

The “Starving Student’s” Pathway to Food Security at the University of Lethbridge

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Abstract

Food banks have existed since the 1980s, yet their demand has increased exponentially; in March 2023, there were nearly 2 million visits to food banks across Canada (Agriculture and Agri-Food Canada, 1998; Food Banks Canada, 2023). Food insecurity has often been studied through one field, but I have found that a multidisciplinary approach may broaden our understanding of how interconnected food insecurity is. This thesis will look at food insecurity amongst undergraduate students at the University of Lethbridge through three key lenses: access, affordability, and stigma. Data was collected qualitatively through six semi-structured interviews with second-year domestic undergraduate students to hear firsthand about their experiences as students navigating a geographically constrained campus amidst an affordability crisis. In order to visually capture the food desertification in the city of Lethbridge, a service area map between the street network and grocery store locations with a 1–3-kilometer walking distance was created using ArcGIS software. A few recurring themes from the interviews included that students may not perceive themselves as food insecure since they find their financial status stable despite frequently skipping meals. In addition, food secure and insecure students were very likely to push off eating while on campus if they did not pack anything despite their hunger due to the cost of food from on-campus vendors. Thus, the perception of food insecurity may appear distorted based on the normality of the increased cost of living. My research aims to add to the growing conversation surrounding student food insecurity and support institutions looking to create food secure campuses.

Key Words: food insecurity, stigma, food deserts, affordability, food banks

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Glossary

Food Desert: Is an area where more than a third of its residents are located more than 1.6-kilometres away from a grocery store selling nutritious food (Dhillon et al., 2019).

Food Literacy: Is an individual's ability to apply skills and knowledge they related to food and nutrition, so that they can buy and prepare food to make healthy choices. It also takes into consideration the economic, cultural, social, and physical factors related to food (Government of Canada, 2022).

Food Oasis: Is an area where all residents have adequate access to affordably nutritious food and beverages within a 1.6-kilometre walking distance (Yang et al., 2019).

Food Sovereignty: Is the right for every individual to have access to healthy and culturally appropriate produced foods within ethical food systems. This includes the growing, purchasing, selling, and eating of food and can be thought of as a more holistic system compared to food security (FAO of the UN, 2014).

Food Swamp: Is an area where residents have inadequate access to healthy alternatives and are left with an overabundance of fast-food chains and convenience stores (Chen & Gregg, 2017).

Dining Plan: The University of Lethbridge offers an eight-month meal plan students can opt into throughout their university degree (University of Lethbridge, 2024). This plan is mandatory for students who choose to live on campus in their first year within the following buildings: University Hall (Uhall), Kainai House, and Piikani House. Otherwise, it is up to the student if they choose to opt into the meal plan. There are two options to choose from based on your likelihood of eating on-campus on weekends or your typical daily consumption of food. These include the commuter plan that cost \$4,300 in the 2023/24 academic year and the standard plan that cost \$4,990 (University of Lethbridge, 2024). Rates were projected to increase for the following year.

Little Library Pantries: On the University of Lethbridge campus there are six bookshelves spread out across campus that are stocked weekly with non-perishable items from the ULSU food bank and from adopted pantry donors (Food for Thought, n.d.).

Upass: Is the University of Lethbridge Transit Pass for students to have unlimited access to the City of Lethbridge transit system (ULSU, 2023). This pass cost \$82 in the 2023/24 academic year and is applied to your student fees. Some students can opt out of this pass, but they must meet the following requirements: “students living in residence on campus; students enrolled in online courses and Calgary Campus students; students who live outside of Lethbridge but within an 80-kilometre radius; students registered as a CNIB or Para-transit student; and some Co-op and Practicum students” (ULSU, 2023).

Urban Market: Is one of the food vendors available on the University of Lethbridge Campus and the one most commonly accessed by students on the dining plan.

Chapter One: Introduction

Research Background

Post-secondary students have always lived on a budget to get by in their undergraduate degrees, which is how the stereotype of ‘the starving college student’ who relies on instant noodles and kraft dinner to survive was born. Unfortunately, the constant reinforcement of this stereotype has left many students unable to identify themselves as food insecure (Watkins, 2022), leaving them to believe the level of precarity they face around food is normal when it comes to missing a couple meals a week. Studies in K-12 schools have shown that reduced access to nutritious food and routine meals strains academic performance (Watkins, 2021). Yet, when students move into the post-secondary system this fact is not met with the same level of care or acknowledgement. Hughes et al. (2011, p.1) refer to student food insecurity on campuses as “the skeleton in the university closet.” In recent years, awareness of student food insecurity has grown and led to research measuring how severe food insecurity is on university campuses. Institutions across Canada have found rates of food insecurity to range from 25 to 56.8 percent (Entz et al., 2017; Food for Thought, 2022; Meal Exchange, 2021; Olauson et al., 2018). These rates look comparable to national averages, but fail to consider the population of post-secondary students is a much smaller demographic compared to other groups on a national scale (Food Banks Canada, 2023). In other words, food insecurity is having a substantial impact on post-secondary students compared to other demographic subgroups in Canada.

Understanding of how a person becomes food insecure and what factors contribute to one’s existing food insecurity is not always straightforward. For example, people who are not food insecure may perceive individuals who are as only being challenged to access food rather than facing financial difficulties (Li T et al., 2023). Food Banks Canada (2023) found the cost of food,

cost of housing, and low wages or limited available hours at work were key contributors as to why people were accessing a food bank. Inflation has caused many people to change their purchasing habits at grocery stores since food prices increased 10.3 percent between September of 2021 and 2022 according to one study conducted in Halifax (Dalhousie University et al., 2023). These purchasing habits may present themselves as changing brands or opting for non-perishables with longer shelf lives instead of fresh produce.

Another factor contributing to an individual's purchasing habits and access to nutritious food is food desertification. This is when an individual lives more than a 1.6-kilometre walking distance from a grocery store (Yang et al., 2019). These food deserted neighbourhoods are most commonly found amongst areas with high numbers of low sociodemographic individuals as well as post-secondary students (Slater et al., 2017; Smoyer-Tomic et al, 2010). Following the global COVID-19 pandemic, food delivery services have taken off and many young adults have found themselves turning to these services for the convenience of accessing nutritious meals with minimal leftovers or waste (Buettner et al., 2023). These services they tend to be more expensive than purchasing the groceries yourself to make a meal, which points to young adults' desire to pay more for the convenience even if it may cost them more economically.

With food insecurity continuing to rise amongst the post-secondary population as well as the larger Canadian population it is now vital to start moving towards sustainable solutions to not only combat food insecurity but reflect the concept of food sovereignty. Food banks have proven not to be a sustainable solution for food insecurity, but rather act as a temporary crutch. To provide context as to why food banks are not the strongest solution to food insecurity, it is crucial to look at user statistics since their introduction into Canada in 1981 (Agriculture and Agri-Food Canada, 1998). For example, their usage has gone up 78.5 percent since 2019 (Food Banks Canada, 2023).

Food banks' purpose in society is still a vital part of combating food insecurity, but with time more diverse solutions could be created for long term food security. At the post-secondary level institutions could frame their programming around building food secure campuses where the student body and the surrounding community can benefit from sustainable access to nutritious foods routinely.

The scholarship on food insecurity is not limited to geography, but requires an interdisciplinary and intersectional approach. For example, the landscape and urban design of Lethbridge does constrain ease of access to nutritious food, but people's perceptions around what is healthy or expensive in a grocery store also contribute to the consumption of nutritious food. Crucially, poor nutrition is strongly associated with poor mental health and poor academic success. This study has three key research questions that include: (1) how the current restraints faced by University of Lethbridge students affect their access to affordable, nutritious food; (2) how students understand food insecurity and whether this understanding affects their perception of their own situations; (3) students' knowledge about the resources available to them on campus. Based off these questions the purpose of my thesis is to expand the conversation around food insecurity on university campuses by connecting key concepts together including nutrition, health, stigma, access, and affordability. Building from existing literature and information gathered from interviews with students at the University of Lethbridge, I also aim to provide recommendations for institutions to work towards creating food secure campuses.

Study Significance

Research in student food insecurity has continued to grow over the last decade, but the focus has predominantly been at larger campuses across Canada. Furthermore, limited studies have been completed following the disruptions of the COVID-19 pandemic and how this has influenced

student lifestyles. As a result, researchers and smaller institutions like the University of Lethbridge have a limited understanding of the severity of food insecurity on their campuses. In the case of the University of Lethbridge, it has an additional barrier for students without a vehicle due to its geographical constraints and the limitations of its public transportation system. Previous studies have often focused on an element of food insecurity such as stigma, mental health, or access to food, but my thesis draws these themes together to better ground the conversation surrounding the dynamics of student food insecurity post-COVID-19.

Research Objectives

- Demonstrate the connection between food deserts and how limited transportation options cause precarity in accessing nutritious food within the City of Lethbridge.
- Understand how students' perceptions of their food insecurity status influences them accessing available support systems.
- Suggest avenues for mitigating food insecurity on the University of Lethbridge campus.

This thesis is divided into seven chapters with a few appendixes attached below. Following the introduction is the literature review, which will give an overview about what other researchers, governments, and non-profits have done in the realm of food insecurity. With my study being located in a very specific region, I have provided a context section with more information about the landscape of the University and City of Lethbridge. I will then discuss my methodology including the limitations of the study. After my methodology is the results section, where I will go over key topics and findings that came out of my semi-structured interviews. The discussion follows my results section where I will highlight why this study matters and what my key contributions are. The final chapter concludes by offering possible suggestions for moving towards a food secure campus.

Chapter Two: Literature Review

History of Food Insecurity

Within Canada there has been a growing understanding around the topic of food insecurity in addition to increased efforts by the Canadian government to curb the impacts people are facing. After the World Food Summit in 1996, Agriculture and Agri-Food Canada drafted an action plan to reduce the number of undernourished people by no later than 2015 (Agriculture and Agri-Food Canada, 1998). Unfortunately, the number of undernourished or food insecure people has only continued to rise. Food banks were first introduced in 1981 and by 1997 their use had doubled. In March 2023 alone there were nearly 2 million visits to food banks across Canada (Food Banks Canada, 2023).

Food Banks Canada (2023) stated the main contributors to people accessing a food bank in March 2023 came down to cost of food, cost of housing, and low wages or limited hours of available work. Since 2019 food banks usage across Canada has increased by 78.5 percent. In Alberta 40.9 percent of those accessing a food bank were people without any dependents or partners. Furthermore, 64.7 percent of people were within market rentals compared to other housing types such as social housing, homeowners, band-owned housing, and unhoused/temporary shelters (Food Banks Canada, 2023). PROOF in the seventh report of Household Food Insecurity in Canada stated Alberta had the highest rate of severely food insecure households, and cumulatively across all categories of food insecurity including severely, moderately, and marginally insecure Alberta had the second highest rate of food insecurity compared to the rest of the country in 2022 (Li T et al., 2023).

There are many misconceptions about food insecurity and how or why people become food insecure. According to the Government of Canada (2020) “food insecurity is the inability to

acquire or consume an adequate or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so.” The largest misconception connected to food insecurity is the assumption of people’s struggles solely stemming from accessing food, when in reality it is related to a combination of factors most commonly reflected by an individual’s financial security (Li T et al., 2023). Those who typically access the food bank have nowhere else to turn and are in dire need. Food Banks Canada (2023) also reported most individuals they surveyed found themselves eating less or missing payments like electricity so that they could eat in order to avoid accessing a food bank.

Food Desertification

The cost of living is not the only contending factor as to why individuals are eating less than they should, or accessing food banks. In the last two decades more researchers have examined food desertification, which is when an individual is more than a 1.6-kilometer walking distance away from affordable, nutritious food (Yang et al., 2019). The severity of food desertification varies between cities within Canada and internationally, but a few contributors to this urban development dilemma are land use bylaws and vehicle dependency (Bedore, 2013; Martinez et al., 2019). The expansion of many cities has left the urban core as well as outer suburb areas with greater commuting distances to supermarkets (Slater et al., 2017). Furthermore, general trends have also demonstrated many food deserts are located among lower socioeconomic status neighbourhoods (Slater et al., 2017; Smoyer-Tomic et al., 2010). Connected to the phenomenon of food desertification is the emergence of food swamps. A food swamp is an area that offers limited access to healthy alternatives but has a surplus of fast food and convenience stores (Yang et al., 2019).

Wang et al. (2014) argued that integrating more community gardens and farmers markets across the City of Edmonton could help reduce the severity of food desertification. This approach proved to be successful within the inner city with mature neighbourhoods, but neighbourhoods on the outskirts such as the southwest and east end of the city still faced some food desertification. In the state of Washington this approach had similar success where it reduced the severity of food desertification, but did not entirely wipe it out (Sage et al., 2013). An important caveat, however, is that these spaces would not be available throughout the whole year, so they would only act as seasonal supports. Therefore, these zones in each city would still be considered food deserts.

Strome et al. (2016) found there to be a strong connection between proximity and people's desire to access fresh fruits and vegetables. Food insecure households who did not own a car were less likely to purchase fresh fruits and vegetables than those who did. Their study also concluded access to small food stores, not just supermarkets, increased the probability of people purchasing fresh vegetables, but not fruit. Lastly, they argue that increasing the density of full-service supermarkets within urban areas to alleviate food desertification does not always effectively reduce negative health impacts and habits. However, increasing access to mobile fresh food markets or small food stores has greater positive impacts on the effected communities (Strome et al., 2016). Shannon (2016) similarly questions whether constructing more supermarkets can address the food desert dilemma, as there has not been enough research into the possible positive impacts of large retail grocers in suburban neighbourhoods in order to conclude improved nutrition and economic circumstances.

On the specific issue of food insecurity among post-secondary students, Smoyer-Tomic et al. (2010) discovered a pattern amongst the food desert clusters in Edmonton many of which were also zones where large numbers of university students resided. Dhillon et al. (2019) made this

connection as well, amongst a minority-serving university in the state of California. So, not only do lower income households typically land in food deserted areas, but neighbourhoods where students typically reside show a similar trend of food desertification. Within the context of Lethbridge, Nugent (2011) stated students traded being close in proximity to their studies for reduced access to an affordable grocery store. Additionally, around the time of their study only one grocery store was on the West side of the city, where the University of Lethbridge is located, and another was under construction.

Increased Popularity of Delivery Services

In recent years food delivery services have taken off, especially since the COVID-19 pandemic. Buettner et al. (2023) found full-time students on campuses with perceived lack of healthy or affordable alternatives are more likely to seek delivery services for food whether it is groceries or other fast-food alternatives. Thus, university students may be enticed to frequently access food delivery apps to obtain healthier alternatives when their campus lies in a food desert or swamp. Furthermore, in a study of young adults who had experienced food insecurity in the last 12 months, Buettner et al. (2023) learned many use food delivery apps to purchase food as they see it as a less stressful experience than shopping for themselves or view it as a quicker way to gain access to a broader range of food. Another factor affecting increased use of delivery services is young adults' comfort or knowledge around cooking for themselves since ordering food ensures you get ready made meals with minimal leftovers or waste (Buettner et al., 2023). Another challenge connected to food insecurity is food literacy, which is an individual's ability to skillfully plan and prepare a nutritious meal (Pepetone et al., 2021). In addition, Pepetone et al. (2021) found 25 percent of meals young adults made for themselves in a week came from ready-to-eat or boxed foods.

Awareness about Food Insecurity

Overall, student food insecurity is something most of us are aware of, but it is never entirely acknowledged: Hughes et al. (2011, p.1) explain it as “the skeleton in the university closet”. This quote can really illustrate how the severity of food insecurity has only gotten worse over the years. For example, the World Health Organization (n.d.) has food insecurity listed as one of the twelve social determinants of health, yet food banks are in greater demand. At the University of Lethbridge, it was found that in 2022 7.4 percent of students have accessed the university food bank and 1 in 4 students admit to running out of food before they have the funds to purchase more (Food for Thought, 2022). Other institutions such as the University of Saskatchewan found 39.5 percent of students faced food insecurity at varying levels amongst a study of 1,282 students (Olauson et al., 2018). Additionally, the University of Manitoba in 2015 to 2016 saw a rate of 35.3 percent food insecurity amongst 548 survey participants (Entz et al., 2017). Finally, Meal Exchange (2021) conducted an online survey at thirteen campuses across Canada with 6,167 student responses and amongst these students 56.8 percent experienced food insecurity. The University of Lethbridge was one of the participating universities, but the response rate was only 160 students making up 2.6 percent of the student population. Amongst the other universities involved in this study the University of Lethbridge was declared to have the worst rate of food insecurity. The other institutions involved in this study also did not have high response rates making the food insecurity rates over-reported (Meal Exchange, 2021).

Food Insecurity Perceptions and Stigma

The narrative of the “starving student” has become a damaging stereotype that may also contribute to the issues related to post-secondary food insecurity. It is assumed to be ‘normal’ for students to have issues making ends meet or to resort to living off kraft dinner and ramen noodles.

This is one of the key contributors as to why many students are uncomfortable about asking for help (Henry, 2017). This is not to say general societal pressure and stigma around accessing resources like the food bank are not main deterrents for students going hungry, but the starving student stereotype has made post-secondary students think it is not unusual for them to feel hungry on a regular basis. Furthermore, this stereotype has affected students' ability to receive assistance from family since some families perceive financial struggle as the norm from their college days (Henry, 2017).

Beyond the starving student stereotype many post-secondary students feel guilty about asking for money from their parents who they know struggle with making ends meet. In addition, post-secondary students want to show they are responsible and independent from their family, making them less likely to share their financial struggles with family members (Maynard et al., 2018). The move into the adult life is challenging and post-secondary students' identities are constantly changing as they grapple with maintaining their emergent independence (Watkins, 2021). Many students may avoid accessing resources available to them if they think others may judge them. The worry of others thinking they do not deserve to be there because of their short funds for food is a significant hinderance to students (Peterson et al., 2022). Additionally, students may perceive that they are 'not as in need as the next student' causing them to decline assistance. Just like the starving student stereotype, the stigma around being food insecure is what stops many students from acknowledging they may fall into this category. The stigmatization around food insecurity had a stronger connection with marginalized post-secondary students who may already face discrimination in different avenues of their academic career (Peterson et al., 2022). Therefore, they are more likely to internalize the stereotypes that come along with strained financial situations or poor food literacy.

Food Insecurity Impacts on Students Health

The strain of experiencing regular to infrequent food insecurity can also cause increased stress and anxiety for post-secondary students. This can manifest in different ways such as increased fear of how others perceive them, worrying about how or when they will get their next meal, reduced focus on their studies, etc. (Peterson et al., 2022). Howard and Barker (2021) found in their cross-sectional study in Alberta, Quebec, and Ontario that first year university students facing food insecurity are more likely to have poorer mental health throughout their studies. This study looked primarily at anxiety, depression, and low satisfaction with life. Students at the University of Saskatchewan reported that being food insecure not only affected their mental health but contributed to their poor physical health, academic standing, and social isolation (Olauson et al., 2018). The Memorial University of Newfoundland found similar results where students who faced moderate to severe food insecurity were more likely to rate their stress levels as high (Blundell & Mathews, 2021). Furthermore, their mental and physical health was more likely to decline with moderate to severe food insecurity. Overall, out of the 967 students who participated in the study, 58.01 percent identified as being some level of food insecure (Blundell & Mathews, 2021).

Impacts on University Programs

All of these factors intersect, which leads many students who could benefit from assistance to avoid accessing the services many campuses have in place. For example, at the University of Saskatchewan they have a food bank available to students, but less than 1 percent of student participants in their study reported accessing it in the last 12 months (Olauson et al., 2018). Peterson et al., (2022) at the University of North Carolina reported 38.9 percent of their participants

felt shame, fear, or embarrassment in asking for help and 58.8 percent did not access resources because they felt someone else is more deserving or in need.

Perceptions around Food Costs

Preconceived bias or perception affects our day-to-day lives more than just when accessing a food bank. For example, Daniel (2020) explains that people may have preconceived notions about which foods are pricier. Based on his research with low-income participants, Daniel assigned these notions two categories: absolute and relative judgments. Some examples of absolute judgements included food waste, multiple packages of food that may contain more than they need, quick consumable foods, and food that provided minimal satiation, while relative judgements included comparing prices in relation to one another rather than basing them on a resource to need ratio. Although this study focuses on the cost of food, the choices participants made did not always reflect their budget or economic status, such as purchasing foods for convenience and enjoyment. Another shift within consumer purchasing habits is purchasing more frozen fruits and vegetables rather than fresh ones as they have an extended shelf life, reducing their food waste and saving them money (Renner et al, 2021; Zboraj, 2022). Furthermore, the debate about the affordability of healthy alternatives circulating on the internet has proven to be impactful in shaping peoples' bias or perception related to what foods they purchase at the grocery store. In order to curb perceptions of food cost and satiation, Daniel (2020) proposes cooking education programs to change habits around buying commercial meals that are unreasonably priced to wholesome homemade meals that have more nutritional value.

Recent studies have also begun to debunk the perception that local food products are more expensive than non-local products. Charlebois et al. (2023) studied 45 categories of products across two different study periods in 2022 in the province of Quebec and concluded that in most

instances buying locally will not cost consumers more. Donaher and Lynes (2016) conducted a similar study in Waterloo, Ontario, between May and October of 2010, finding no significant evidence that local Ontario produce was more expensive than non-local produce. Overall, the biggest barrier for low-income families to change their purchasing habits is reversing the perception that local products are pricier than non-locally sourced. Effective policy changes should focus on removing barriers for low-income families and other community members to access local products to ensure that perception does not get in the way of a predominantly locally sourced diet (Charlebois et al., 2023; Donaher & Lynes, 2016).

Food Inflation Causes and Effects

Collectively the price of food may be comparable on a local to a non-local scale, but food inflation rates from 2022 and 2023 draw a different conclusion. For example, between September of 2021 and 2022 as well as 2022 and 2023 the cost of food in Halifax increased 10.3 percent then 5.9 percent (Dalhousie University et al., 2023, 2024). The rates of inflation have decreased within the last year, but collectively food prices are still on the rise, which impacts students' ability to maintain a healthy diet with the same budget they had before these high rates of inflation. Three categories that saw the greatest spike in 2022 for food prices were Bakery [14.8%], Other [12.8%], and Vegetables [12.7%] (Dalhousie University et al., 2023). Comparatively the three highest observed changes in food prices within 2023 included Bakery [8%], Vegetables [7.6%], and Other [6.7%] (Dalhousie University et al., 2024). A common denominator between 2022 and 2023 that influenced these inflation rates is geopolitics. For example, the conflicts in Russia, Ukraine, the Middle East etc. have the potential to increase energy costs that drive the food prices up (Dalhousie University et al., 2023, 2024).

Regardless of the cause of inflation this relationship between food costs and individual budgets still influences people's decision to choose unhealthy alternatives that are more likely to leave them fuller at a lower cost (Barosh et al., 2024). Furthermore, the amount of income an individual takes home also influences their purchasing habits and awareness towards making ends meet (Barosh et al., 2024). So, even if individuals' perceptions change surrounding what they perceive as more expensive in a grocery store the level of inflation is still challenging to navigate (Donaher & Lynes, 2016).

A 2023 report of the Standing Committee on Agriculture and Agri-Food examined the rising food costs within Canada and offered 13 recommendations the House of Commons or the Government of Canada could consider for stimulating greater reciprocity in the economy (House of Commons Canada, 2023). In response, the government proposed *Bill C-56: The Affordable Housing and Groceries Act* in September 2023, which sought to address Recommendation 13: "The Committee recommends that the Government of Canada strengthen the Competition Bureau's mandate and its ability to ensure competition in the Canadian grocery sector by implementing legislative changes to the *Competition Act* that provide the Competition Bureau with the power to compel companies and individuals who are the subject of its market studies to provide it with relevant documents and information, including disaggregated financial data" (House of Commons, 2023, p. 50). Furthermore, the Competition Bureau of Canada (2023) released a study in June 2023 stating that more competition in the grocery retail space would promote more affordable grocery prices. If grocery prices were to see greater competition making nutritious food more affordable this would also assist in reducing food insecurity for some individuals who only became food insecure due to the recent affordability crisis.

In the Canadian context, in 1986 there were at least eight grocery chains and in 2023 there were only five large chain grocers. Additionally, Loblaw's and Sobey's profit margins have increased by approximately CAD\$300-700 million between 2019 and 2022 (Competition Bureau Canada, 2023). Alternatively, the Bouras et al. (2023) study initiated by the Bank of Canada, found most markup growth occurred in 2020 a year with low levels of inflation. Then by 2022, Canada saw the highest levels of inflation in recent history, but grocery markup rates were at a net zero. Thus, displaying competing ideas between the cause of the current affordability crisis within the grocery sector over the last three years.

Food Security Programing Comparison

At the University of Lethbridge, there is a robust number of initiatives available to the student body in comparison to other institutions in Alberta and across the country. One institution that has comparable initiatives is the University of British Columbia (UBC) in Vancouver. Their initiatives are larger in size, but their programing is on the same trajectory as the University of Lethbridge hopes to be. Both institutions have a food bank or a pantry model for students to pick up a few items; produce is available on a weekly or monthly basis for students to pay what they can from local producers; on-campus vegetable gardens are open for students to be involved in; and free lunch programs are available at both campuses with the caveat that UBC's model offers more lunches for four days a week (Food Hub Market, n.d.; Sprouts, n.d.; University of Lethbridge, n.d.).

In the last couple of years several food security programs have emerged at other campuses that are unique and would be interesting to see develop in the City of Lethbridge. At the University of Alberta, they have a yellow bus that drives students to a few different grocery stores on most Saturdays throughout September to April (University of Alberta, n.d.). This service also takes

students to some specialty stores on 34th Avenue, such as the Halal Meat Shop. A program that is external to the University of Calgary, but works in partnership with them, is Fresh Routes, which brings affordable produce to campus once a week (University of Calgary, n.d.). Fresh Routes is a mobile bus that stops at different locations around Calgary to make affordable nutritious food available to neighbourhoods facing barriers (Fresh Routes, 2023). At UBC an at-cost grocery store has recently opened with a student-led-governance model that works to bring affordable grocery essentials to students and the surrounding community (Food Hub Market, n.d.). Two other models to examine along the lines of these Alberta-based projects are GROW (n.d.) found in Niagara Falls, Ontario, and Anabel's Grocery (n.d.) located in Ithaca, New York, at Cornell University. Lastly, another great initiative at UBC is the Sprouts program, which has several initiatives but two of the most notable include the Sprouts Café and the Community Fridge (Sprouts, n.d.). The café is an at-cost model, so their price point is affordable for students and is still open to the public. Their Community Fridge initiative is always accessible and aims to also tackle food waste in addition to food insecurity. The fridge is also accompanied by a freezer and a dry goods pantry (Sprouts, n.d.).

Food Secure Spaces

Beyond what each campus community is currently executing to counteract food insecurity, a much larger picture we should look at is food sovereignty. Last year, I spoke to a student at UBC about their at-cost grocery store and during our conversation they mentioned their desire to no longer just battle food insecurity but work towards creating a food secure campus. The reason why this shift in mindset and goals is so important is because funding to support food banks and other programs may not always be there. So, moving towards sustainable solutions that revolve around food sovereignty where the need for external support is not at the detriment of the program is key to long-term food security. Building food secure campuses may look different at every institution

as each has diverse needs or resources they can pull from. For example, the University of Lethbridge is surrounded by agriculture and our food systems still have challenges with food waste, so building connections between external partners can benefit the student body and our community instrumentally.

Literature Review Summary

The field of food insecurity is very dynamic and affects multiple aspects of peoples lives and day-to-day decisions. Over the last several decades governments and academics have grown more aware of food insecurity, but so has the size and nature of this dilemma. At the University of Lethbridge, 19.2 percent of students sporadically run out of food and cannot afford to purchase more (Food for Thought, 2022). The ability to routinely purchase nutritious food has an overwhelming number of factors a few most notable from the literature are food desertification, the cost of living, and individual's perceptions and unseen stigma around food insecurity. Each city or post-secondary institution has taken different approaches to help fight food insecurity with creative solutions that best fit the needs of their populations. Through scoping out existing literature within this field it has helped ground this study's aim at informing the University of Lethbridge about the interconnected relationships between food desertification and students' perceptions and growing stigma towards food insecurity, to inform future programming and work towards creating a food secure campus.

Chapter Three: Context

Geographies of Lethbridge

The City of Lethbridge is located on traditional Blackfoot territory and has a population of 106,550 people as of the 2023 Municipal Census data (City of Lethbridge, 2023). There are also approximately 13,814 students who reside within the City of Lethbridge between the college and

the university campuses, who may not all be accounted for in the Municipal Census (Bay, 2023b; University of Lethbridge, 2023b). Lethbridge is also divided by an expansive coulee with the highest and longest trestle bridge in the world (Visit Lethbridge, n.d.). Its climate consists of frequent temperature shifts due to warm and moist westerly winds from the Pacific Ocean most commonly referred to as chinooks (Choose Lethbridge, n.d.). The City of Lethbridge is often broken into three sections from the North, South, and West side based on its growth across the coulee to define different regions of the city more clearly. This distinction is important to note, as the Westside has seen the most growth between 2019 and 2023, yet it has the smallest number of services available to its residents such as hotels, healthcare offices, shopping centres, etc. (City of Lethbridge, 2023).

Transportation Options and Costs

When community members think of public services such as the city transit system there are often positive remarks about how efficient the system is. Yet, people who share these sentiments are the least likely to be frequent users of the city transit system. Within Lethbridge not everyone has the same ease of access to bus routes, which may complicate the amount of time it takes to get to and from campus or work. Seen in *Figure 1* is a map of the Lethbridge transit system. Please note the DRZ areas, which are zones where a regular transit route does not run, so individuals must request the on-demand ride. Essentially this service is a collective taxi for neighbourhoods outside of the designated city transit routes where individuals can be picked up or dropped off at their homes from the nearest bus stop.

As an individual who has personally taken this service, I can vouch that this portion of your commute can range from a modest wait time of 5-20 minutes for the bus to arrive at your home or the station. Then it could take approximately 10-30 minutes on the bus before you are dropped off

at the nearest transit route or your home. The on-demand ride service fluctuates in commute time depending on how many other people need the service at the same time as you. Most university students live on the West side, which means they are most likely to use routes 51, 52, and 53. These three routes only operate from 6:00 am to 7:00 pm Monday through Saturday and do not run on Sunday, so those who live within DRZ 101B and 102B have access to the on-demand ride service (Lethbridge Transit, 2024). Otherwise, students are forced to take 1 Gold or 2 Blue and walk the remaining distance to their house.

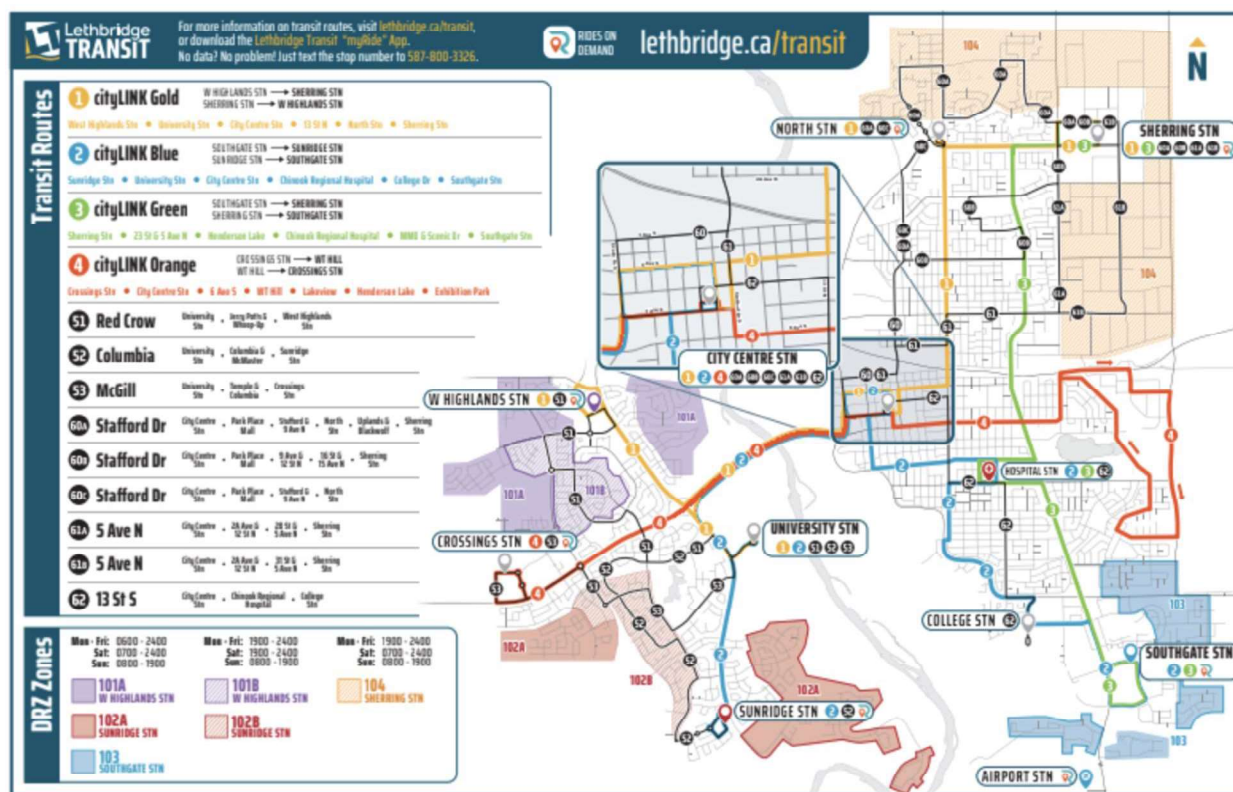


Figure 4. Lethbridge City Transit Bus Routes (Lethbridge Transit, 2024)

Students who have vehicles also have the option to enter a parking pass lottery where individuals are randomly selected to pay for a parking pass in lot E, F, or N (University of Lethbridge, 2023a). The prices in each of these lots vary, see Table 1 for price distribution and

Figure 2. for parking locations. Based on the price and location of the parking on campus some students also try and park in residential neighbourhoods across from the University of Lethbridge. In addition, the University Drive Alliance Church also holds their own parking pass lottery for students to enter, but their passes are free for whoever is randomly selected (University Drive Alliance Church, 2018). This church is approximately a 5-minute walk from the University of Lethbridge, which ends up being approximately the same time if you are an individual who arrives later to campus and parks in lot N.

Table 1. University of Lethbridge Student Parking Rates for Lot N, E, and F

Park Lot	8-month Rate
Lot N	\$384.00
Lot E	\$472.00
Lot F	\$604.00

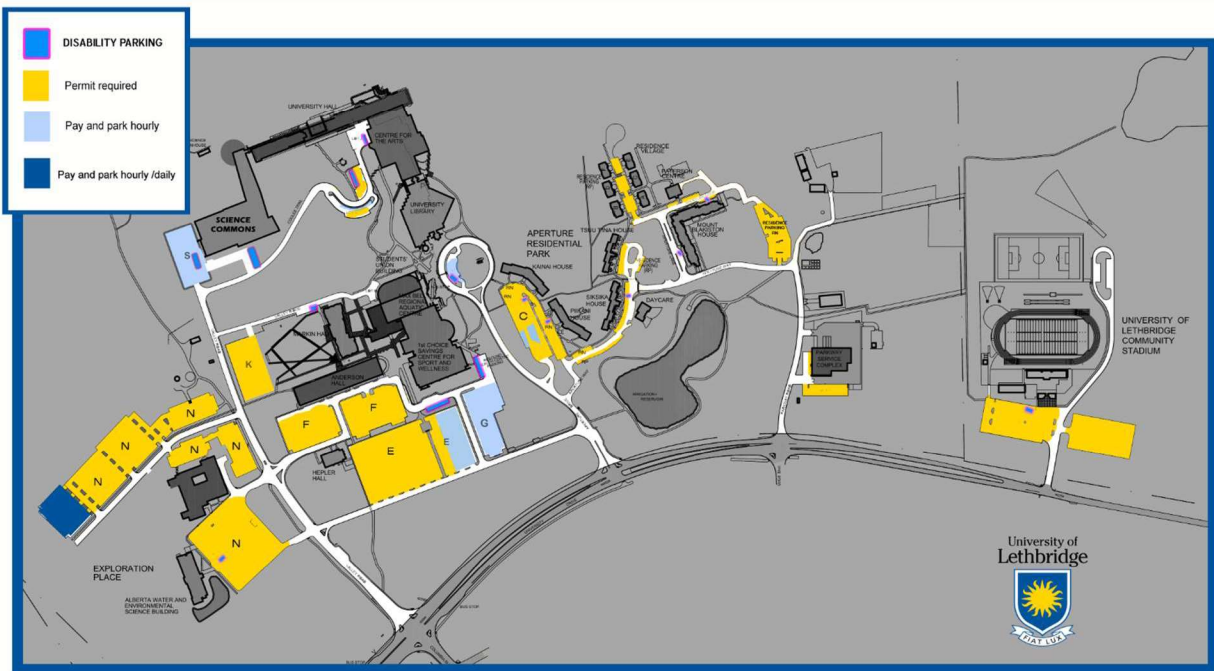


Figure 5. University of Lethbridge Campus Map (University of Lethbridge, n.d. b)

Westside Grocery Store Locations

Since the University of Lethbridge opened in 1967, the Westside of the city has grown, but the services available to these residents have not grown at the same rate. Nugent (2011) completed a student food insecurity study at the University of Lethbridge more than 10 years ago and at the time the Westside only had the Safeway grocery store available. This left no competition making the prices at the grocery store to be quite pricy, which drove many students to seek grocery stores across town, even if it meant long commute times on city transportation. Since then, two more grocery stores have opened on the West side of Lethbridge that can be seen in Appendix A.

Student Funding Options

There are a variety of ways students find to support themselves through school including part- or full-time work, scholarships and bursaries, government or bank loans, and personal or family savings. Within each province the amount and distribution of government loans looks different, which makes student experiences with post-secondary education dissimilar. For example, the Alberta government does not have a loan reduction strategy to assist students from accumulating too much debt, unlike other provinces (MacLaren, 2014). This value works out to approximately \$61,600 per student for an undergraduate degree (MacLaren, 2014). In the 2018/19 academic year, 60 percent of Canadian government loans were given to students entering their undergraduate program (Blair, 2024).

Before students apply for loans they often send in applications to a variety of scholarships and bursaries, especially if they are transitioning from high school to post-secondary as there are numerous entrance awards available. In Alberta every high school student has the opportunity to be awarded up to \$2,500 based on their academic achievement to encourage post-secondary studies (Alberta Student Aid, n.d.). At the University of Lethbridge in the 2021/22 academic year, 62

percent of new high school grads received some kind of financial award that averaged approximately \$1,041 (University of Lethbridge, 2022). Across Canada 544,055 full and part-time students are given grants for their post-secondary studies; *Figure 3*. displays the provincial distribution (Government of Canada, 2023). Students still have challenges navigating the scholarship and bursary space as they do not feel all awards are well advertised, feel they do not qualify, the criteria to apply is too niche, or they avoid applying for smaller scholarships and only focus on the larger ones (BeMo, 2024).

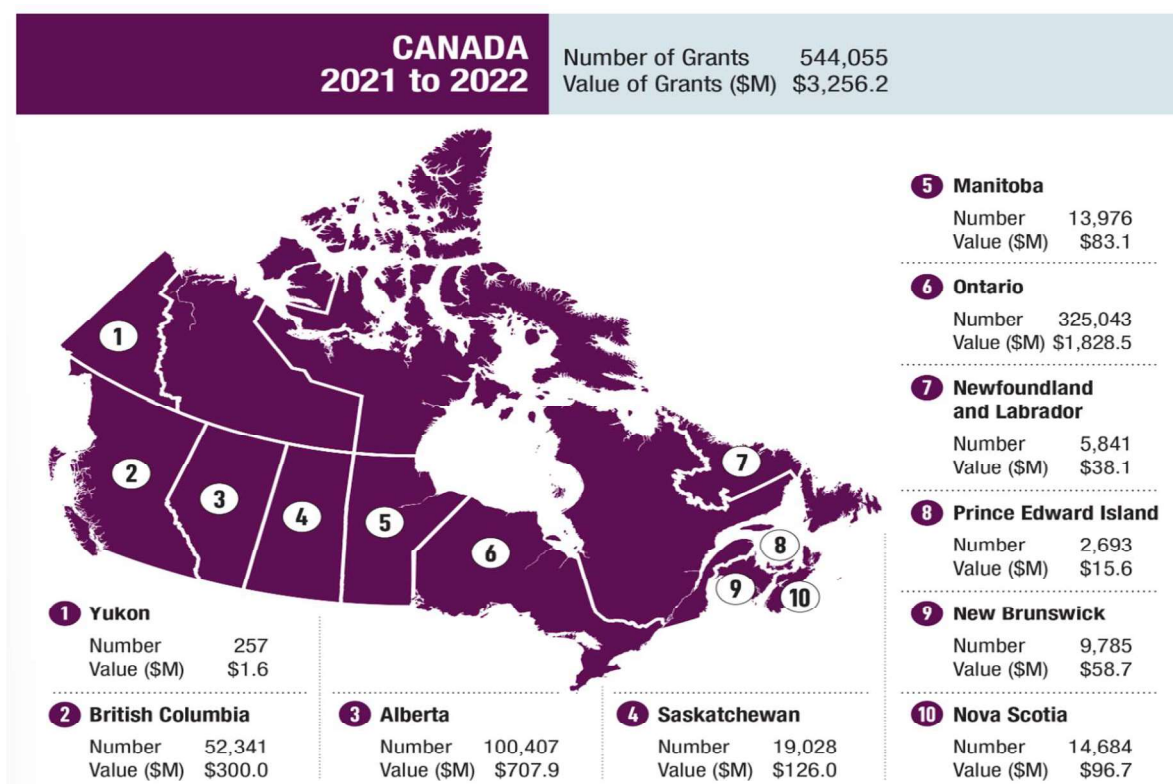


Figure 6. Canada Student Grants for Full and Part-time Students 2021/22 (Government of Canada, 2023)

Housing Affordability

The current economic climate displays not only a rise in the cost of food, but in rental prices. In Lethbridge rental prices have gone up 17.5-20.5 percent for a one-bedroom apartment and 15.2-18.2 percent for a two-bedroom suite in the last year (Bay, 2023a; Marczuk, 2023). Some economists suggest the average person should only dedicate 25-35 percent of their monthly income towards rent, which is easily being exceeded with the recent projections of housing costs that do not include the rise in utilities that many renters also pay (Liew, 2023).

Students are also the most common demographic to have multiple roommates to save on living expenses, but Zumper (2024) found the median rental price for a three-bedroom home in Lethbridge is \$1,660. This would work out to \$553 a person before utilities, which does not meet the recommended budget Alberta Student Aid (2024) sets out for those requiring financial assistance to get through post-secondary. Alberta Student Aid states a single person with no dependants only requires \$1340 monthly to live. This breaks down to \$551 for rent and utilities, \$706 for food, clothing, and personal items; and \$83 for transportation (Alberta Student Aid, 2024). This provides a sense of the complexity facing students as they try to manage the rise in housing accommodations on top of food expenses.

Chapter Four: Methodology

I took a qualitative approach with some references to quantitative data because I aimed to provide a nuanced glimpse into the importance of the issues discussed in this thesis. The primary reason why a qualitative approach was considered for this work was it explains processes and lived experiences without constricting an individual's life experience to a quantitative value (Hay & Cope, 2021). It also builds a context around situations that may be overlooked by quantitative research since not all experiences can be clearly defined within a specific category. The best

example of this is that not every individual may accurately represent themselves as food insecure in a survey where there are given limited choices to define their relationship with routinely accessing affordable, nutritious foods. So, survey responses may not always best represent your sample of participants' food security status.

This qualitative study aims to understand student perceptions and experiences with food insecurity to suggest avenues to create a more food secure campus. Before interviews commenced, the existing literature helped ground this study with information about food insecurity across Canada in relation to the affordability crisis and the transition out of COVID-19. The original core themes for coding the semi-structured interviews were access, affordability, and perception. When I went to analyze the interviews, I found these three themes restrictive in accounting for a student's whole experience with food insecurity. So, to analyze the various aspects discussed in all six interviews these were core themes that emerged within the results and discussion: financial support; transportation preferences; access and affordability of food; on and off campus food vendor experience; food insecurity perceptions and relationships with skipping meals; and knowledge about existing food insecurity programs.

In order to capture students' day-to-day experiences and perceptions, I conducted semi-structured interviews in January of 2024. Over the course of a student's degree their experiences surrounding food insecurity are likely to change. For this reason, I decided to focus on second-year students who have lived independently from their families for a year but may still be adjusting to adulthood as they find their way at university. I was able to interview six participants, all of whom were domestic students. One participant turned out to be in their fourth year, but they still provided valuable feedback based on their experience in each year of their

degree. Each interview lasted approximately 20-30 minutes. All participants' identities will remain confidential, and I use pseudonyms to share their narratives.

There were also limitations to this study due to a number of reasons. The largest constraint is the number of participants and range in demographics covered in the interview data. If there was more time to conduct this qualitative study, I would expand the scope to include international and Indigenous students because other studies have shown that these demographics experience higher rates of food insecurity compared to domestic students (Olauson et al., 2018). Additionally, looking beyond second year students would also be another point of interest since first to fourth year plus students all have valuable experiences to highlight and provide greater nuance in understanding experiences with food insecurity over a student's program and time at the University. Graduate students are another group that has different experiences with food insecurity since the nature of their education is not broken up by summer breaks and their tuition rates are higher.

In conjunction with the qualitative semi-structured interviews, I made a map using ArcGIS Pro 3.1.2 software to display food desertification across the City of Lethbridge. This map included a grid displaying three service areas ranging from a 1-to-3-kilometre walking distance from each grocery store. The service area function determined what services were beyond a 1-to-3-kilometre walking distance based on the street network raster and the point data from the grocery store location file. The street network data was sourced from Lethbridge Open Data Catalogue, while the grocery store locations were sourced from Google Maps (2023). I then compiled the data in Microsoft Excel version 2312 where their address as well as their X and Y minimum and maximum coordinates were collected. Some locations were omitted from the data set as they do not meet all requirements of a grocery store in respect to the confines of food desertification parameters (Chen

& Gregg, 2017; Slater et al., 2015; Smoyer-Tomic et al., 2006; Yang et al., 2019). For example, London Road Market and Shoppers Drug Mart were omitted because they may offer all or most grocery items, but they are still pricier for the same conveniences as Walmart, Superstore, Safeway etc. Other specialty grocery stores were omitted such as Purple Carrot, Urban Grocer, and Umami Shop as they may provide most if not all grocery items for a particular cuisine type or dietary restriction, but their products are characterized by increased cost and limited selection. The grocery chains that were included are Save-On, Safeway, No Frills, Superstore, Wholesale Club, Walmart, and Costco.

The approach taken for this study was also informed by previous research and work I completed with an on-campus organization called Food for Thought. My work with this initiative that aims to mitigate or curb the effects of food insecurity opened my eyes to different perspectives and questions relating to student food insecurity. In particular, this connection is what informed my research around stigma and perceptions towards food insecurity. In addition, my background with Geographical Information Systems is what formed my curiosity for understanding the impacts geographical constraints can have on an individual's motive to access nutritious foods. Finally, being a student myself has also challenged my understanding of the affordability crisis and the preconceived perceptions society has about the student population in Canada. Furthermore, being a student allowed me to analyze typical student behaviours and habits that may go unnoticed by other researchers due to the disparity in age disconnecting them from the same path of recognition.

This is all to say, as much as the research is separate from me as an individual, my lived experiences are still an integral part of the formation of this study. Additionally, the question set, and any follow-up questions made during the interview were formed not only from the existing

literature, but from the interactions I had with students at campus events through my work with Food for Thought.

Chapter Five: Results

Participant Demographics

All six participants were domestic undergraduate students. None of them indicated that they were Indigenous. Participants ranged in age from 19 to 22. Three participants identified as male using he/him pronouns and three identified as female using she/her pronouns. Despite me clearly communicating inclusion criteria in the outreach process, Participant 3 stated during the interview they are actually in their fourth year. Another important demographic detail to note is that participant 5 is in their second year, but would be considered a mature student as they started university two years after high school. See Table 2 for a summary of all participant demographics.

Table 2. Participant Demographics Summary

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
Student Status	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic
Pronouns	She/her	He/him	She/her	She/her	He/him	He/him
Year of Study	Second Year	Second Year	Fourth Year	Second Year	Second Year (Mature Student)	Second Year

Participant Financial Support Through University

Each participant had a unique situation pertaining to how they are funding their university career. One common theme was every participant relied on multiple streams of support. The best

example to illustrate the number of streams of funding many students access to get their degree is a quote from participant 4. “Um, it’s kind of a mixture between family, part-time work, and I just had to take out a bank loan because I really struggled to even find any scholarships in my second year.” Participant 4 was also only one of two participants who worked throughout September to April. The jobs these two students worked ranged from babysitting to tutoring. Also, none of the participants worked full-time during the Fall and Winter semesters, but all of them pick up a full-time work throughout the summer to save for the following year. For a summary regarding sources of student financial support accessed by the participants refer to Table 3 below. Participant 3 was omitted from the count as they provided information on their current financial situation, but they stated their second year looked different causing greater food insecurity.

Table 3. Types of Funding that Supported Participants Through University

Type of Funding	Use This Support	Do Not Use This Support
Government or Bank Loans	3	2
Scholarships/Bursaries	2	3
Family Support/Savings	4	1

Participants’ Commuting Habits

All participants opted into the Upass, but the frequency of use of public transit varied depending on living situation and personal preferences; refer to Table 4 for a summary. Participant 1 did not own or have access to car beyond receiving rides from friends on occasion. This participant predominantly walked everywhere with the occasional use of the city transit system. Participants 3 and 4 do not currently use the transit system and only opt in because they are not able to opt out of the Upass. The participants who did make use of the transit system said it was to get to and from the university for classes. However, these participants mentioned they would predominantly carpool with roommates or their partners to get to and from the university. No

participants said they use the transit system for accessing other services around Lethbridge. Some participants mentioned they would use the transit system if they were desperate or had no other choice to get to a grocery store for example. When participants were asked why they avoid or do not use the transit system common themes arose such as the transit system times did not line up with their class start and end times, or the buses they would frequent were overcrowded at the times they would consider using them.

Table 4. Frequency of Bus Use

Frequency of Bus Use	Number of Participants
Hardly ever (1-3 times cumulatively) to never use	3
Occasionally for commuting to and from the university (1-3 times weekly)	2
Routinely use to commute to and from university (3-5 times weekly)	1

Participant Grocery Access and Spending Habits

All participants lived more than a 1.6-kilometre walking distance away from a grocery store, which meant that they resided in a food desert. Some participants elaborated on their residence location by stating they lived more than a 3-kilometre walking distance or approximately a 10-minute drive to a grocery store. When asked how far they live from a grocery store each participant looked at a food desert map I created; refer to Appendix A. Participant 4 said “I’m in this yellow mark in Country Meadows. So, we’re like I think its five kilometres. Could we walk there? Yes, it would be probably like an hour trip. The other thing with Country Meadows is that there’s a neighbourhood that separates you, so you have to go all the way around to the grocery store like Safeway.” Overall, most participants shared similar remarks about walking to pick up groceries just because of time and the logistics of carrying multiple bags of food back to their

place. Participant 6 mentioned “I live like thirty minutes away from the university and the closest grocery store is like a 10-minute drive, so I can’t walk there or at least not in the winter especially. I’ve tried biking, but I have spilled milk. I could see myself walking the distance if it was just there and back but to carry groceries all the way back, it’s just unrealistic.”

Half of the participants mentioned they typically go grocery shopping once a week while the other half frequent a grocery store every two or three weeks. When asked if they split groceries with roommates, three participants said they purchase as a group those larger items that they may all use, but they still have some items they purchase individually. Two participants purchased all of their own food and participant 5 split all their groceries 50/50 with their partner.

Fruit and Vegetable Purchasing Habits

When participants were asked if they found it challenging to incorporate fruits and vegetables into their diet, all of them said fruits, specifically berries, were not often incorporated mostly due to cost. Some participants mentioned they may purchase apples, oranges, or bananas. Furthermore, all participants said they attempt to incorporate produce into their diet, but it all comes down to the cost of the items. The rate at which produce wilts or molds is another deterrent for many participants as they are likely to get busy and forget about the produce causing the food and their money to be wasted. Participant 1 stated “tomatoes for example could be the equivalent to a box of snacks and I mean, it’s objectively more unhealthy, but it stays better longer. So, it might be a better decision.”

On and Off Campus Fast Food Purchasing Tendencies

Participants’ habits around on-campus food and beverage purchases varied significantly from person to person. In summary, two participants said they almost never purchase food or beverages on campus because of cost and wanting to conserve their money for later expenses.

Participant 6 went on to say they grew a bit of disdain for on-campus vendors because of the dining plan they opted into for their first year. Participant 3 had similar reasons for avoiding on-campus vendors, but indicated they may purchase something every couple of months. Participants 2 and 4 said they purchase something from a campus vendor two or three times a week, however their practices differ: participant 4 stated they may buy something on the days they are on campus all day, while participant 2 stated they are more likely to buy a coffee. Finally, participant 1 purchased from campus vendors twice a month, but purchased food and beverages from the vending machines twice a week. Furthermore, participant 1 provided some insight into the evolution of their dietary preferences from living on campus to now: “I think in your first year you are deterred because Urban Market is limited. You can either get a burger or sometimes a salad, but you get sick of eating these options for a full year, so it deters you from eating at Urban Market or even wanting those types of food.” (Participant 1).

For off-campus food and beverage purchases, three participants estimated they would eat out two or three times a month at the most. Participants 4 and 5 said they may eat out occasionally, but rarely overall. Lastly, participant 6 mentioned they will be eating fast food for the first time in approximately five months for a belated birthday celebration.

First Year Dining Plan

The University offers a dining plan that all students have the choice to opt in or out of throughout their degree. Refer to Table 5 for an overview of how many students opted in versus out of the dining plan. Participation in the dining plan, however, is most common for first-year students. Out of the six participants I interviewed, only two opted into the dining plan during their first year. They were required to opt in because they lived in University Hall residence where no private kitchen space was available. The remaining four participants lived off campus and opted

out of the dining plan. The most common reason for why they did not opt into the dining plan was due to cost as they believed purchasing their own food to prepare would be cheaper than the dining plan.

Table 5. Opt-in versus Opt-out Rate for Dining Plan within Participants First Year

	Opted in	Opted out
University Student Dining Plan	2	4

The dining plan has a variety of remarks both positive and negative regarding student experiences with what is offered to them. Participant 6 elaborated on the options they were provided as well as their experience with eating from these places for 8-months: “I could eat from Booster Juice, Urban Market, Subway, and there was a Pizza73 thing where you could order pizza, but again it is all fast food.... There was a very small healthy section in Urban Market that would go quickly, especially on weekends since they do not restock the healthy section. So, by five-ish on a Saturday almost all options would be gone.” (Participant 6). For reference see Figure 4 for a visual of all healthy alternative coolers in Urban Market.



Figure 4. Urban Market Healthy Alternatives Coolers (Wandler, 2024)

Budget Anxiety

When participants were asked if they have ever worried about not having enough money to purchase the basic necessities only two participants out of the six acknowledged they were worried about paying all their bills on top of feeding themselves. Participant 2 said they worried more so about purchasing larger grocery items such as cooking oil because their cost tends to be more than their regular week to week purchases. All participants said they had varying degrees of anxiety at the end of semester or over the holidays about making ends meet. Participants 5 and 6 stressed they keep fairly regimented budgets, so it is not often a source of anxiety. Other participants said the end of December to the beginning of January or the end of April to the beginning of May were stressful points. Some students expressed they had a general sense of a hierarchy of expenses. For example, participant 2 stated “definitely rent is my top priority and just based off of where we live car insurance is definitely another necessity. Then food would be kind

of almost equal with car insurance.” Most remarks were similar across the board regarding what expenses are more important, but one that stood out was participant 6. They stated “it’s like rent, car insurance, gas, stuff like that so if I miss the bus, I can still attend class. School supplies is another expense because again I am paying a lot of money to be here, so I want to make sure I get good marks. I need high grades for my future.” (Participant 6). A few students indicated that while they could ask for money from their parents, they would avoid reaching out as they perceived their parents’ financial situation as constrained. Instead, they would choose to cut back in some way or to skip a meal.

Experiences with Skipping Meals

Every participant said they have skipped meals due to losing track of time. Participant 5 was the most regimented about not missing meals as they were previously a high-level athlete. The other participants stated it was more common for them to miss a meal because they were running late for class, studying, or forgot to bring something with them and did not want to purchase food on campus. Participant 1 mentioned “sometimes I will intentionally skip a meal just because I have like 5 soups and six days left in the week, so I will save it for tomorrow”. Another reason meals may have been skipped was some participants’ medication made them less hungry causing them to accidentally skip meals. Participant 6 found that between paychecks they may skip a meal or eat less because they prefer to have a small safety net in their budget. Additionally, participant 1 said they skipped a meal because there was nothing in their fridge and they did not feel like going grocery shopping.

Identifying and Understanding Food Insecurity

Overall, none of the participants had a strong understanding or knowledge about food insecurity before being interviewed; refer to Table 6 for a summary. After sharing the Government

of Canada definition of food insecurity with them, I gave participants the opportunity to reconsider their initial responses. This subsequent round of responses showed small amounts of variance. Participants 4 and 5 confidently stated they would not consider themselves food insecure. A follow up question I asked participant 4 was what is your perception of a food insecure individual and who would you view as a food insecure student? Their response was, “I’d probably say like, if you can’t afford to get groceries or like although we might not have like the fullest fridge like you don’t have options to eat if you’re skipping meals then I would view that as food insecurity” (Participant 4).

The other participants were more on the fence of defining their situations into food secure versus insecure. Participant 6 described their situation as, “I wouldn’t use the term food insecure for me because I have a safety net, but my stubbornness doesn’t make me eat as much as I should”. Participants 1 and 2 had similar relationships with food insecurity where it is intermittent, more commonly occurring at the beginning or end of semesters. Finally, participant 3 said they are not food insecure now, but in their second and third year they were intermittently.

Table 6. Knowledge of Food Insecurity Before Interview

Had not heard or known about food insecurity before the interview	Had a general understanding of what food insecurity could mean, but could not clearly define it
3	3

Awareness of Existing Programs and Feedback for Future Programing

Every participant was aware of the Little Library Pantries: although they did not know them by name, they referred to “the bookshelves with food in them.” One participant out of the six has taken food from the pantries before. The rest of the participants believed other students may

need the food more than them, so they left the food for another person. Participants were less aware of other programs offered on campus, including the LPIRG Fresh Food Box, Lethbridge Food Bank Mobile booth, and Food for Thought Free Produce booths. Participant 3 stated they may have purchased a Fresh Food Box before and participant 4 said they ordered one, but were unable to pick up the produce during the pick-up time. In addition, participant 4 mentioned they had taken food from one of the Mobile Lethbridge Food Bank drop dates last semester but did not know about the program before approaching the pop-up event.

When asked if there were any resources or programs they wish to see on campus, most participants did not have specific examples beyond what is currently being offered. A common statement during this point of discussion was that it would be beneficial if the cost of food or beverages could be made cheaper in some way, such as a subsidy or student discount. When given the example of a grocery store all students said it would be great to have one on campus. While not all participants were confident they would use it, many stated that their peers who are dependent on public transit may enjoy this program the most. Participant 6 stated: “I thought the grocery store example is good, but it depends on the intention behind the program and if it will look different than other vendors like Urban Market. If the intention is to make money, I do not really see the point because the Bookstore is kind of like that where if you go to Staples and compare prices the mark up is huge on campus. So, I do not see a realistic situation where it would be affordable.” Furthermore participant 6 among others later stressed they would frequent the grocery store for an item or two at least if the price point was the same as or cheaper than off-campus grocers. Refer to Appendix B where an updated food desert map provides a visual for what the City of Lethbridge food desertification would look like if the University of Lethbridge had a grocery store located onsite. Finally, participant 1 mentioned they would like to see more healthy

alternatives being offered at Urban Market or a greater variety on some sort of rotation, so students do not get bored of eating the same things.

Chapter Six: Discussion

Access, affordability, stigma, and perception intercept with each other as we have seen in the literature and my interviews with second year students. Their interconnected relationship is demonstrated by the likelihood of nutritious food being purchased, if there are challenges with easily accessing it, or if it costs substantially more than an item that has a longer shelf life and leaves them feeling more satiated. Additionally, students may weigh the cost of paying more for their food to be delivered to them against saving time on cooking and clean-up as a fair trade off, especially if they are in the midst of studying for exams (Buettner et al., 2023). Furthermore, perception plays a powerful role in deterring many students from accessing available resources for them on campus as they believe others are in greater need of the food bank or free fresh produce than them (Peterson et al., 2022). The stigmatization of food insecurity has also caused more harm than good as students fear how their peers may perceive of them if they do stop by the food bank for non-perishable items (Peterson et al., 2022).

Convenience: the Driver Behind Most Decisions

A theme I did not initially foresee appearing in my research was convenience, but, as I interviewed more participants, I realized most decisions or actions taken were put on a scale of what is the easiest way to achieve their desired outcome. For example, participant 1 did not have a vehicle, but they say purchasing a few of their essentials from Shoppers Drug Mart was a better alternative to walking several hundred meters before they get on or off the bus to purchase groceries at one of the three grocers on the Northwest side. In addition, they may even order their groceries from a delivery service if there was a larger number of items they needed. Some of the

other participants mentioned they may only purchase groceries every two weeks or buy things in bulk to reduce cost and time spent running errands.

Amongst the participants that I interviewed, I saw a connection between the cost of transportation and the likelihood of that individual's ability to consistently purchase nutritious foods. Participants 2 and 6 specifically discussed their car insurance and gas bill were more important than their groceries because living in Lethbridge required a level of mobility only your own vehicle can offer. They highlighted that, without their vehicle, the amount of time and energy required to get to and from campus among other services could take twice as much time if reliant on city transportation. So, this led the participants to often skimp on grocery items if their budget did not support well-rounded meals on top of rent, utilities, car insurance, gas, etc. Furthermore, most participants did not seem upset or irritated by the lack of grocery stores near them as they would hardly ever consider walking to get groceries anyway because it was perceived as a bigger hassle than it was worth.

Beyond what convenience meant for student grocery purchasing habits, it also deeply intertwined with their nutrition. Numerous students expressed that university is already challenging enough, so eating healthy alternatives often slips through the cracks, and they end up consuming what most people define as unhealthy options, such as kraft dinner, instant noodles, canned soup, etc. (Henry, 2017; Pepetone et al., 2021). Otherwise, they may even opt to order food to their home or stay late on campus and just purchase a sub to get through the several hours of studying to come (Buettner et al., 2023). In the future, this may lead to more misconceptions about post-secondary students being perceived as lazy, but in reality, their heavy academic workloads require them to make sacrifices in other areas. It makes sense that students choose convenience for day-to-day decisions related to food as a way to reduce the amount of effort or work required.

Student Perceptions and Stigma around Food Insecurity

Looking in on students' lives from the public's perspective without knowing the intricacies of them leads to unwarranted stereotypes like the 'starving student' (Henry, 2017). Society's push to normalize students feeling hungry or eating less nutritious meals is in part what is causing students' inability to view themselves or their peers as food insecure. In this sense, it becomes difficult to draw a distinction between starving because you are a post-secondary student, and starving because you lack the ability to acquire quality foods routinely as the Government of Canada (2020) would describe it. This causes students to have a major disconnect with acknowledging their food security status. During the interviews, many students felt uncomfortable with discussing their personal situation regarding whether or not they are food insecure. I often interjected or followed up with asking if intermittent food insecurity may better define their situation, which led to a couple of students finally agreeing to that terminology if not begrudgingly.

These responses and interactions I had in regard to students' perception around their food insecurity status as well as their understanding of the topic only reaffirmed the importance of the qualitative approach I took. If I had taken a quantitative approach through a survey for example, the data may have missed important details of students' lived experiences and decision-making processes. Surveys that have previously gone out to students inquire about their food insecurity status with only a few generic categories, such as severely food insecure, moderately food insecure, seldomly food insecure, and food secure. The harm or critique to this approach is that food insecurity has become highly stigmatized and individuals who fall into these categories may not feel comfortable admitting this on a survey, even if it is anonymous. Furthermore, the rigidity of the former categories may confuse students as to whether they identify with them or not. This took place in my study where students did not want to say they are or were food insecure unless the

term ‘intermittently’ came along with it because it was not constant or consistent in every month or academic term.

Within the student population, this environment is challenging to navigate because many students have newfound independence from their families, and they will go to great lengths to preserve it, even to the detriment of their health (Watkins, 2021). During my interview with participant 6, we briefly discussed if the term food insecurity carries any stigma and if it may prevent them or people they know from labeling themselves as such. Their response was the following: “Yeah, I could definitely see people not wanting to be labelled food insecure, it makes people think lower class and students don’t typically like to associate with that. They’re like, I’m a student right now so yeah, I have less money, but I’m not the poorest. Even though like I probably am, but I think people are hesitant to accept that they’re lacking money, especially nowadays.” (Participant 6). This factored into participants’ unwillingness to ask for assistance from their parents as many of them did not want to burden them any longer or would like to be perceived as financially responsible (Maynard et al., 2021).

Participants also stressed that they felt someone else was always more in need, which made them avoid accessing available resources on campus for students who may be hungry and in need of a meal. This dynamic of perception is in part because the definition around food insecurity has not changed over the last couple of decades, but the number of people who are impacted by food insecurity has exponentially increased, especially following the COVID-19 pandemic. Students and other members of society may still perceive individuals who are food insecure as in a lower sociodemographic group that may work a minimum wage job. Yet, this is not the only demographic currently struggling with food insecurity. Food Banks Canada (2023) found 43.8 percent of households accessing the food bank are single adult households.

Chapter Seven: Conclusion

Moving forward we should work towards shifting our mindsets away from battling food insecurity to building food secure spaces. This can be done in a variety of ways and each community comes with their own assets that they can pull from to strengthen their food security. Over the last several decades, the need has only grown in size for food insecurity resources, such as the food bank. These resources are valuable for community members to access, but their success and ability to remain open is heavily dependent on funding. Thus, making them unreliable to serve all individuals within this growing group of food insecure people. So, transitioning to a sustainable food system that provides access to healthy and culturally appropriate food products is the future of long-term sustainable solutions (FAO of the UN, 2014).

As seen throughout this study, it is important to note food insecurity can look different from person to person, so future research should work to incorporate these intricacies into their design. In this study, while all participants may not have shown the textbook signs of food insecurity that does not mean that their struggles and experiences with combating the existing affordability crisis did not influence their ability to access nutritious meals routinely. For students to feel more inclined to purchase food on-campus the participants stated the cost is the main contributor holding them back as well as the fear it may not be cooked properly or taste as satiating as food cooked at home. Each participant had different relationships to purchasing takeout where some valued convenience and others valued good quality food, so managing different perceptions within these spaces may be the biggest barrier.

The stories shared during the interviews support the existing literature regarding the “starving student” enigma where students downplay the severity of their struggles seeing as it has become too normalized for students to live on a tightly constrained budget (Henry, 2017). It may

not be their parents reinforcing these beliefs, but they can be found in the day-to-day life of any post-secondary student. Perception and stigma also deeply influence students' views of themselves as in need or deserving of accessing food insecurity resources on or off campus amongst the literature and in my interviews.

To conclude, the geographic landscape of Lethbridge did point to creating additional barriers for all participants, although they navigated them differently depending on the resources available to them. Some participants did point out that they are dependent upon their car to freely move between the university and their home as well as to additional services such as work or the grocery store. Food deserts are present in Lethbridge, prominently on the Southwest side, and all participants did state they live three or more kilometres away from a grocery store (Appendix A). Overall, the participants were quick to clarify that their proximity to a grocery store did not hinder them too much as most had their own vehicle to commute around town, but participant 1 learned to adapt to this situation by using grocery delivery services or purchasing smaller quantities of items from Shoppers Drug Mart.

Now that there is a broader understanding of food insecurity among the University of Lethbridge student body, I want to provide some general feedback or steps the campus could take to work towards building a food secure campus. These suggestions were created based on the feedback from participant interviews and research into other programs on and off campuses for my thesis as well as from my time with Food for Thought.

My first suggestion is cooking classes that students could participate in for free, just like any other workshop offered at the University of Lethbridge. These would provide a hands-on experience to pick up new skills while learning about nutrition. This would allow students from various backgrounds to shift into their adult life with the confidence and understanding of how to

cook nutritious meals on a budget. A great comparator to look at for building this initiative is the University of Alberta (n.d.) who offers classes every other week to all students.

Another program that will not only benefit the student body, but the overall community is an at-cost grocery store. This initiative has the greatest possibility of connecting stakeholders together where local producers could support the student body and in turn the University of Lethbridge would support local farmers. Lethbridge is a key major city in southern Alberta and is an agricultural hub with one of the largest Agriculture and Agri-Food Canada facilities. Sustainable solutions come from interacting with a community's strengths, which has the opportunity to not only provide affordable nutritious foods, but also educational and professional development opportunities.

In the past Food for Thought has trialled different ways of offering groceries or produce to students on campus, but to capture the desired audience there needs to be a strong marketing campaign to constantly remind students of this program. The reason why this element is important is participants said they were unaware of much of what Food for Thought did because there was not enough information put out through email, social media, posters, etc.

Furthermore, the affordability of this space is another driver for success where students will not be enticed to purchase their basic necessities or a healthy snack if it does not match the same price point as off-campus vendors. This is why an at-cost model is vital to the longevity of a campus grocery store for students. Creating this space would also assist in mitigating food desertification within Lethbridge, especially for those who are without vehicles and living on or near campus. Refer to Appendix B to see how an on-campus grocery store would positively impact the existing landscape of food desertification on the Westside of Lethbridge.

These suggestions have the potential of building a food secure campus by educating students about how to cook nutritious meals for themselves, which in turn builds their confidence going beyond university. In addition, it gives students the opportunity to learn skills they may not have had the chance to acquire from family or other avenues of life. This will aid in supporting an at-cost grocery store on campus as more students may look for the most convenient location to pick up affordable nutritious ingredients. An at-cost grocery store also has the potential of generating enough income to keep itself afloat after initial start up costs without straying from the purpose of supporting the community rather than generating profit, which could enable long-term sustainability that is not reliant upon external funding coming in from year to year. Food banks and other initiatives that require additional funds are still important to continue supporting as the transition to a self-sustaining food secure campus will take time.

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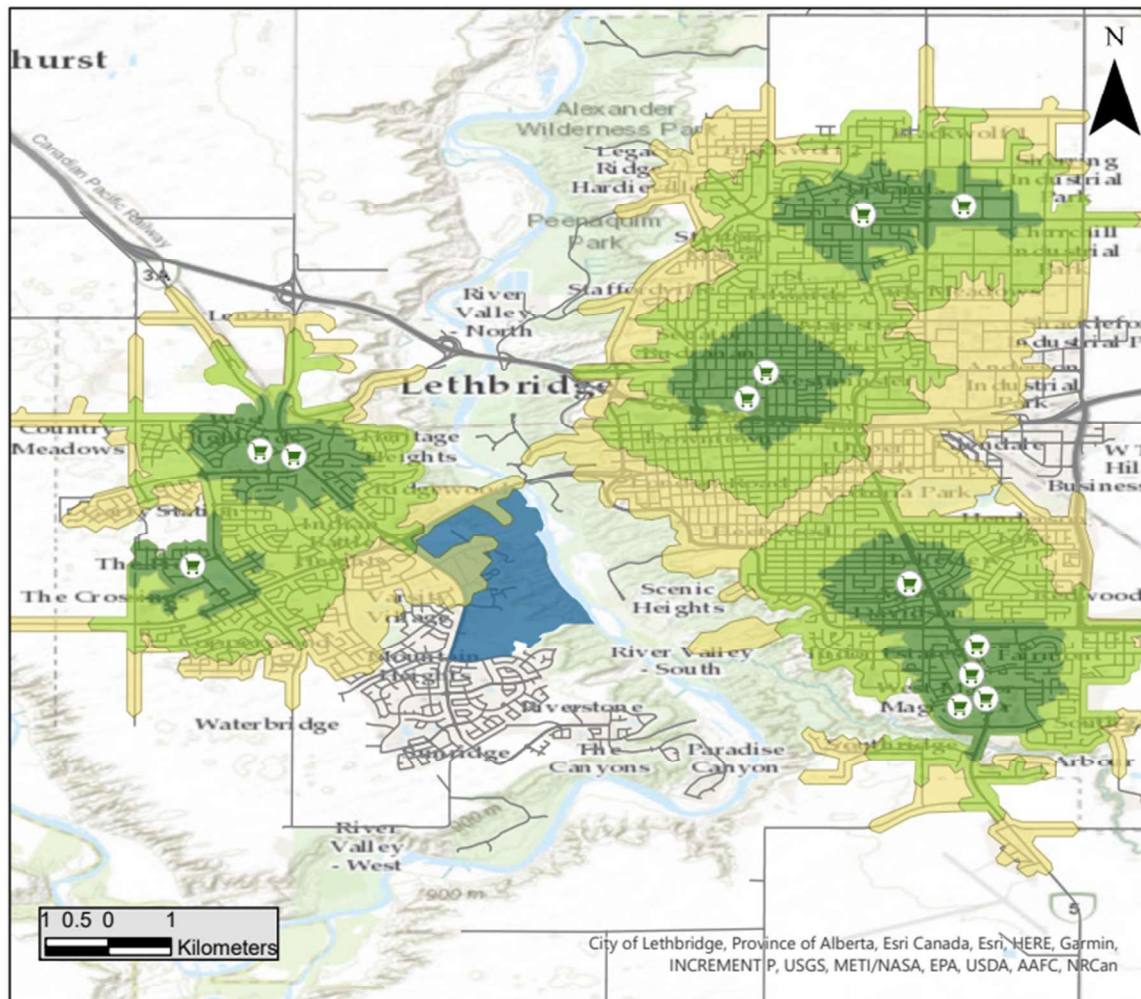
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Appendix A: Lethbridge Food Desertification

Lethbridge Food Desertification



Legend

Grocery Store Walking Distances

- 1 km
- 2 km
- 3 km
- Grocery Store Locations
- University of Lethbridge Grounds
- Street Network

This map depicts the walking distances to grocery stores within Lethbridge using the existing street networks. There are three scales 1, 2, and 3 kilometers away all fading in color intensity to signify increased walking distances and time required to reach one.

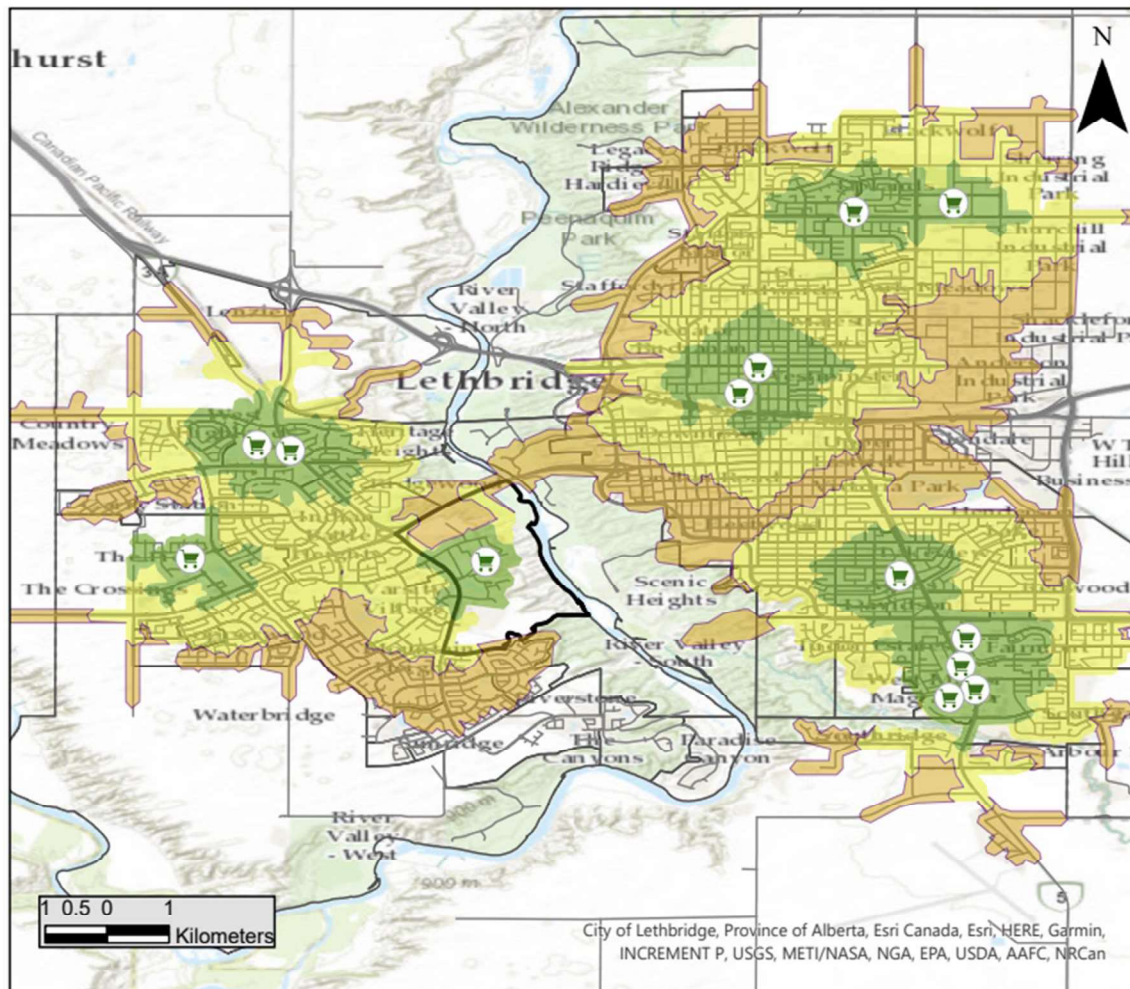
Created By: Bryanne Wandler

Date: November 26, 2023

Data Sources: Open Data Lethbridge and Google Maps for street addresses.

Appendix B: Lethbridge Food Desertification if the University had a Grocery Store

Lethbridge Food Desertification Improved



Legend

Grocery Store Walking Distances

1 km

2 km

3 km



Grocery Store Locations



University of Lethbridge Grounds



Street Network

This map depicts the walking distances to grocery stores within Lethbridge using the existing street networks. There are three scales 1, 2, and 3 kilometers away all fading in color intensity to signify increased walking distances and time required to reach one. This map also showcases what food desertification would like if the University had a grocery store.

Created By: Bryanne Wandler

Date: April 3, 2024

Data Sources: Open Data Lethbridge and Google Maps for street addresses.

Appendix C: Semi-Structured Interview Question Set

Demographic Questions:

How do you identify?

Are you in your second year of university?

How old are you?

Are you a domestic or international student?

Are you an Indigenous student?

Accessibility:

How do you commute around Lethbridge? [By car, transit, a family member, or friend]

Do you opt into the Upass? → How often do you take city transit?

How are you supported through school? [Family, Government/Bank loans, Grants/Scholarships, Savings, Full/Part-time work, etc.]

Do you live close enough to a grocery store that you may consider walking there? [Within a 30-minute walk or a 1–2-kilometer distance]

How often do you shop for groceries?

Affordability:

Do you split groceries with roommates, a partner, or family member? [If yes, how so?]

How often would you say you purchase food or beverages from on campus vendors?

- Do you eat out often apart from campus vendors?

Do you have any dietary restraints? [If so, how do these restraints make it challenging to access or afford food]

What is your preferred cuisine type?

How has the transition out of structured dining plan gone for you?

Do you find it difficult to incorporate fruits and vegetables into your meals?

Have you ever skipped a meal and why? [Discuss/elaborate]

Have you ever worried about not having enough money to purchase the basic necessities in a month?

Perceptions of food insecurity:

Have you heard of the term food insecure? [If so, how would you define it?]

Would you consider yourself food insecure?

Have you ever accessed any of the following resources on campus? [For example, items from the Little Library Food Pantries or the Fresh Food Box program]

Is there any programs or resources you wish to see on campus? [For example, a grocery store]