of food insecurity and working to solve common problems such as space allocation and offering vehicles for food transportation. There was, however, a common response about financial support. Both food insecurity programs indicated a lack of financial support that hinders their operations. Both institutions would like closer financial ties and larger donations from their institutions.

**3. Knowing what you know now, if you could go back in time, what would you do differently?**

This question resulted in an agreement among the respondents that worked closest with direct operations of the food bank. Before opening the food bank, developing a long-term operational plan would have been key. Both food banks are operating on a reactionary footing, there was no foresight that the programs would grow to the scope they have. Establishing an operational plan going forward is key.

**4. What is the biggest obstacle in obtaining food supplies?**

Respondents from both institutions had almost identical responses. The reliance on outside food banks is a major obstacle to acquiring food. When picking up food at the food bank, the food insecurity programs can only take what the food banks have to offer. This presents difficulty in planning and forecasting what food supplies will be available from week to week.

Another shared response that indicated an obstacle was obtaining a delivery truck to pick up food. There is more food available than can be picked up, and if a coordinated effort could be made to obtain better transportation, more food could be available for the food programs.



## Findings

From the transcribed interviews I coded the data and developed a set of themes following Tesch's eight step coding process recommend by Creswell and Creswell (see Table 2 below). I analyzed the themes to develop a conclusion to the research question as required by the descriptive method. (Braun & Clarke, 2022; Creswell & Creswell, year; Miles et al., 2020).

**Table 2**      **Tesch's eight steps to coding**

1. Get a sense of the whole. Read all the transcriptions carefully. Perhaps jot down some ideas as they come to mind as you read.
2. Pick one document (e.g. one interview) the most interesting one, the shortest, the one on top of the pile. Go through it asking yourself "What is this about" Do not think about the substance of the information but its underlying , meaning. Write your thoughts in the margin.
3. When you have completed this task for several participants, make a list of all the topics. Cluster together similar topics. Form these topics into columns, perhaps arrayed as major, unique and leftover topics.
4. Now take this list and go back to your data. Abbreviate the topics as codes and write the codes next to the appropriate segments in the text.
5. Find the most descriptive wording for your topics and turn them into categories. Look for ways of reducing your total list, show in interrelationships.
6. Make a final decision on the abbreviation for each category and code.
7. Assemble the data material belonging to each category in one place and perform preliminary analysis.
8. If necessary, recode your existing data.

Using Tesch’s coding method I identified 4 themes from my research. As explained in Table 3, the themes (relationships, logistics, planning and financial stability) were derived from codes created from respondent interviews.

**Table 3 Codes and Themes**

Examples from respondent interviews <i>(Not direct quotes based on respondent’s interview preference)</i>	Codes	Themes
<ul style="list-style-type: none"> <li>- depend on external food banks.</li> <li>- depend on borrowing a truck.</li> <li>- we need the donations</li> <li>- yearly food drive is important</li> <li>- everyone helping us</li> <li>- finding volunteers is important</li> <li>- needing help moving food</li> <li>- need institute help</li> </ul>	<p>internal partnerships external partnerships reliance on others</p>	<p>relationships</p>
<ul style="list-style-type: none"> <li>- it takes time to set up and move all the food to satellite campuses</li> <li>- we have to find time to do a Costco run</li> <li>- using a truck that we have to borrow</li> <li>- dealing with storage issues and mice</li> <li>- making sure the students know when we are on campus</li> </ul>	<p>food supplies food storage food pick up campus awareness campus set up</p>	<p>logistics</p>
<ul style="list-style-type: none"> <li>- rely on external funding that we don’t know if it will continue</li> <li>- don’t have time to apply for grants</li> <li>- would go back and make a feasibility plan</li> <li>- need a sustainability plan</li> <li>- don’t know what will happen next year</li> </ul>	<p>reacting surviving sustainability</p>	<p>planning</p>
<ul style="list-style-type: none"> <li>- need to have a bigger budget</li> <li>- spend hundreds of dollar a week at Costco</li> <li>- need to hire more people to do this, but don’t have the money</li> <li>- it is hard to plan if we don’t know our budget</li> </ul>	<p>hiring money needs budget issues</p>	<p>financial stability</p>

# Themes and Codes Explained

## 1. Relationships

Relationships were a very common theme mentioned in all respondent interviews. The food insecurity programs can not work alone, they need to maintain many different type of relationships. These relationships need to be fostered and maintained in order for the programs to continue.

Institutional relationships: The need to have a good working relationship with campus resources such as space planning to find storage space, logistic departments to borrow vehicles; institutional management to allow for campus wide food drives; and with staff volunteers to provide labour and program support, all play a role in the effectiveness of the food programs.

Community relationships: This is very important. Most of the food that the food programs source comes from community food banks. One institution is experiencing a local food bank experiencing an increasing number of students showing up to use their services, straining the relationship with the institution.

Inter-institutional relationships: One food program is run by an independent student association, meaning they are not part of the institution. However, by having a strong relationship with the student support arm of that institution, they have been able to work closely with the institution. When excess funds are available, the managers in that department are willing to donate to the food program. This is not an official institutional policy but the contingent product of strong relationships that have been developed over years.

## 2. Logistics

Logistics refer to the movement of food, staff and resources needed to run the food program. Both institutes shared similar experiences with logistics. Time needs to be found to do shopping runs which means allocating one or two days a week to this task. Storage space needs to be organized for the food which involves finding space on campus. Food needs to be moved to satellite campuses and both institutes need to

organize vehicles to do this. In one case it is an employee's personal vehicle, in the other it is a vehicle borrowed from the institution. Logistics is very much tied to relationships. All respondents expressed a need to have good relationships with the logistics and transportation departments of their institution.

### **3. Planning**

All respondents expressed a need for better planning. Both food programs explained how the rapid increase in the scope of food insecurity had caught them off guard. Neither program expected the food programs to be in such high demand as they are today. All respondents express that because they are so busy trying to manage day to day operations, they lack the time to plan. One program is trying to combat the lack of planning ability by securing funding for a new full-time employee who will be working half time on grant writing, and half time on regular food insecurity programs. The other institute desperately needs a full-time delivery truck. The one employee working on food insecurity at that institute has a choice to make, either pursue grant writing or work on such day-to-day issues. Both of these are high time demand activities and there is not enough time in the week to do both. Planning is something all respondents wish they could spend more time on.

### **4. Financial Stability**

All respondents expressed repeatedly how financially unstable their food programs are. All respondent indicated that they rely on donations and food drives to survive which they all felt is not a sustainable situation. All respondents expressed that without solid and long-term financial commitments they lack the ability to do any serious long-term planning. Respondents indicated that the financial commitments they need would include: dedicated funding for food procurement, dedicated funding for full time grant writers, additional staffing, funding for transportation and storage of food resources.

## **Discussion**

My research problem, why my campus' food insecurity program has the scope it does, has an answer: the resources needed to expand the satellite campus' program are

simply not available. The student association representative is only on campus one day a week and there are two satellite campus that they need to visit each week. In addition to all their other duties, they have to stock, organize, and deliver the food. There are simply not enough hours in the day to accomplish all the tasks. Considering the one-day a week availability, there is no data to support that this level of commitment is fulfilling the needs at this satellite campus, nor is there data that suggest they are not. More studies are needed to understand the needs at this campus and equate that need to the operational hours of the food program.

My research question was about the obstacles in establishing a food insecurity program. What I discovered is that my findings echo the findings of Ulleveg et al., (2021) and Cady (2020). My research has shown that partnering with institutional leadership, partnering with off campus resources, having a dedicated space, a sustainability plan, significant budgetary resources, and a dedicated staffing plan, all need to be addressed and were identified as obstacles by the respondents in my research.

Partnerships were identified as being crucial to success. These partnerships can be divided into two categories, internal and external. Internal partnerships mean having a partnership with the post-secondary institution in which the food insecurity program operates. Student associations are separate from the institutions, as such, they need to negotiate for space and resources on campuses. Food insecurity programs should have a partnership which includes both a financial and space commitment with the institution in which they operate.

External partnerships mean aligning with community food banks for a consistent food supply. The lack of external partnerships is cause for concern. Food insecurity programs lack the ability to have a long-term viability plan if they cannot establish a stable and long-term food supply. Relying on outside partnerships for food donations, while understandable given limited resources, is not a sustainable approach when those partnerships can end at any time. Food insecurity programs should work to establish their own food supply chains that are completely within their control. It is important for food insecurity programs to foster strong relationships within the institutions they serve and the community they operate.

As post-secondary institutions, or student associations, build out their food insecurity programs, there comes a time where they realize they lack the ability to function as a major purchaser in the food space. This causes problems when negotiating contracts, forcing institutions to buy at retail prices rather than wholesale prices. One institution's food program is combating this by trying to form a collaboration between many different post-secondary institutions where resources could be shared. By forming a collaborative, food supply contracts could be negotiated on more favorable terms. This collaboration is an ideal goal, and it is progressing. Currently, there is a draft proposal, but it is a slow process for the singular employee spearheading this idea. There is not enough time in the day to promote a new collaboration, run the program, and complete their other duties. In addition, now is not the time to be asking for new resources given the economic climate at that institution. For now, the collaboration effort is moving slowly, and time will tell if it results in change.

Student interface issues are also important. Each food insecurity program started with a low barriers model. While noble, having an open-door policy, with low barriers to entry and no rules, presented significant problems during the first two years of operation for one program. Students dropping by for a snack, students fighting over the best food, students taking more than they need are all products of human nature and a food program is not above that. Rules need to be in place and a student interface plan is necessary for the operation. During the third year of operation, one institution changed the student interface model from a shopping cart model, where students get to choose what they want to a standard food box model where standardization and equity was the focus. This change eliminated many student issues. More research is needed to determine the best practice in student interface for these programs.

Food insecurity programs require volunteers to operate, and this is a situation that needs to change. In discussions with my respondents, it was determined that for every hour of food bank operation it requires approximately 18 hours of preparatory work by food bank staff or volunteers. This includes the time it takes to buy and transport food from the donation sites back to the campus and the time needed to organize and prepare the food program service location. This means that one full-time person can only operate a program for 1.5 hours a week. This is a major reason for the hours of most programs – there are not enough personnel employed to run them.

Another important need is for food insecurity programs to better define their mission statement. When starting a food bank, one institution was fighting fears that the program would attract homeless people, attract crime, and give a bad look to the campus. None of that happened. Another program indicated that students like to have snacks available rather than food boxes. This indicates that food insecurity programs are not clearly understood by the institutions or the students. Further study is needed to determine the perceptions of what a food insecurity program should provide and what services are best needed.

Food programs also need clear ownership. Feeding students is not a mental health service, it is not student advocacy, it is not external relations. Where does ownership of the food programs reside within a post-secondary institute? There was a clear indication that the people running these programs were doing so in addition to their other duties. "*Working off the side of their desk*" was a common response from respondents. Given the time demands, the amount of work required, the amount of time spent negotiating external partnerships, grant writing, and other needs, dedicated staffing with clear ownership of the food program is warranted.

Both institutions indicated the continuing state of reacting to food insecurity rather than planning for the needs of the food insecure. This is because of the lack of resources and staffing that keep these programs running week to week rather than allowing for development of a long-term sustainability plan.

Giving food to students is not a solution to the root cause of food insecurity. The cost of tuition, books, and learning materials, rent, living expenses, bills, and inflation all contribute to food insecurity. One method to combat this is to promote student fiscal responsibility. One institution is investing in financial planning literacy and financial bursaries to address the root cause of food insecurity. The institution is also looking at ways to ensure students are aware of the true cost of living expenses before they come to campus.

Post-secondary institutes are not islands, they exist in the spaces of the communities in which they are based. This means that they can affect the local communities in many ways. If students are waiting for student loans to come in, are between jobs, or have had unforeseen expenses, they will need help. If that help is not

available at the institute, students will go to local food banks. One institute reported that the local community food bank was seeing an increasing number of students looking for food, straining the food bank's food supply. The community also reported that they have food available, it just needs to be logistically organized to be picked up. The food program in question has applied for a community engagement grant to purchase a food delivery truck so they can alleviate the strain the students are causing on the community food bank and engage with the community to get excess food to the institute's food bank. By working with the community, the institute is working to keep everyone engaged in the solution to food insecurity. This builds stronger ties with the local community.

One institution has formed a food insecurity working group. This is a collection of people spanning the institute's student services, financial aid, managers and others willing to help with food insecurity. One respondent was selected for my research because they were a member of this working group. The respondent indicated that the working group lacks a mission statement or clear purpose. Without funding or the ability to direct funding from elsewhere, the respondent felt the working group is nothing more than a group of people who simply talk about food insecurity. Without a member of the executive team from the institution who can see the entirety of the food insecurity firsthand, they saw little point to the working group. The working group should determine the future direction and mission goals of the working group to better serve their purpose.

Both institutions have multiple satellite campuses. By their nature, satellite campus present common characteristics across most post-secondary institutions. These campuses are isolated from the main campus and often isolated from student services. Their cultures are typically unique from the main campus. They present both challenges and opportunities that are not present at main campuses. Food transportation to satellite campus adds an extra layer of complexity. Not only does food have to be picked up during the week at the main campus, but it also then needs to be transported again to the satellite campus. Any unused food needs to be brought back to the main campus at the end of the days service. With multiple satellite campuses, this need to be done multiple time a week.

Program awareness was mentioned by respondents as a challenge at one campus due to the campus layout and the student association office location. The satellite campus where I work as an instructor illustrates both challenges and



opportunities regarding awareness and location. First, there is the geometry of the campus. There is a centre area where every student must pass through multiple times a day. This allows the food program to set up in an area where there is maximum visibility. This is not the case at other campus where the food insecurity program set up is difficult for students to notice, and often students are not aware the program has set up for the day. The campus where I work has a few hundred students, the way the campus is designed and the location of the student association office means that all the students see the office and see the student's association representative, for the entire time they are on campus. This offers three advantages: the students get to know the representative and develop a sense of trust through that constant contact, the food program is highly visible, and the food program is easily accessed. The sense of trust between the students and student representative was identified as a key reason the student representative knows there is a food insecurity problem at the campus. The students feel comfortable enough to confide in them. Shame is associated with food insecurity (Maynard et al., 2018), developing trust has been key to overcoming that shame and removing that barrier to the food program. This indicates that work needs to be done on education and understanding around food insecurity because there is nothing shameful about being food insecure.

Trust at the satellite campus is a positive for the campus, and an indication of the compassion the student association representatives have. It is not easy to develop enough trust with students that they confide their food insecurity. This trust is critical to identifying the food insecurity rates at this satellite campus since the student body refreshes every 16 months, at a rate of 5% per month. This rate of turnover is not the case at traditional four-year degree institutions, where students are at the institution for significantly longer, allowing for more stable data collection and analysis. Considering the difficulty in obtaining trustworthy data on the rates of food insecurity, developing trust between the student and the food insecurity program is an important way to gauge the rates of food insecurity at this campus.

In closing this discussion, I would like to recognize the hard work of the student associations and the institutional staff and managers who lead the work of food insecurity programs. These people deserve to be recognized! Without their dedication and concern for student wellbeing there would be no food insecurity programs

## Research Improvement Areas

In this research I focused on the front-line workers of food insecurity programs. If I were to repeat this research, I would include upper executives of the institutions. In this way both sides of the partnership equation could be examined. Having high-level decision makers to have input in this study would have allowed me to better understand the level of institutional buy-in in these two food insecurity programs.

There was considerable disadvantage to my research by not being able to quote the participants. Hearing the voices of the participants would have added to the trustworthiness of the research. If I were to do this again I would have pushed harder to not have that restriction imposed on me by one of the institutions ethics boards or chosen a different post secondary institute to work with.

## Recommendations

Food insecurity programs require substantial behind-the-scenes resources. Those considering starting a food insecurity program would be well served to consider having the following in place:

1. A sustainability plan, providing a clear path forward and mission statement.

Operating day to day is not a sustainable solution. Food insecurity programs need to accept that food insecurity will be a foreseeable problem in the years to come, they need to begin planning for continued operation rather than just surviving. They

2. A stable food Supply

Relying on outside food banks is not a stable method of acquiring food. Food programs need to move in a direction that enables them to be in control of their own food sources. Establishment of a food source complete within the control of the institute should be established.

3. Transportation plans in place.

Food can not be acquired or delivered if it can not be transported. Establish a reliable food transportation network is important.

4. Sufficient dedicated storage.

Food insecurity programs need to establish long term storage and operating space at all campuses.

5. Well defined student interface locations.

Having consistent and regular student interface location will allow students to better understand where and when food is available for pick up. Finding centralized location will allow for better awareness and access

6. Proper staffing.

Food insecurity programs require dedicated staffing. The amount of work required to run these programs is not something that can be done part time or off the side desks.

7. Institutional partnerships.

Food insecurity programs need to establish buy in and financial support from the institution in which they operate.

8. Educational clarity regarding what food insecurity means and how it should be understood.

Food insecurity should not be viewed as shameful, a location for snacks, or free groceries. What services the food insecurity are providing need to be understood and explained to the student body, institution, and faculty.

9. Trust needs be developed between the food programs and the students in need.

Students need to feel that there will be no judgement at the food program. Trust is an important relationship between students and food insecurity staff.

10 Clear ownership of the food program

Food programs should be clearly identified as to who is responsible for the operation. They cannot be run off the side of someone's desk. Clear ownership is needed.

Specific recommendations for the existing programs that were included in this study, future work should include:

1. Promote the awareness of the food programs, so students know when they are available and the resources that the program has.
2. Define the role and purpose of advisory groups. The advisory groups should not just be monthly meeting with no measurable contribution to the obstacles facing the food insecurity programs.

3. Develop collaborations with other post-secondary food programs. Institutional programs can not fight this problem on their own.
4. Develop plans for long-term sustainability. Existing in a constant state of reaction is not a viable option for long term solutions, and work should be done to eliminate this situation.

Food insecurity is not a short-term problem that will solve itself. Future programs will have to have all these point in place if they wish to be successful and have a long-term viability.

## **Recommendations for Future Research**

Learning more about food security and insecurity on post-secondary campuses is important for both understanding the general issues students face and specific ways the institutions can better support their students. Future research could provide valuable information for these and future food insecurity programs through:

1. Understanding food insecurity needs at different types of post-secondary institutes.
2. Determining what the best student interface options.
3. Research is needed to determine what services a food insecurity program should provide from the perspective of students.
4. Research is needed to better understand what is making students food insecure.
5. The place of food programs in the variety of approaches to addressing food insecurity.

## **Conclusion**

One suggestion currently being investigated by one of the institutions is the establishment of a campus grocery store. This store would operate as a nonprofit, offering deep discounts on groceries, be expanded as a chain across all post-secondary

schools, and only available to post-secondary students. This has several distinct advantages. Buying power will greatly increase and a stable food supply can be established. A campus wide grocery store would benefit all students, not just those with food insecurity. The non-profit grocery store could employ students and could be run in coordination with post-secondary institutions and student associations. This concept is in the early stages of development but could move beyond current deficit-based approaches to help bring a long-term sustainable response to supporting student food security.

Going forward, post-secondary institutions will have to face a reality that they have never faced: they will have to decide if they are responsible for helping feed their students in need. The moral question of feeding students is a question of societal values, entrenched in politics and beliefs. I believe that the institutions should help feed their students. However, there is an economic reality that must be faced. Institutions have limited resources and cannot fund everything. Institutions will have to find a compromise between protecting economic resources and meeting student needs.

## References

- Broton, K.M., Cady, C.L., (eds). (2020). *Food Insecurity on Campus: Action and Intervention*. Johns Hopkins University Press.  
<https://jhupbooks.press.jhu.edu/title/food-insecurity-campus>
- Brownfield, N., Quinn, S., Bates, G., & Thielking, M. (2023). What is eating Gilbert's grades? *Journal of Further and Higher Education*.  
<https://doi.org/10.1080/0309877X.2023.2176203>
- Cady, C.L.,(2020). If Not Us, Who? Building National Capacity to Address Student Food Insecurity through CUFBA. *Food Insecurity on Campus: Action and Intervention*. IN K.M. Broton, C.L. Cady, C.L., (eds), *Food Insecurity on Campus: Action and Intervention (Pg 33-53)*. Johns Hopkins University Press.  
<https://jhupbooks.press.jhu.edu/title/food-insecurity-campus>
- Cox, R., (2012). Teaching Qualitative Research to Practitioner-Researchers. (2012). *Theory Into Practice*, 51:129-136,  
<https://www.tandfonline.com/doi/pdf/10.1080/00405841.2012.662868>
- Creswell, J.W., Creswell, J.D., (2023). *Research Design Qualitative Quantitative and Mixed Methods*. Six edition. Sage
- DeCarlo, M., Cummings, C., Agnelli, K., & Laitsch, D. (2022). Graduate research methods in education (leadership): A project-based approach. Version 2.12.14.17-19.22. BC Campus. <https://pressbooks.bccampus.ca/dlaitsch/>
- Lankford, D., Bernstein, J., Green, A., Mikati, N., Petrosky, S., Jacobs, J. J. (2022). Sociodemographic Correlates of Food Insecurity in Students Attending a Private University: A Cross-Sectional, Descriptive Study. Palo Alto: Cureus Inc.  
<https://DOI:10.7759/cureus.28987>
- Government of Canada. (February 18, 2020), Household Food Insecurity in Canada  
<https://www.canada.ca/en/health-canada/services/food-nutrition/food-nutrition-surveillance/health-nutrition-surveys/canadian-community-health-survey-cchs/household-food-insecurity-canada-overview.html>
- Maynard, M. S., Meyer, S. B., Perlman, C. M., & Kirkpatrick, S. I. (2018). Experiences of Food Insecurity Among Undergraduate Students: "You Can't Starve Yourself Through School" *Canadian Journal of Higher Education* (2018), 48 (2), 130–148.  
<https://doi.org/10.47678/cjhe.v48i2.188121>
- Meal Exchange. (2016) *Hungry for Knowledge: Assessing the Prevalence of Student Food Insecurity on Five Canadian Campuses*.  
[https://cpcml.ca/publications2016/161027-hungry\\_for\\_Knowledge.pdf](https://cpcml.ca/publications2016/161027-hungry_for_Knowledge.pdf)

- Meal Exchange. (2021). 2021 National Student Food Insecurity Report.  
[www.mealexchange.com/resources](http://www.mealexchange.com/resources)
- Murphy, R.A., Guo, Y.G., Cordeiro, H.S.M.P., Stroshein, S., Hamilton, C., Kozicky, S., w. (2022). Food Hubs as a Means to Promote Food Security in Post-Secondary Institutions: A Scoping Review. *Nutrients* 2022, 14, 3951. <https://doi.org/10.3390/nu14193951>
- Richards, R., Stokes, N., Banna, J., Cluskey, M., Bergen, M., Thomas, V., Bushnell, M., & Christensen, R. (2023). A Comparison of Experiences with Factors Related to Food Insecurity between College Students Who Are Food Secure and Food Insecure: A Qualitative Study. *Journal of the Academy of Nutrition and Dietetics*, 123(3), 438-453.e2. <https://doi.org/10.1016/j.jand.2022.08.001>
- Tin, J. J., Williams, V., Perryment, G., & Montano, S. (2022). Prevalence of Food Insecurity in a community college district: relationship between food security and grade point average. *Community College Journal of Research and Practice*, 1–12. <https://doi.org/10.1080/10668926.2022.2114035>
- Meal Exchange. (2016) Hungry for Knowledge: Assessing the Prevalence of Student Food Insecurity on Five Canadian Campuses.  
[https://cpcml.ca/publications2016/161027-hungry\\_for\\_Knowledge.pdf](https://cpcml.ca/publications2016/161027-hungry_for_Knowledge.pdf)
- Meal Exchange. (2021). 2021 National Student Food Insecurity Report.  
[www.mealexchange.com/resources](http://www.mealexchange.com/resources)
- Silverthorn, D. (2016). Hungry for knowledge: Assessing the prevalence of student food insecurity on five Canadian campuses. Toronto: Meal Exchange. Retrieved from: <http://mealexchange.com>