

2011

Journeys to the food bank : exploring the experience of food insecurity among postsecondary students

Nugent, Mary A.

Lethbridge, Alta. : University of Lethbridge, Faculty of Health Sciences, c2011

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JOURNEYS TO THE FOOD BANK: EXPLORING THE EXPERIENCE OF FOOD
INSECURITY AMONG POSTSECONDARY STUDENTS

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Bachelor of Science in Nursing, University of Victoria, 2000

Thesis

Submitted to the School of Graduate Studies
of the University of Lethbridge
in Partial Fulfillment of the
Requirements for the Degree

MASTER'S OF SCIENCE (NURSING)

Faculty of Health Sciences
University of Lethbridge
LETHBRIDGE, ALBERTA, CANADA

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Dedicated to:

To my loving husband who has unwaveringly supported me throughout this journey.
I love and cherish you.

To the study participants who courageously persevere through their own food insecurity
and hunger, so that they might reach their dreams.

Abstract

Food insecurity is a global issue giving rise to health inequities affecting populations at all life stages. Postsecondary student food insecurity exists, yet is an understudied phenomenon. To provide insight into the perspectives and experiences of food insecurity in the postsecondary population, university students (n=15) who accessed a campus food bank were interviewed utilizing person-centered interviewing. The social determinants of health (SDH) and structural violence theory provided conceptual guidance for the qualitative study. Students were found to lead complex lives, shouldering many responsibilities. They valued their health; however, they lacked the necessary supports to maintain adequate nutritional intake. They employed multiple strategies to mitigate their food insecurity issues, while concurrently making sacrifices and experiencing suffering. Three economic pathways leading students to food bank use included shortfall, cumulative and catastrophic pathways. This research offers increased understanding of food insecurity in this vulnerable population, exposing inequities which must be addressed.

Keywords: postsecondary student, food insecurity, social determinants of health, structural violence, food bank

Acknowledgements

David Gregory has been the most amazing inspiration to me as a student, a nurse and a person. His love of knowledge and truth, and his desire to make our world a better place, has awakened the researcher in me and taught me that through good research, truth and knowledge will come forth and expose inequities in our society. He pushed me towards excellence. Thank you David. As a friend and colleague, I could not have asked for a better supervisor.

My thesis committee, Dr. Susan McDaniel, Dr. Bradley Hagen, and former committee member, Dr. Steve Ferzacca, have challenged and inspired me to look at the world through new eyes. Their contributions to my proposal and research took my study into far richer directions than I could have imagined. Thank you so much for sharing your time, knowledge, and wisdom.

Without the support of the University of Lethbridge Students' Union, particularly Manager, Cheri Pokarney and Food Bank Administrator, Shelley Tuff this research study would not have been possible. I appreciate your support in providing access to your students, and providing me with valuable data your food bank use, without which I could not have made it.

A special thank you to the students who participated in my study. You bravely shared your stories with me in the hope that by doing so, you could assist future students to become more food secure. Good luck in your studies and in your careers.

Heather Caldwell, thank you for involving me with the Good Food Club and for first telling me about the issue of food insecurity within the U of L student population, You were the inspiration to pursue postsecondary student food insecurity as my master's research topic.

Without the support and sacrifice of my many colleagues at the University of Lethbridge, Faculty of Health Sciences, this thesis would have been many years from completion. Many times they shouldered an unfair burden of commitments, making my life easier and allowing me the time and energy to focus on this research. You cheered me on, keeping me motivated and focused. From the bottom of my heart, THANK YOU!

Thank you to Dr. Chris Hosgood, Dean, and the Faculty of Health Sciences for granting me the time to start and finish my master's studies.

Thank you to Lynda Sexton-Kellett, who took the 'pathways' and brought them to life through her artwork.

Last, but certainly not least, I would like to thank my husband who endured my power-writing sessions with unwavering support, and who kept our household running when I was absorbed in analysis and writing. (No more pizza for supper!) I love you.

Table of Contents

Dedication iii

Abstract iv

Acknowledgements v

Table of Contents vi

List of Tables x

List of Figures xi

Chapter One: Statement of the Problem 1

 Rationale for Study 1

 Review of Research Problem 3

 Conceptual Frameworks 7

 Social determinants of health 8

 Structural violence theory 9

 Overview of Method 10

 Problem Statement and Purpose 11

 Research Questions 11

 Significance 12

Chapter Two: Literature Review 13

 Poverty and Canadians 13

 What Canadians Think About Poverty 17

 Canada’s Social Safety Net 21

 Education and Universities in Canada 24

 Who Are Canadian University Students? 25

 Canadian student profile 26

 Student tuition and debt 27

 Definitions: Food Security and Food Insecurity 32

 Outcomes and Implications of Food Insecurity 39

 Searching the Literature: Food Insecurity and Postsecondary Students 44

 Literature Review: Linking Postsecondary Students and Food Insecurity 46

 Published research 46

 Quantitative literature 47

 Qualitative literature 51

 Reports and statistics 51

 Themes Drawn From the Published Literature 54

 Knowledge, time and budgeting 54

 Student loan funding 55

 Campus food banks 56

 Summary: literature review postsecondary students and food insecurity ..58

 Literature Review: Interviewing the Food Insecure 59

 Lethbridge Context 62

 Lethbridge population, rental vacancy rates and rents 62

 University of Lethbridge campus 64

 University of Lethbridge student profile 67

 Statistics and Details on Campus Student Food Banks 70

 University of Lethbridge Students’ Union Campus Food Bank 71

University of Alberta campus food bank	75
University of Calgary campus food bank	77
Other university campus food banks.....	78
Campus Food Banks Conclusion	78
Conceptual Frameworks	78
Social determinants of health (SDH)	79
Structural violence	84
Conclusion to Chapter Two Literature Review	91
Chapter Three: Methodology	94
Methodology and the Qualitative Paradigm	94
Method	95
Interview as method and the person-centered interview.....	95
Person-centered interviewing.....	96
Access, sampling and recruitment of interviewees.....	98
Access	98
Sample and sample size	98
Inclusion criteria	99
Recruitment of participants.....	100
Data collection: instruments and procedures	101
Demographics	101
Semi-structured interview guide.....	101
Qualitative data analysis	106
Methodological trustworthiness (rigor)	108
Credibility	108
Transferability.....	110
Auditability	110
Confirmability	111
Ethical Considerations	111
Dissemination	114
Conclusion to Methodology.....	114
Chapter Four: Results	116
Describing the Participants – Demographics	117
Dependents and living with people/pets	118
Income, savings, credit and ownership.....	120
Shelter and kitchen facilities.....	122
Shopping and cooking knowledge, budgeting confidence, shopping.....	122
Sources of knowledge regarding ULSU’s food bank existence	124
Cost of living data.....	125
Qualitative Data: Student Interviews	125
Theme 1: Student as Person and His/her Food Basics.....	129
Context and constraints of being a student	129
The complex student	130
Striving for health	131
Student and supports	134
Living with others	137
Time	138

Subpopulations.....	139
Food basics and the student	145
Food procurement and selection	146
Food preparation, knowledge and meals	155
Food security systems	158
Food opportunities	158
Personal and financial support for food security	159
Food security action planning	160
Theme 1: Summary of Major Findings.....	161
Theme 2: The Vulnerable Student – Pathways to the Food Bank	163
Supply and demand – limited finances	163
Income, debt and savings.....	164
Budgeting in action	167
Vigilance	167
Coping with depleting resources – the juggling act.....	170
Students’ pathways to the food bank	174
The shortfall pathway	174
The cumulative pathway	175
The catastrophic pathway	176
Suffering	180
Summary of findings, supply and demand	183
The food bank connection.....	184
Knowledge and referral to the students’ union food bank.....	184
Feelings about food bank use.....	185
A gendered experience.....	186
Theme 2: Summary of Major Findings.....	188
Theme 3: Structural Issues Affecting Students.....	189
Housing	189
Costs and demands associated with classes and attending university ...	191
Food deserts and geography.....	192
On campus	192
Off campus.....	195
Student loans, scholarships systems, and university environment	196
Scholarship funding models.....	197
Student loans.....	199
Encouraging debt	199
Student suggestions for systems change	200
Funding and fees	201
Budgeting skills	202
Nutrition skills	203
Access to food.....	204
Theme 3: Summary of Major Findings.....	204
Theme 4: Post Script – Reflections on Maturing and Persevering	206
Maturing.....	206
Transitions.....	207
Social pressure to spend.....	209

Litmus test.....	210
Persevering.....	211
Theme 4: Summary of Major Findings.....	213
Conclusion to Chapter Four Methodology	214
Chapter Five: Discussion	216
Demographics and the general population.....	217
Question #1: Experience of food insecurity.....	219
Question #2: Factors and barriers contributing to food insecurity	223
Question #3: Strategies commonly utilized to overcome barriers	229
Question #4: To what extent do the SDH and structural violence contribute	232
Selected social determinants of health.....	233
Structural violence	235
Recommendations and implications	239
Limitation of the study.....	241
Recommendations for further study.....	242
Utility of applied frameworks.....	243
Advice, reflection and reflexivity	246
Advice for future researchers.....	246
Reflexivity and reflection	248
References.....	250
Appendices.....	266
A. U.S. Adult Food Security Module – 12 month	266
B. Letter to ULSU Manager	275
C. Letter of Invitation to Student.....	277
D. Demographic Questionnaire	279
E. Interview Guide	287
F. Member Check Preliminary Findings.....	291
G. Consent Form.....	295
H. Recruitment Telephone Script	298
I. Transcriptionist Oath of Confidentiality.....	302
J. Costs of Living Estimates for International Students	303
K. Conceptual Model of Determinants of Healthy Eating.....	304

List of Tables

Table 2.1 Comparison of U.S.D.A and Health Canada Category Labels and Criteria for Food Security Status Among Adults.....	36
Table 2.2 Good Food Club Survey Results: Fall 2007, Spring 2008	53
Table 2.3 Comparative Table of Vacancy Rates and Average Rents, Alberta	63
Table 2.4 Lethbridge Campus Enrolments (U of L) Fall 2005 – Fall 2010	68
Table 2.5 University of Lethbridge Students Union Food Bank Statistics.....	74
Table 2.6 ULSU Food Bank Usage 2009-2010: Annual Report	74
Table 2.7 Determinants of Health Frameworks	82
Table 3.1 Sample Interview Questions Using Person-Centered Interviewing	97
Table 3.2 Interview Topics and Findings in Qualitative Food Insecurity Studies.....	103
Table 4.1 Demographics	118
Table 4.2 Frequency – Marital Status / Child Status	120
Table 4.3 Income, Savings, Credit, and Ownership Data from Participants	122
Table 4.4 Shopping and Cooking Knowledge, Budgeting Confidence, Shopping, and Living	124
Table 4.5 Knowledge of Students’ Union Food Bank Existence	125
Table 4.6 Themes and Categories.....	128
Table 4.7 Three Pathways to the Food Bank	178
Table 4.8 Litmus Test - \$50 For This Weekend	210
Table 5.1 Minimum Wage and Tuition Comparison.....	236

List of Figures

Figure 3.1 Flow Map of Research Activities105
Figure 4.1 Diagram of Pathways179

Chapter One: Statement of the Problem

Rationale for Study

A former postgraduate student recently told me: “I sold my blood to put food on the table...I also lived on peanut butter and stale bread for weeks at a time.” An undergraduate student confided to me: “I had to drop my favourite elective – it was either feed my kids or take the course. What choice did I have?” A university bookstore employee shared: “We watched the same thing every noon hour for an entire semester. She would slide in and finish whatever meal scraps other students had left behind on their meal trays. We finally asked her if she was okay, and she said she was fine – but we still saw her every noon hour.”

In 1948 the Universal Declaration of Human Rights, recognized food as a fundamental human right and not just a need (United Nations, 1948). Within a human rights framework Canada’s Action Plan for Food Security outlines government commitment to ensure “all Canadians are food secure” (Agriculture and Agri-Food Canada (AAFC), 1998, p. 3). “Nutritional adequacy is an essential and arguably the single most important determinant of health” and food security is a global issue giving rise to health inequities affecting populations at all life stages (Canadian Senate, 2009a; McIntyre & Rondeau, 2009, p. 189; World Health Organization, 2008). Despite the commitment to Canadians’ food security, during 2009 there was an 18% increase in food bank use in Canada, a 20% increase in food bank access at the University of Alberta Campus Food Bank (and an overwhelming 100% increase over the past 2 years), and a steady pace in food bank use at the University of Lethbridge Students’ Union Food Bank (Food Banks Canada, 2009; Pokarney, 2009; University of Alberta, 2010). A spring 2009 survey of 344 University of Lethbridge students revealed that 16% of respondents

believed they would utilize the campus or an off-campus food bank sometime in the next year (Weber & Carter, 2009).

Many who read this thesis may fondly reminisce about their ‘starving student’ days at university or college. What is this phenomenon of the starving student? Why does it exist? Why is it that we do not know more about this reality? Perhaps food insecurity among students is considered a part of student life and therefore is nothing to be alarmed about as students’ situations are merely temporary; a rite du passage. Perhaps there is a common belief that university students spend their money recklessly and become the makers of their own problems? Hughes (2009), in an editorial entitled *Food Security: The Skeleton in the National Closet*, and further in his 2011 research with the same title, argues that food insecurity in the postsecondary student population has the potential to impact both health and learning, and “should not be considered as an accepted aspect of the impoverished student experience, but as a major student health priority” (p. 1973).

Notwithstanding human rights declarations and government commitment to alleviate food insecurity there is evidence, even in the dearth of published literature for this population, that food insecurity exists and is problematic for postsecondary students. Certainly there is anecdotal evidence and, as the literature review will reveal, a few organizational reports, and scattered quantitative and qualitative published literature. But is that enough knowledge to make informed decisions about programs, services and funding models for this population? Perhaps the ‘starving student’ phenomenon, when better understood through more in-depth scholarly research, may assist stakeholders, decision, and policy makers to improve this potentially preventable public health issue.

Review of the Research Problem

Food security is a relatively new term that describes a constellation of concepts. “Food security exists when all people, at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary need and food preferences for an active and healthy life” (Food and Agriculture Organization of the United Nations, 1996, para. 1). At the core of food insecurity is 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” (McIntyre & Rondeau, 2009, p. 188). Quite simply, “food insecurity is the opposite of food security” (Food Security Projects of the Nova Scotia Nutrition Council and the Atlantic Health Promotion Research Centre, 2005, p. 1).

Direct measures of food security within the Canadian population (and throughout the world) are generally collected through the United States Household Food Security Survey Module (U.S. HFSSM) – a validated, quantitative, 18 item survey instrument (U.S. Department of Agriculture, 2008). The Canadian Community Health Survey Cycle (CCHS), since 2004 (Cycle 2.2), has utilized a modified version of the U.S. HFSSM instrument (Health Canada, 2007a). The CCHS 2.2 provides Health Canada’s the most currently published country wide food security data; however, the more current 2007/08 food security data available for analysis on the Statistics Canada’s CANSIM database reveals 7.7% of Canadian households to be food insecure (a decrease from 9.2%, or 1.1 million Canadian households in 2004) (Health Canada, 2007a; Statistics Canada, 2010b). Alberta’s figures also decreased from 10.7% in 2004 to below the national average at 6.3% in 2007. However, Health Canada warns that the two CCHS collections are not

comparable because of methodological issues therefore, the 2004 data cannot be utilized for trend analysis and the CCHS 2007-2008 is considered a first measurement for assessing trends in household food insecurity in Canada (Health Canada, 2010).

Select subgroups within the CCHS data collection included households with and without children, gender, French-speaking Canadians, and off and on reserve Aboriginal respondents. As the CCHS national survey seeks to capture a representative sample, it does not specifically collect postsecondary student group data. Therefore this segment of the population, who are at higher risk for food insecurity, is potentially concealed. There is indeed no accurate direct measure of food insecurity prevalence in Canadian post-secondary students.

Alberta's 2009 (61%) increase in the use of food banks, largely attributable to the global economic downturn (which had greatly affected the Alberta economy during 2008-2010), this downward trend in food insecurity may be short-lived (Food Banks Canada, 2009). In fact the 2010 FoodCount document from Food Banks Canada showed a 10% increase in Alberta's food bank use between March 2009 and March 2010 (Food Banks Canada, 2010). Thirty-eight percent (38%) of those assisted by Canada's food banks were children and youth, 51% of assisted households were families with children, 38% were single people and 11 % were couples with children (Food Banks Canada, 2010).

Indirect measures of food security are derived through food bank use. It was only in 2009 that the national organization, Food Banks of Canada (FBC), attempted to include campus food banks in their annual 'HungerCount' initiative. Not only is this still a work in progress, i.e. not all campus food banks participated in the count that year, but

these campus food banks, until recently, were not reported as a data subset in FBC's latest report (Food Banks Canada, 2009). In 2011, Food Banks Canada reported that 4%, or 34,000 Canadians, who used food banks were postsecondary students (Food Banks Canada, 2011). The *Campus Hunger Count 2004*, commissioned by the Canadian Alliance of Student Associations (CASA) compiled survey information from 46 campus food banks. They reported that student loans did not keep up with rising costs of tuition and books therefore, students chose to "forgo food purchases" in order to meet their other basic needs, creating a "nutrition deficit" (Ferguson, 2004, p. 9). To date CASA has not published any further data on this topic.

Postsecondary student food insecurity is an emerging yet poorly studied issue in Canada and the United States, and at this juncture, efforts towards knowledge discovery appear to be fragmented (Hughes, Serebryanikova, Donaldson, & Leveritt, 2011; Pia Chaparro, Zaghoul, Holck, & Dobbs, 2009; Rondeau, 2007). According to the literature, the scope and experience of postsecondary student food insecurity is not well understood. Only one qualitative and five quantitative published research studies were located on the topic of postsecondary student food insecurity. Pia Chaparro, et al. published what appears to be the first cross sectional study to assess the prevalence and possible predictors of food insecurity among postsecondary students. Of the students assessed at the University of Hawaii (at Manoa), 44% were classified as food insecure or at risk for food insecurity (Pia Chaparro, et al., 2009). A very recent second cross sectional study at an Australian university revealed that their students held double the national risk of being food insecure (Hughes, et al., 2011). Using two methods to measure food insecurity, the issue was evident in 12.7% to 46.5% of their student population.

Food security is not only a global or a national issue. It is a local issue at the University of Lethbridge. The initial impetus for this thesis study, an unpublished survey at the University of Lethbridge (Fall 2007, N=695), found that 16% of students admitted to having “gone without food (in the past 3 months) because of no money for meals” (Bron, Marriner, Rupert, Warner, & Nugent, 2008, p. 7). This 16% was repeated in a subsequent survey (N = 828, 10% of the campus population) the following semester with respondents reporting a range of 1-60 skipped meals per student (over a three month period).

Two researchers studied the adequacy of loans garnered through the Canada Student Loans Program at the University of Alberta (Meldrum & Willows, 2006). In this quantitative study they concluded that university students “likely have insufficient money for a nutritionally adequate diet” (p. 43). Willows and Au (2006) studied the nutritional quality and costing of university food bank hampers and ultimately observed that the campus food bank program was an inadequate solution to student food insecurity. Hampers could only be obtained twice monthly and nutritional adequacy as compared to the Edmonton Nutritious food basket was poor. To meet nutritional adequacy, a further equivalent of \$12 per week was needed to bring the hamper to accepted Canadian nutritional standards. House, Su and Levy-Milne (2006) provide the only published qualitative study on this topic. They compared perceived healthy eating barriers and benefits of dietetic students to students from the general university populace concluding that among other barriers, non-dietetic students found it too “expensive to eat healthy” (p. 16).

At the University of Lethbridge, two hundred and sixty nine (269) food hampers were distributed through the ULSU Food Bank during 2008 to 96 clients. Poverty is a common risk factor for food insecurity. As many students are reliant on student loans, summer savings, and a variety of other sources of income, research regarding food insecurity in this vulnerable population is currently under-represented in the literature. Compounding this issue at the U of L is the burden of student loans (total average debt for U of L students was \$25,868 in 2009), rising tuition costs (247% increase in Alberta from 1991-2009), and reasonable access to healthy foods (the nearest supermarket providing a full array of healthy foods is 3.7 kilometers from campus) (Canadian Association of University Teachers, 2009; Canadian University Survey Consortium, 2009; Google, 2010a). For students without transportation, this becomes a significant issue.

The need for this study was justified not only in light of limited research but also because postsecondary students' basic human right to food appears to be violated. In Dennis Raphael's (2009) seminal book, *Social Determinants of Health*, McIntyre and Rondeau "contend that food insecurity is wrong, yet it is treated as though it were merely bad" (2009, p. 188). There was a need to understand 'how' and 'why' students became food insecure in order to address the problem. The World Health Organization asserts that, "Health and health equity may not be the aim of all social policies but they will be a fundamental result" (2008, p. 1).

Conceptual Frameworks

One framework used to guide this study arose from the social determinants of health (SDH) as presented by Dennis Raphael (2009b). The SDH framework directed the

semi-structured interview guide developed for this study and assisted in exploring patterns during data analysis and discussion. A second framework, structural violence theory, also informed this study, particularly during the analysis and discussion stages of this thesis study. Structural violence theory is presented as a health and human rights issue by Paul Farmer (Farmer, 2004, 2005).

Social determinants of health.

Within the social determinants of health (SDH) framework, food security stands as one of 12 SDH. Each of these determinants are complex, interrelated, and context and politically driven. The literature on food insecurity showed that income distribution, shelter, transportation, and education were some of the important components of poverty - which is considered a key SDH, especially when related to food insecurity (Agriculture and Agri-Food Canada (AAFC), 1998; Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008; Health Canada, 2007a; Raphael, 2007, 2009b). “One key aspect of food insecurity is whether individuals and their households have enough money to access healthy foods in adequate amounts” (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008, p. 4).

Generally speaking, a food budget should not exceed 15% of net income; housing is considered unaffordable if over 30% of net income. In 2008, the approximate cost of a healthy diet for a male student was 29% to 40% of his net income. Additionally housing cost this student between 33% and 46% of his net income. Not yet included in this budget estimate were transportation, tuition, books and other costs of living (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008). (Net income was based on current student loan rates plus working 4 months of the year.) It appeared

from this data that many postsecondary students currently live in poverty. Therefore the SDH provided an appropriate and relevant framework from which to view postsecondary student food insecurity.

The SDH are enmeshed with politics and philosophies of health equity and social justice. Healthy social policy relies on political will and funding, which are influenced by a fundamental belief in addressing inequity (Raphael, Curry-Stevens, & Bryant, 2008; World Health Organization, 2008). Ultimately, healthy public policy should address potential health inequities in subpopulations such as postsecondary students.

Structural violence theory.

Structural violence theory arises from the combination of two concepts, structuralism and violence. Together they are defined as violence which is generally invisible and ubiquitously integrated into common and stable organizations (such as government, educational and health organizations), and therefore are a part of our social fabric. Key to this theory is the unequal distribution of power and/or resources that become enmeshed within socio-cultural structures. As inequities are embedded into organizational systems, one has difficulty identifying the perpetrator of violence – violence which is ultimately directed at the ‘underdogs’ of a society (Farmer, 2004, 2005; Farmer, Nizeye, Stulac, & Keshavjee, 2006; Galtung, 1990; Ho, 2007; Roberts, 2009).

Paul Farmer presents structural violence, “and its interplay with health across the globe,” with the concept of suffering (Roberts, 2009, p. 38). As food insecurity is clearly linked with health inequities, key to the violence which appears to be perpetrated on postsecondary students are the structures designed to support the very students who are forced to resort to food banks to feed themselves. Students have little to no control over

political and organizational structures which decide student loan allocations, tuition fee increases and where the nearest supermarket is located in relation to their place of residence. Additionally, international students must learn to understand existing systems in their new country before they can navigate them. Therefore, structural violence provided an additional and effective means of examining postsecondary student food insecurity.

Overview of Method

The research methodology chosen for this exploratory, descriptive study was qualitative. The method used was person-centered interviewing as outlined by Levy and Hollan (1998). Fifteen (15) University of Lethbridge (U of L) students who accessed the University of Lethbridge Students' Union (ULSU) Food Bank were interviewed for approximately 60 minutes regarding their experiences with food insecurity and the factors which contributed to and alleviated their own and other students' food insecurity. The sample size of 15 generated a data set that reached saturation (Morse, 1995, 2000). U of L students who were of the age of consent, were full time students, who accessed the ULSU Food Bank during October 2010 and April 2011, and who were non-nursing students were invited to participate by way of a general invitation inserted into their food hamper. Students self selected into the study by contacting me if they were interested in participating.

The semi-structured interview guide was informed by the published literature on postsecondary student food insecurity and literature on interviewing the food insecure. The SDH and structural violence theory also informed both the interview guide development and the qualitative data analysis. The data analysis was further informed by

Burnard's 14 stages of analysis and Ryan and Bernard's techniques to identify themes (Burnard, 1991; Ryan & Bernard, 2000, 2003). Transcribed, verbatim interviews were read multiple times. Reoccurring patterns drawn from the data which insight and understanding into the phenomenon of food insecurity among postsecondary students. Once data was analyzed, a member check confirmed the thesis study results.

Problem Statement and Purpose

The human right to food motivated the need for a clearer understanding of the experiences of postsecondary students' food insecurity. To date, research examining food insecurity within the postsecondary student population is limited. The purpose of this study was to understand the experiences of food insecurity among postsecondary students and the factors which contributed to, and alleviated, this social and public health issue.

Research Questions

The primary research question which guided this study was:

1) What are the experiences of food insecurity among students at the University of Lethbridge?

Secondary research questions included:

2) What do University of Lethbridge (U of L) students perceive to be the factors or barriers which contribute to food insecurity for themselves and for the postsecondary student population at the U of L?

3) What strategies are most commonly used by postsecondary students at the U of L to overcome barriers associated with food insecurity?

4) To what extent do the SDH and structural violence account for the factors which contribute to food insecurity in this sample?

Significance

The results of this study contribute to the limited literature and research on postsecondary student food insecurity. Understanding the factors which precipitate food insecurity and how the social determinants of health and structural violence interplay in this issue may enable policy makers and funders to develop interventions designed to alleviate the phenomenon. It is anticipated that the study results will provide valuable information for the University of Lethbridge and the U of L Students' Union. Students, student bodies, funders and local governments may be able to utilize these results to reexamine their policies and programs in order to better prevent food insecurity in the postsecondary student population. Students who read this study may begin to examine their own involvement with food security and question the normative state of food insecurity within their own lives and/or the lives of their peers.

Chapter Two: Literature Review

Postsecondary student food insecurity is an emerging yet poorly studied issue in Canada and the United States (Pia Chaparro, et al., 2009; Rondeau, 2007), and at this juncture efforts towards knowledge discovery appear to be fragmented (L. McIntyre, Canadian Institute of Health Research [CIHR] Research Chair in Gender and Health, personal communication, November 9, 2009; C. Rocha, Director, Ryerson Centre for Studies in Food security, personal communication, November 17, 2009; P. Williams, CIHR Research Chair in Food Security and Policy Change, personal communication, November 17, 2009). The purpose of this chapter is to describe: poverty in Canada and the Canadian social safety net; the Canadian university context and today's university student, and; definitions of food security, along with the outcomes and implications of being food insecure. Also presented is current existing literature, published and grey, that links postsecondary students with food insecurity, making explicit the gap in knowledge that exists regarding this sub-population. Additionally, I briefly discuss the published literature in relation to interviewing the food insecure. I also provide the context for Lethbridge where possible. Finally, I discuss the social determinants of health and structural violence and present them as conceptual frameworks with which my research questions were examined.

Poverty and Canadians

As food insecurity is strongly linked in the literature with poverty and the lack of monetary resources to purchase food, a discussion on poverty in Canada is warranted. In Canada, there are multiple ways to present poverty data and a variety of technical definitions of poverty; however, despite these differences, multiple parties agree that

ending the cycle of poverty in Canada is important and morally the right thing to do (Campaign 2000, 2009; Canada Without Poverty and Citizens for Public Justice, 2009; Canadian Senate, 2009b; Gurnett, 2009; Pederson, Reach, & Donahue, 2010; Raphael, 2007). The Canadian Senate writes in their 2009 report, *In From the Margins: A Call to Action on Poverty, Housing and Homelessness*, that, “eradicating poverty and homelessness is not only the humane and decent priority of a civilized democracy, but absolutely essential to a productive and expanding economy benefiting from the strength and abilities of all its people” (Canadian Senate, 2009b, p. 3).

In Canada, during 2007 almost one in 10 children (and their families) lived in poverty (Campaign 2000, 2009). Based on after tax income (that is, after tax Low Income Cut-Offs or LICOs), in the 20 years spanning 1997-2007, child and family poverty decreased by only 2.4%, leaving 9.5% of Canadians still considered to be poor. Statistics Canada currently utilizes LICO scores which are a relative measure of poverty threshold. They report before and after tax measures to establish the existence of poverty. “LICOs are income thresholds, determined by analysing family expenditure data, below which families will devote a larger share of income to the necessities of food, shelter and clothing than the average family would” (Statistics Canada, 2009, p. 4). There is debate over whether pre or post tax LICO figures are most appropriate and, if given its relative measures, the accuracy of the score. What is questioned is that LICOs do not measure poverty as the ability of a person to meet his/her basic needs. Using before LICO tax figures reduces the 2007 poverty rate by 5.5% (Campaign 2000, 2009; Raphael, 2007) however, proponents of a poverty-free Canada advocate the use of multiple measures to more accurately measure poverty. These include: 1) the after-tax

LICO figures; 2) indicators of poverty such as, incidence of low income households and economic families, government transfer payment as percentage of income, unemployment rate, Aboriginal population, moves in the previous year, percent of children <6 years of age, percent of lone parent families, and adults with no high school certificate; and 3) other contextual indicators such as social inclusion, social exclusion, control of destiny, and social participation (Pederson, et al., 2010). Organizations that advocate for the impoverished utilize the after tax LICO measures in their communications. They believe it more accurately reflects the actual spending capacity of a family. Campaign 2000 and Canada Without Poverty are such organizations, made up of coalitions of Canadian organizations and individuals at many levels, working to end child poverty. There are additional arguments that LICO values do not reflect today's spending patterns as measurements are based on 1992 spending patterns (Campaign 2000, 2009; Raphael, 2007) .

Statistics Canada recognized the difficulty in defining poverty: "Defining poverty is far from straightforward. The underlying difficulty is that poverty is a question of social consensus, defined for a given point in time and in the context of a given country. Decisions on what defines poverty are subjective and ultimately arbitrary" thus, Statistics Canada continues to use LICO scores which they believe show "some Canadians are less well-off than others based solely on income, and as such (LICO) are low income and not poverty measures" (Statistics Canada, 2009, p. 6).

In researching their *In From the Margins* report, the Canadian Senate heard evidence from Canadians regarding the reduction of poverty during 2008 and produced two reports that identify factors aggravating poverty in Canada. They mapped out an

economic case for reducing poverty in Canada (Collin & Paul, 2008, 2009).

Unaffordable housing was listed as a key factor that contributes to increased poverty. Other risk factors included “racism, gender discrimination, violence, divorce, illness, accidents, low wages, lack of education and skills, and having children” (Collin & Paul, 2009, p. 3). Particularly vulnerable populations were “lone parents, persons with disabilities, recent immigrants, Aboriginal people living off reserve, and unattached individuals aged 45 to 64 years” (Collin & Paul, 2009, p. 5). Women were more likely to be poor, thus placing children at increased risk. Being employed did not protect families from poverty as the working poor – those unable to earn a sufficient income to provide for their family’s needs – still needed to access food banks.

An additional issue is the growing income gap between rich and poor Canadians (Raphael, 2009b; Reutter et al., 2006). In 2007, for every one dollar a poor family had, the highest 10% of Canadian earners had almost \$12 (Campaign 2000, 2009). To view this from a different perspective, between 1999 and 2005 “the average debt levels of the poorest 20% of Canadian families grew by 70.3%, while the wealth and assets of the richest 20% grew by 43.1% after adjusting for inflation” (Canadian Association of University Teachers, 2009, p. 51). There is concern regarding erosion of the middle class in this country.

Increasing income inequality has also led to a hollowing out of the middle class in Canada with significant increases from 1980-2005 in the percentages of Canadian families who are now poor or very rich. The percentage of Canadian families who earned middle-level incomes declined from 1980 to 2005 while the percentage of very wealthy Canadians increased as did those near the bottom of the income distribution (Mikkonen & Raphael, 2010, p. 13).

Experts recommended a national poverty reduction strategy to the Canadian Senate and, to that end, a private members bill (C-545) known as “An Act to Eliminate

Poverty in Canada” was introduced into the Canadian House of Commons as a private members bill in June 2010. The bill defined poverty and recognized it as a human rights issue, therefore, entreating the Canadian government to eliminate poverty in Canada through the establishment of short, medium and long term strategies. Parliamentary reports quote Campaign 2000: “repeating the belt-tightening methods of the 1990’s will not only deepen the inequality within Canada but will cost taxpayers more in the future through increased health care costs, emergency housing resource, the criminal justice system and through losses in skilled labour market productivity and lifetime earnings” (Collin & Paul, 2008, p. 3). Private members bills are seldom passed in Canadian Parliament, and the *Canadian Government Response to the Final Report of the Standing Senate Committee on Social Affairs, Science and Technology’s Subcommittee on Cities entitled, In From the Margins: A Call to Action on Poverty, Housing and Homelessness* advised that the Senate report was compiled in a time of a strong Canadian economy – and therefore all 74 recommendations were rejected (Government of Canada, 2010). (Ranier, 2010). This bill has since been re-introduced in 2011 as Bill C-233. It currently stands before Canadian Parliament.

What Canadians Think About Poverty: Why Should We Be Concerned?

What do people in Alberta and Canada think about poverty? It appears that Albertans are concerned about poverty worldwide, looking to provincial, federal and large non-governmental organizations (NGOs) to support measures that reduce poverty (Angus Reid Strategies, 2009a). They also attribute poverty in Canada to structural explanations such as government policies and unequal opportunities in our society (Reutter, et al., 2006). Two studies inform this literature review as to how Canadians feel

about and attribute causes of poverty at global and domestic levels. Studies such as these are important because “people’s understanding of poverty will likely influence their interactions with people living in poverty” (Reutter, et al., 2006, p. 2). These attitudes along with economic, legal, and social structural processes may lead to social exclusion which is defined as the “societal processes which systematically lead to groups being denied the opportunity to participate in commonly accepted activities of societal membership” (Raphael, 2009b, p. 251) which, in turn, leads to “higher health risks and lower health status” (Galabuzi, 2009, p. 252). Some groups commonly affected by social exclusion include Aboriginal people, immigrants, racialized groups, those with disabilities, single parents, children, women, the elderly, gays, lesbians bisexuals and transgendered people (Galabuzi, 2009).

Public attributions of poverty among participants from eight neighbourhoods in Edmonton (n = 839) and Toronto (n = 832) were revealed in a 2002 study (Reutter, et al., 2006). Researchers performed multivariate logistic regression with the data from a 110 item survey instrument collected via telephone interviews to “predict support for structural, individualistic, intergenerational and fatalistic attributions for poverty by demographic and exposure-to- poverty variables” (p. 1). They supplemented this data with individual and group interviews. Overall, the researchers found that participants most attributed poverty to structural causes (e.g. government policy, social safety net) and least attributed it to individualistic (e.g. laziness) causes. Wealthier respondents “were somewhat less likely to support the structural reason(s)” for poverty; and intergenerational poverty as a attribution was more likely to be supported by wealthier and better educated respondents (p. 16). Income was positively correlated to

intergenerational attributions but negatively correlated with individualistic, fatalistic and one (unidentified) structural attribution. Thirty percent (30%) of Canadian participants and 38% of Albertan participants believed that “people live in poverty mainly because of their own choices and actions,” and 51% of Canadians (41% of Albertans) believed that “people live in poverty through no fault of their own” (p. 16). An interesting finding was that some respondents, who lived in poverty but did not receive welfare income, “view people receiving welfare as abusers of the system creating problems for those who really need help” (p. 17). Researchers also found that beliefs and attitudes on the causes of poverty were influenced by formal and informal education on poverty – and those who were exposed to this education were more likely to attribute poverty to structural causes.

The Alberta Council for Global Cooperation (ACGC) commissioned an Angus Reid poll of 801 Albertans (Angus Reid Strategies, 2009a). The ACGC wanted to identify Albertans’ understandings and opinions of global poverty. They then compared these opinions against a representative, national sample of 1,000 Canadians. This study was conducted to determine opinions and then better utilize social marketing strategies with the goal of increasing awareness and knowledge of global poverty and the work of the ACGC. Researchers measured citizens’ “awareness, knowledge and perceptions of Global Poverty as an issue for Alberta” (Angus Reid Strategies, 2009b, p. 3). Results revealed that Albertans are knowledgeable about the issue of global poverty, and poverty (at that level) is a growing concern to Albertans (and Canadians), with 80% of those polled believing that poverty is on the rise locally and worldwide. Poverty ranked fifth in top five global issues that concerned Albertans, behind health care, trade/economic issues, political stability and terrorism. Half of participants believed poverty affected

them at a personal level. Ninety percent (90%) stated they “connected” with those who are suffering. Albertans valued transparency and accountability in those agencies they chose to support through their donations. Albertans understood the positive outcomes of reducing poverty in terms of political and economic stability. However, researchers suggest that Albertans had difficulty connecting the social issues of global poverty to local organizations addressing the same issue, believing that global poverty should be addressed at a provincial level. Albertans and Canadians believed that United Nations and related organizations, as well as their provincial and federal governments, should all take the lead in decreasing global poverty.

I could find no existing research conducted on attitudes towards postsecondary student poverty; however, a recent newspaper article regarding the University of Calgary campus food bank, and student difficulties financing their education, inspired a number of online responses to the posting (Gerson & Storry, 2010). There were 16 responses from 12 readers – many with opposing views. One response quips sarcastically, “the attack on the personal finances of the nation’s young people continues. But since it is being done in the name of education, it seems to be OK” (Idea-Nation, October 8, 2010). Another response states, “These kids need to get jobs and save money before they go to school!!! I did and saved enough money to cover a majority of expenses” (Rick1986, October 8, 2010). According to these online responses, there appeared to be polarized views on how postsecondary education should be financed.

On its website, The Conference Board of Canada recently cited two reasons that all Canadians should be concerned about the growing gap between the rich and the poor in Canada (Conference Board of Canada, 2011). Firstly, they believe that high inequality

diminishes economic growth which can undermine social cohesion, and secondly, it “raises a moral question about fairness and social justice” (p. 1).

Canada’s Social Safety Net

Canada’s ‘social safety net’ refers to a variety of government funded programs and benefits designed to protect Canadians by providing assistance during transitions of life, and in times of need. Mikkonen and Raphael (2010) contend that there are normal transitions and changes during one’s lifetime that include, entering and maintaining work in the labour force, attaining education, raising children, seeking housing, and retirement. All are characterized by “life changes that can affect their health” (p. 35). Benefits and programs considered part of the social safety net range from income security programs (such as social assistance/welfare, employment insurance, workers compensation and disability benefits, pensions including retirement), family allowances, health and social services, Canada student loans, child tax benefit, working income tax benefit, and Canadian mortgage insurance, to name a few.

Hallstrom (2009) identifies three distinct periods in the development of the Canadian welfare state and political ideology:

- (1) pre-1939 (characterized by the slow and limited development of social policy;
- (2) 1940-1970s, where social policy both developed and diversified; and (3) the 1980s onward a period identified... as one of both resilience in the face of neo-liberalism as well as of blame avoidance (p. 341).

Neo-liberalism refers to the period after the 1970’s recession with a shifting focus towards global markets, reducing economic barriers between countries and “withdrawal of the state from the provision of public goods in favour of privatization” (p. 342). This change in Canadian public policy jeopardizes the social safety net. Examples exist such as increasingly stringent eligibility criteria for receiving employment insurance (EI)

benefits leading to progressively more difficulty in qualifying to receive the EI benefits that workers have previously paid into; and a web of welfare rules making it difficult to qualify for benefits (Mikkonen & Raphael, 2010; Osberg, 2009; Torjman, 2007). With Canada's unemployment rate increasing (projected to rise to 9.8% in 2010 during this global recession) defects in Canada's Employment Insurance program are becoming obvious (Osberg, 2009). Additionally, Canada is among the lowest ranked of the 30 OECD (Organisation for Economic Co-operation and Development) industrialized wealthy countries in public spending for early childhood education, seniors' benefits, social assistance payments, unemployment benefits, benefits and services for people with disabilities, and supports and benefits to families with children (Mikkonen & Raphael, 2010). The Caledon Institute of Social Policy present further examples of theoretically promising (but in fact "restrictive" and "flawed") programs initiated by the Canadian government in 2006 and 2007 such as the Working Income Tax Benefit and the Universal Child Care Benefit (Torjman, 2007, pp. 6-7).

Even the Canadian Senate weighs in on the issue of a disintegrating social safety net admitting that:

First, when all the programs are working, when the individual gets all possible income and social supports, the resulting income too often still maintains people in poverty, rather than lifting them into a life of full participation in the economic and social life of their communities... Second, at their worst, the existing policies and programs entrap people in poverty, creating unintended perverse effects which make it virtually impossible for too many people to escape reliance on income security programs and even homeless shelters... The programs that entrap people also provide too little income to meet those same (basic) needs (Canadian Senate, 2009b, p. 5).

Canadians rely on the social safety net at many stages in their lives through expected or unexpected life transitions. The safety net provides more than financial benefits – it also

“includes services such as counseling, employment training and community services” and as such they need to be strengthened otherwise the health of Canadians becomes threatened (Mikkonen & Raphael, 2010, p. 36). Current neo-liberal philosophies would endorse volunteerism, economic and private markets and individual responsibility as our safety net. “What the Canadian programs overlook or downplay are the structural barriers to market income: the availability of work in the local economy, family responsibilities that might interfere with full-time employment, the availability of child care, and any idea of social responsibility for children” (Baker, M. as cited in Hallstrom, 2009, p. 343).

Canada Student Loans and Grants Programs may be considered as a part of the Canadian social safety net – students who cannot afford the cost of a post-secondary education have the opportunity to apply for and receive a Canada Student Loan and/or Canada Student Grant (Human Resources and Skills Development Canada, 2011). Additional ‘safety-net’ features of the program include interest relief options such as accrued interest deferred for up to 30 months post-graduation, debt reduction if unable to initiate loan payback after a five year period, or existing disability which prevents repayment. These benefits are intended to make the loan affordable by deferring or forgiving interest or principal until the student is employed and able to pay back the loan. Additionally, Canada Student Grants Program provides non-repayable grants to students of low and middle income families. Critics of the programs highlight unrealistic assumptions about a student’s ability to pay for their education and flawed methods for calculating award amounts. For example, the Canadian Association of Student Associations believe there is currently an unfair assessment of assets owned by students,

unrealistic expectations of parental and spousal funding contributions to a student's education costs and, a need to raise the current loan limits along with a need to decrease current loan interest rates (Canadian Association of Student Associations, 2011). They also cite a lack of adequate appeals mechanism and a student loan ombudsman.

Education and Universities in Canada

January 2011 statistics revealed that more than 60% of Canadians age 25 and older had completed some postsecondary education. Of these, 34.1% indicated they received a certificate or diploma, 16.3% reporting a Baccalaureate degree and 7.2% a graduate degree (Canadian Association of University Teachers, 2011). The Canadian Association of University Teachers (CAUT) also reported that unemployment rates were lower for those with postsecondary certificates and degrees - the overall unemployment rate in Canada for January 2011 was 7.0%. However, according to the CAUT, only 5.4% of these possessed an undergraduate degree and 3.9% possessed a graduate degree (Canadian Association of University Teachers, 2009). The unemployment rate in January 2011 for those who held a postsecondary certificate was 6.4%.

Total expenditures at Canadian universities have “increased dramatically over the past 30 years and at a rate significantly higher than expenditures on academic salaries” while government funding has dramatically declined (Canadian Association of University Teachers, 2011, p. 1). Nationally between 1979 and 2009, “the proportion of university operating revenue provided by government sources has declined from 84% to 58% while the proportion funded by student tuition fees has increased from 12% to 35%” (Canadian Association of University Teachers, 2011, p. 1). In Alberta universities, 29% of operating revenue comes from student tuition fees. To offset decreases in funding,

universities have had to increasingly rely on private income sources including seeking out full tuition paying students from international sources (Canadian Association of University Teachers, 2011). Additionally universities such as the U of L have aggressively recruited students from the local area using social marketing techniques, successfully drawing students who might have chosen to attend another Canadian university for their education - as shared by the immediate past-president of the U of L, Dr. Bill Cade, (personal communication, August 2009, W. Cade). The president of the CAUT, Wayne Peters, identifies a crisis in postsecondary education, which includes decreased federal and provincial financial funding, and increased reliance on private funding to support universities, spelling “disastrous effects on our students, our institutions, our communities and our country” (Peters, 2011). Implications are wide spread but from the student perspective could result in increased costs to attend university.

Who Are Canadian University Students?

It is important to understand the profile of the Canadian university student today and the burden of debt that they carry. The Canadian University Survey Consortium (CUSC) cooperatively prepares surveys of students enrolled in 34 Canadian universities. The University of Lethbridge takes part in these surveys. In each year of a three year cycle, different student groups are targeted: all undergraduates; first-year undergraduate students; or graduating students. The Graduating Student Survey 2009 is “one of the most comprehensive studies conducted with students graduating from an undergraduate program in Canada” (Canadian University Survey Consortium, 2009, p. 93). Unless otherwise identified, the following data are provided by the *Graduating Student Survey*

2009: *University of Lethbridge* (Canadian University Survey Consortium, 2009). This survey reported on Canadian and U of L students in their graduating year of university during 2009. They state: “as we found three years ago, there is remarkable consistency among students over time. In terms of trends, this year’s results, with some exceptions, are very similar to findings from the previous three (2006, 2003, 2000) CUSC surveys of graduating students” (p. 93).

Canadian student profile.

In 2009, the majority of graduating students in Canadian universities were 24 or younger (Canada = 80%; U of L 73%), and female (Canada = 67%; U of L = 65%). Nine in 10 students were single in their last undergraduate year (single, divorced, widowed, or in relationship but not living common-law) with 6 in 10 students living independently (Canadian University Survey Consortium, 2009). CUSC further reports, of those students who live independently, 49% rented their accommodations (U of L 62%). Otherwise, 38% of Canadian students lived with parent/guardians or relatives (U of L = 18%); 9% personally owned their home (U of L = 14%); and 5% lived in on-campus residence (U of L = 3%). Seven percent (7%) of Canadian students who graduated in 2009 had children (U of L = 8%); 7% self identified as having a disability (U of L = 8%); 22% self identified as being from visible minority (U of L = 18%); and 3% self-identified as being Aboriginal (U of L = 4%). Statistics Canada CANSIM tables showed an increase in Canada in overall total university enrolments (all programs, full and part time status students) from 822,774 (1997/1998) to 1,066,353 (2007/2008) – an increase of 22% over 10 years, with male students making up 43% and 42.5% (respectively) of the total registration (Statistics Canada, 2010c). Alberta experienced a 24% overall increase

in student enrolments over the same period of time with females making up 57% of the students enrolled in 1997/1998 and 59% of the students enrolled in 2007/2008.

According to the 2009 CUSC survey the average length of university undergraduate programs was four years; however, students generally attended the institution for five years either because of part time studies or because they interrupted their studies for one or more semesters. Almost 20% of students who graduated in 2009 were “first generation students; that is, neither their mother nor their father had any post-secondary education” (p. i). This figure decreases in the CUSC 2010 data where 14 % of students in first year university are first-generation students (Canadian University Survey Consortium, 2010). Finally, most students attended university in their province where they permanently reside.

Student tuition and debt.

Over the past 20 years, the cost of undergraduate tuition in Canada has increased over 200%, (Alberta 247.2%) from an average of \$1,706/academic year in 1991-1992 to \$5,138/academic year in 2010-2011, while cost of living has increased in the same period by only 41% (Canadian Association of University Teachers, 2011). University of Lethbridge undergraduate fees for the 2011-2012 academic year are \$5,600 (Registrar's Office and Student Services, 2011).

CAUT (2011) reported that “in 2006, youth aged 18-24 with parents earning more than \$100,000, in pre-tax income were almost twice as likely (49%) to have been enrolled in university than those with parents earning less than \$25,000 (28%)” (p. 23). There is concern about student debt load.

Students appear to be accumulating greater debt in paying for their education...student debt-load is rising faster than the cost of living. On average,

debt increased 37% between 2000 and 2009. During the same period the cost of living rose only 21%. This increase in debt may in part make some students question the value of their education given the money necessary to complete their undergraduate program. (Canadian University Survey Consortium, 2009, p. 94).

In the 2009 CUSC survey, 58% (almost 6 in 10) of Canadian graduating students reported debt from financing their education – U of L graduating students reported this figure to be 60%.

Canadian students reported that most common funding sources for their education are their parents or other family members (50%); however, one-third of students rely on summer or current employment, government loans/bursaries or university scholarships/bursaries (Canadian University Survey Consortium, 2009). The most common debt source is student loans, equaling 56% of their debt. Other sources of debt are loans from financial institutions (21% of total), loans from parents or other family members (18%) or other sources (5%). Overall average debt for all students surveyed is approximately \$15,500. However, those students who report debt, report their average debt to be approximately \$26,700 (median = \$23,500). The *CAUT Almanac 2011-2012*, an annual report by the Canadian Association of University Teachers (drawing its statistics from Statistics Canada) reports that in 2005 the average debt at graduation, including government and private loans, was \$22,600 for college students, \$37,000 for baccalaureate level students, \$37,800 for Master's students and \$43,700 for Doctoral students (Canadian Association of University Teachers, 2011).

According to CAUT, debt appears to increase as students age but begins to decline again for students 30 and older. Nine in 10 students report having a credit card with 75% of these students regularly paying off their balance each month. Students who report a balance owe an average of \$3,400.

The Canadian Education Project has developed a series of research briefs drawn from longitudinal survey data of low income students (L-SLIS) currently receiving the Canadian Millennium Scholarship Foundation's Access Bursary, also called the MESA Student Survey (Measuring the Effectiveness of Student Aid) (Canadian Education Project, 2010). They reported that in their survey population of *third year* low-income university students (conducted 2007, 2008 and 2009), average debt accumulation was \$18,480 and 50% of students would have borrowed more if they were able (Finnie, Childs, & Wismer, 2010e). Comparatively, the Graduating Students Survey (Canadian University Survey Consortium, 2009) reports that among those 2009 graduating students who received government students loans, the average debt was \$23,000; and, the CAUT (Canadian Association of University Teachers, 2011) reports that in 2005, the average debt at graduation among undergraduate, university students with private and government loans was \$37,000. Among graduate students this debt increases to \$43,700.

Additionally, Finnie, et al. (2010e) report that almost half of students were concerned about their ability to pay back their loans, anticipating 5.8 years to complete their payments. Without government assistance, 42% of students surveyed would have quit school entirely while 25% would have borrowed more from private institutions, 20% would borrow more from family members – “government aid accounts for 60% of students' total funding in first year and over 55% in later years” (Finnie, Childs, & Wismer, 2010d, p. 2). Females tend to borrow from government slightly more than males but are less likely to borrow from family and private institutions than males. “Students from larger communities borrow smaller amounts from government than students from smaller communities” – 97.1% vs 98.9% (Finnie, et al., 2010e, p. 4)

In a different study, the researchers reported government aid as the largest funding source for post-secondary students (college and university) (Finnie, et al., 2010d). Total funding, from all sources (scholarships, private borrowing, family contributions, school year employment income, summer savings and government aid), decreased substantially in years two (and three for university students), from \$16,100 to \$12,690 (and \$12,370 in year three). Family financial contributions among university students dropped from 52.3% in year one, to 48% in year two, then 36.3% in year three. Scholarships also dropped over the three years for all postsecondary students, however private borrowing and school year employment income increased.

In a 15 year longitudinal study of a 1988 high school graduating class, Andres and Adamuti-Trache (2008) found that: in British Columbia, students who also hold student loans were more likely to work while attending university; and women were more likely to work part time during the academic year suggesting that men were able to earn more during the summer. They also found that although women tended to complete their postsecondary studies more quickly than men, women incurred more student debt than men. According to the CUSC'S graduating students report, approximately 60% of Canadian students were employed – most often off campus – spending on average 18 hours working each week, and “those who work more hours are more likely to report their employment has a negative impact on their academic performance” (Canadian University Survey Consortium, 2009, p. v). The Canadian Education Project reported student employment rate in 2010 was 67% and two-thirds of these students were working an average of 34 hours per week with a median earning of \$400 per week (Kaznowska, Kramer, & Usher, 2010). Fifty seven percent (57%) of these students admitted that if

they were able, they would have worked more hours at their current job. Male students in this study earned approximately 25% more money than female students. This same study showed student unemployment at 20% “nearly double the rate reported by Statistics Canada’s *Labour Force Report*” (p. 2). They attribute this discrepancy to Statistics Canada’s reporting methods which excludes university students who choose to study rather than work.

In 2009 CAUT reported that the proportion of Canadian 20 year old students who were working increased by 7% from 1996/97 to 2006/07 with 45% of university students working in 2006-2007 (Canadian Association of University Teachers, 2009). In Canada, during 2010, 48.7% of 20-29 year old full time students (and 84.2% of part time students) participated in the labour force – this is an increase of 7.2% over the past 10 years (Canadian Association of University Teachers, 2011). The Canadian Education Project (CEP) found that university students who reported more paid hours, spent less time studying, and those students who worked every week and worked twenty or more hours each week were “considerably more likely to leave postsecondary education compared to students who work fewer hours or do not work at all” (Finnie, Childs, & Wismer, 2010f, p. 2).

The CEP also studied postsecondary student engagement support networks. Students who believed that their studies would assist them in their future careers achieved relatively higher first year grades and were much less likely to leave their education than other postsecondary students (Finnie, Childs, & Wismer, 2010a). They also found that among university students, support of family and friends did not have a strong relationship with either grades or quitting schooling; however, in college students,

support of friends did impact these outcomes. In their study of first generation students, defined as students whose parents did not attend postsecondary education, Finnie, et al. found that although first generation students decided to attend university later in their high school career and their families were less likely to have saved for their postsecondary education, they were not more likely than non-first generation students to leave their education without graduating (Finnie, Childs, & Wismer, 2010b). Stuber's (2011) study on the experiences of white first-generation college students (focusing on engagement, race and class) indicated that despite half of the study population having feelings of marginality and being a greater risk for attrition, over time the majority of working class students persisted, and many overcame their marginalization to become 'motivated persisters'.

Definitions: Food Security and Food Insecurity

According to Mechlem (2004) there are an estimated 200 definitions of food security. Jarosz (2011) explained that the definition and scale of 'food security' has evolved over the past 35 years because partially because of evolving political and ideological discourse. The most commonly used definition of individual and household level food security - currently used by the Dietitians of Canada (2005), and the definition I utilized for my research - came from the 1996 World Food Summit: "Food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary need and food preferences for an active and healthy life" (Food and Agriculture Organization of the United Nations, 1996, World Food Summit Plan of Action, para. 1). It is argued that food is a public health issue, a basic human right and is a matter of social justice (Health Canada, 2007a; Hughes, et al.,

2011; McIntyre, 2003; McIntyre & Rondeau, 2009; Mechlem, 2004; World Health Organization, 2008).

It has been stated quite simply that “a lack of food security is food insecurity” (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008, p. 1; Food Security Projects of the Nova Scotia Nutrition Council and the Atlantic Health Promotion Research Centre, 2005). Expanding on this definition, the Food Security Project of Nova Scotia Nutrition Council (2005) observed,

Food insecurity means not being able to get enough food or enough healthy foods that you like and enjoy. It means wondering about where your food comes from or worrying about where your next meal will come from. It means wondering if there will be less food in the future because of the way we are growing and producing food now (p. 1).

Another definition of food insecurity is “a lack of access to affordable, adequate food though socially acceptable means,” (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008, p. 4). McIntyre states that the “generally accepted definition of food insecurity,” is “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,” (McIntyre & Rondeau, 2009, p. 188) which is also posted on the Public Health Agency of Canada’s website.

Regardless of what definition is used, food insecurity is clearly linked with poverty and the lack of monetary resources to purchase healthy foods (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008; Drewnowski & Eichelsdoerfer, 2009; Health Canada, 2007a; McIntyre, 2003; McIntyre & Rondeau, 2009; Meldrum & Willows, 2006; World Health Organization, 2008). The key determinant for hunger and food insecurity in Canadians is insufficient income to

dedicate to the household food budget (McIntyre & Rondeau, 2009; Power, 2005; Tarasuk, 2005, 2009) although there are a number of other factors at play in high-income countries including physical, economic, sociocultural, and political environmental influences (Gorton, Bullen, & Mhurchu, 2010). That being said, there is “extensive documentation of the inextricable link between food security and income adequacy,” (Tarasuk, 2005, p. 299). The household food budget in developed countries like Canada is the “most elastic” (McIntyre, 2003, p. 47) in that fixed household monthly spending priorities such as shelter needs, and childcare tend to trump the more flexible food budget, expressed as “pay the rent or feed the kids” (Friendly, 2008, p. 12).

Food bank use, income and homelessness measurements are considered an indirect measurement of food insecurity prevalence (McIntyre, 2003; McIntyre & Rondeau, 2009). The standard methodology for measuring and categorizing household food insecurity – the most direct approach – is to utilize standardized, validated questionnaires such as the *U.S. Household Food Security Survey Core Module* (U.S. HFSSM) which was developed in 1995 and has undergone a number of subsequent refinements (Bickel, Nord, Price, Hamilton, & Cook, 2000; U.S. Department of Agriculture, 2008). The ‘core module’ is a validated 18 item survey instrument used to measure food insecurity prevalence and severity in individual households with adults and children; all questions are referenced to the previous 12 month period (U.S. Department of Agriculture, 2008).

The survey questions focus on “concrete experiences of diminished diet quality and reductions in food intake” (Tarasuk, 2009). One major strength of the questionnaire is its multiple indicator questions which, when analyzed, distinguishes four degrees of

food insecurity. The core U.S. HFSSM has been well utilized in the United States and, with some minor modifications, worldwide (Melgar-Quinonez, Nord, Perez-Escamilla, & Segall-Correa, 2008). The instrument was adapted for use by Health Canada's 2004 *Canadian Community Health Survey, Cycle 2.2* and reported in *Income-Related Household Food Security in Canada* (Health Canada, 2007a). It has continued to be utilized in subsequent CCHS survey collections.

Health Canada has departed from the four category labels used by the United States Department of Agriculture (USDA) (moving to a three label system) citing that thresholds from the USDA "may be overly stringent" (Health Canada, 2007a, p. 11). Table 2.1 compares the most current USDA and Canadian category descriptions and raw scoring criteria for the 10-item *Adult Food Security Survey Module*.

Table 2.1

Comparison of USDA and Health Canada Category Labels and Criteria for Food Security Status Among Adults

U.S.D.A. Category Label (2006)	Description / Raw Score	Health Canada Category Label (2004)	Description / Raw Score
High Food Security Among Adults (considered food secure)	No reported indicators of food-access problems or limitations. = 0 affirmed responses	Food Secure	No, or one indication of difficulty with income-related food access. = 0 or 1 affirmed responses
Marginal Food Security (considered food secure)	One or two reported indications – typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake. = 1-2 affirmed responses		
Low Food Security (considered food insecure)	Reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake. = 3-5 affirmed responses	Food Insecure, Moderate	Indication of compromise in quality and / or quantity of food consumed. = 2 to 5 affirmed responses
Very Low Food Security (considered food insecure)	Reports of multiple indications of disrupted eating patterns and reduced food intake. = 6-10 affirmed responses	Food Insecure, Severe	Indication of reduced food intake and disrupted eating patterns. = 6-10 affirmed responses

(Economic Research Services, 2009, November 16 revised, p. 1; Health Canada, 2007a, p. 11).

Those with ‘very low food security’ experience hunger – which is a ‘prolonged involuntary lack of food’ (McIntyre & Rondeau, 2009, p. 188).

Addressing the history and current status of food insecurity in Canada, McIntyre and Rondeau (2009) write: “A very brief social history of food insecurity in Canada would read simply: Poverty increased then it deepened. Food insecurity emerged, then it increased in severity” (p. 190).

Statistics Canada’s CANSIM database with 2007/2008 data revealed that 7.7% of Canadian households were moderately or severely food insecure - a decrease from the 2004 figure of 9.2% provided by Health Canada (Health Canada, 2007a; Statistics Canada, 2010b). The same databases revealed Alberta’s figures decreased from 10.7% in 2004 to 6.3% in 2007 – below the national average. According to the most recent Health Canada publication on food insecurity prevalence which provided a breakdown of the data, *Canadian Community Health Survey (CCHS 2.2)* (collected in 2004, and published by Health Canada in 2007), the prevalence of food insecurity was higher among certain households such as those with lowest incomes (48.3%), lower middle (29.1%), and those who relied on government and other sources of income such as “social assistance (59.7%), workers compensation/employment insurance (29.0%) as their main source of household income compared with those with salary/wages as their main source of income” (Health Canada, 2007a, p. 4). The CCHS 2.2 survey data also revealed that food insecurity prevalence was higher in off-reserve Aboriginal households (33.3% as compared to non-Aboriginal 8.8%), higher in households with children (10.4% as opposed to those without children at 8.6%) and higher with those who do not own their own homes (20.5% compared with 3.9% who did own their own dwelling). Finally, within households with children, those lead by a female lone parent had a higher prevalence of food insecurity (24.9%) and those households with 3 or more children, or at

least on child under 6 years also had a higher prevalence of food insecurity (Health Canada, 2007a). There have been further CCHS collections of food security data in Canada, with the most recent Cycle 7.1. In 2010, Statistics Canada published a *Health Fact Sheet* describing 2007-2008 food insecurity data (Statistics Canada, 2010a). It revealed that lone parent households had the highest rates of food insecurity accounting for 16% of all food insecure households. Additionally they reported that households with younger children (under six years old) had the highest rates of food insecurity (10.3%) versus adults with older or no children. Younger people and women were more likely to live in households with food insecurity, with moderate household food insecurity peaking from ages 12 to 19 (6.6%) and slowly decreasing from age groups 20 to 34 (6.1%) until age 65 and older (2.5%). “Note that this does not mean that individuals in their teens necessarily experienced food insecurity themselves, but that they were more likely to live in a household where one or more household members did” (Statistics Canada, 2010a, p. 2).

There is some criticism leveled at food insecurity data collection in Canada since the recording of economic circumstances and their links to food insecurity data have been neither detailed nor consistent. The CCHS 2.2 survey for the first time administered the validated *Household Food Security Survey Module* (HFSSM) to all respondents. This indicated an improvement in how food security data were collected. However, according to Kirkpatrick and Tarasuk (2008a), subsequent CCHS cycles of 3.1 and 4.1 chose to not only make the HFSSM questions optional, it was also not administered in all provinces thus creating “methodological issues” (p. 325). It appears Health Canada does not consistently collect and measure economic circumstances of households across Canada,

which “thwarts attempts to develop a deeper understanding of the (national level) factors that mitigate vulnerability to food insecurity” (Kirkpatrick & Tarasuk, 2008a, pp. 325-326). The literature did not reveal what is at the root of these inconsistencies, however what was clear is that this lack of detailed information makes it “impossible to determine how federal, provincial and territorial policies have functioned to increase or reduce problems of household food insecurity” (p. 326).

Outcomes and Implications of Food Insecurity

Food insecurity is listed as one of 12 social determinants of health (Raphael, 2009b) and in the *Ottawa Charter for Health Promotion*, food is recognized as a “prerequisite for health” (World Health Organization, 1986, p. 1). Food insecure individuals tend to have a less varied, nutritionally inadequate diet with lower intakes of fruits and vegetables (Gorton, et al., 2010; Kirkpatrick & Tarasuk, 2008b; Power, 2005). There is literature linking health risks and health issues to food insecurity. These include impaired fetal development, child growth delays, mineral and micronutrient deficiencies (e.g. iron), inadequate nutrition intake, malnutrition, chronic disease, mental illness and depression (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008; Eicher-Miller, Mason, Weaver, McCabe, & Boushey, 2009; Gorton, et al., 2010; Gucciardi, Vogt, Demelo, & Stewart, 2009; E. D. Parker, Widome, Nettleton, & Pereira, 2010; L. Parker, 2007; Seligman, Laraia, & Kushel, 2010; Tarasuk, 2005, 2009). “Individuals in households characterized by food insufficiency had significant higher odds of reporting poor/fair health, of having poor functional health, restricted activity, and multiple chronic conditions, of suffering from major depression and distress, and of having poor social support” (Tarasuk, 2009, p. 217).

Links between academic performance and good nutrition have been well studied among children. Children who are well nourished achieve better performance measures and have increased ability to concentrate. Children who are undernourished have been associated with behaviour and attention problems, absenteeism, poor academic performance and are more irritable and lethargic (Dietitians of Canada, 2004; Florence, Asbridge, & Veugelers, 2008; MacLellan, Taylor, & Wood, 2008; Pia Chaparro, et al., 2009; Sorhaindo & Feinstein, 2006). I could not locate any studies exploring food insecurity or hunger and academic outcomes in postsecondary students in the literature, and this result is confirmed by Pia Chaparro's recent research study (Pia Chaparro, et al., 2009).

Although income is not a direct measurement of food insecurity, low household income is an indicator and therefore researchers have examined the relationship between incomes and healthy diets in high income countries such as Canada. High income households are more likely to buy higher quality foods such as fruits, vegetables, whole grains, lean meats and low-fat milk products. Healthy food purchases "fall precipitously as income declines" along with the nutritional quality of other purchased foods (Kirkpatrick & Tarasuk, 2008b; Tarasuk, 2009, p. 209). "As income drops and food budgets shrink food choices shift toward cheaper refined grains, added sugars and vegetable fats." (Drewnowski & Eichelsdoerfer, 2009, p. 1). This leaves those with low incomes nutritionally vulnerable as they must compromise quality and variety in order to 'fill their bellies'.

Most of the nutrition monitoring research has taken place in the U.S. However, a recent Canadian study utilizing CCHS 2.2 data (sample size 32,107) analyzed 24-hour

food intake recall and household food security data for persons 1-70 years of age living in private residences. Kirkpatrick and Tarasuk (2008b) found significant nutritional inadequacies of “protein, vitamin A, Thiamin, riboflavin, vitamin B-6, folate, Vitamin B-12, magnesium, phosphorus and zinc” in adults and adolescents (p. 604). Another recent U.S. study analyzing National Health and Nutrition Examination Survey 1999-2004 data (n = 11,247) showed that food insecurity in U.S. adolescents is significantly associated with iron deficiency anemia; odds were 2.95 times greater among children aged 12-15 years than those living in food secure households (Eicher-Miller, et al., 2009). The richest sources of iron come from meats such as beef, pork and poultry. Iron deficiency anemia is associated in children with poor behaviour and academic performance, and in adolescent girls with menstrual issues. In adults, chronic iron deficiency can manifest itself as fatigue, bruising, shortness of breath and cardiac issues. Poor nutrition is associated with higher risk of chronic disease or precursors for chronic diseases such metabolic syndrome (defined as three of six criteria - abnormal blood glucose, elevated blood pressure, increased waist circumference, increased triglycerides, and decreased high-density lipoproteins), hypertension, type 2 diabetes, hypercholesterolemia cardiovascular disease, osteoporosis and some types of cancer (Gucciardi, et al., 2009; Health Canada, 2007b; Kirkpatrick & Tarasuk, 2008b; E. D. Parker, et al., 2010; Seligman, et al., 2010; Tarasuk, 2009).

Obesity is a growing public health problem across all socioeconomic gradients in Western industrialized countries. Increased body weight is linked to a multitude of health issues. There is some evidence that states when food insecure, individuals will sacrifice the quality of their food selection, thus obesity becomes an issue with the food insecure,

(Drewnowski & Eichelsdoerfer, 2009; McIntyre & Rondeau, 2009). This appears to explain the paradox that those Canadians who are food insecure may also be at risk for obesity. However, there is conflicting evidence linking overweight and obesity prevalence to food insecurity, especially in the case of *severe* food insecurity, though there appears to be stronger evidence of obesity issues in adults who are *moderately* food insecure (Tarasuk, 2009). The determinants of healthy eating patterns are complex and are affected by individual, social, cultural, physical, policy and political factors (Power, 2005). Tarasuk (2009) listed possible hypotheses as to why eating patterns have been linked to weight gain (including the hypothesis that inexpensive high energy dense foods lead to weight gain) and voices the need for longitudinal studies to determine whether there is a causal relationship. This literature do not account for exercise (or lack thereof) as a factor for obesity and food insecurity. Contradicting Tarasuk in a recent oral presentation at the Canadian Public Health Association 2010 annual conference, researcher Lynn McIntyre stated that her recent logistic regression analysis of CCHS healthy eating index data did not show a significant difference between the body mass index (BMI) of food secure individuals and any level of food insecurity (McIntyre, 2010, June). However, she did reveal that 57% of food insecure adults are current smokers - 38% above the 2006 Canadian average of 19% for ages 15 and older (Public Health Agency of Canada, 2007). According to McIntyre, when these individuals in lowest socioeconomic status quit smoking, statistically they have the most gain in body weight as compared with food secure Canadians who quit smoking, calling for a recommendations for nicotine replacement therapy and weight treatment therapy to mitigate this dramatic gain in body mass index (BMI).

In addition, food insecurity causes significant stress in households. In the *National Population Health Survey (NPHS) Cycle 2* data, individuals who were food insecure had “significantly higher odds of reporting poor/fair health...suffering from major depression and distress and of having poor social support (Vozoris & Tarasuk, 2003, p. 120). It is thought that mothers and pregnant women may have increased stress because they cannot consistently provide nutritious meals for their children. In fact many adults will “go without food to ensure that the youngest family members are fed (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008, p. 5). Thus, members of the same household will have different experiences of food insecurity (McIntyre & Rondeau, 2009).

In a systematic review of environmental influences on food security in high-income countries (apparently the first review of its kind), Gorton et al. (2010) reviewed 78 articles to assess which factors are associated with food insecurity. They organized the multiple resulting factors into four broad categories: economic, physical, political and socio-cultural. Lack of household financial resources figured most prominently in the literature, however the many other factors Gorton identified highlight the complexity of this public health issue. According to this systematic review, economic factors associated with food insecurity include: income, wealth, employment, living expenses, and housing tenure. Physical factors include: health, household facilities, home gardens, transport, rural/urban location and associated factors such as food deserts (lack of nearby facilities to purchase healthy foods), food pricing, availability of healthy foods and presence of take-out food restaurants and supermarkets. Political factors associated with household food insecurity include government policy and welfare support; and finally

socioeconomic factors include: cooking and financial skills/nutritional knowledge, cultural obligations, educational level, household composition, immigration and acculturation, social networks, media and embarrassment. The authors conclude, “While income is strongly associated with food security, it is by no means the sole factor, nor the sole solution. Rather the results of this literature review point to a need for comprehensive interventions at multiple levels...” (p. 26).

McIntyre and Rondeau (2009) “contend that food insecurity is wrong, yet it is treated as though it were merely bad” (p. 188), and Tarasuk (2009) asserts that nationally food insecurity is “rooted in the breakdown of Canada’s social safety net” and is a “serious social problem” (p. 205). The World Health Organization believes that social issues such as food insecurity are not unfortunate; they are unjust and thus avoidable (World Health Organization, 2008). None of the leading literature on food insecurity specifically identified postsecondary students as a population at risk for food insecurity and not only is it unclear as to why this is the case, it is difficult to postulate as to why the data on this particular population has not been teased out of Canadian longitudinal, national research such as the CCHS. It appears that postsecondary student food insecurity in Canada is at this point is virtually invisible.

Searching the Literature: Food Insecurity and Postsecondary Students

The literature reviewed regarding food insecurity within the population of postsecondary students was obtained through computer assisted searches of a number of database categories including health sciences, education, general/multidisciplinary, women’s studies, sociology, and student theses. These included Cumulative Index of Nursing and Allied Health Literature (CINAHL), Medline, ProQuest Nursing and Allied

Health Source, Nursing and Allied Health Collection, Health Source: Nursing/Academic Edition, Global Health, SocIndex, ERIC, Academic Search Complete, University of Lethbridge Institutional Repository, Proquest database of Dissertations and Theses.

Six relevant published articles (House, et al., 2006; Hughes, et al., 2011; Meldrum & Willows, 2006; Pia Chaparro, et al., 2009; Rondeau, 2007; Willows & Au, 2006) were obtained via key word searches from the databases which included postsecondary and student (postsecondary +/- student(s); college +/- student(s); young adult; university +/- student(s); matched with the concept of food insecurity (food insecurity; food security; hunger; nutrition). I also expanded the search to include the concepts of postsecondary student poverty. In order to ensure I had not missed any articles, I consulted with the University of Lethbridge Health Sciences Librarian. I also expanded the key word search strategy to include subject headings / MESH terms. Finally I employed RSS (Really Simple Syndication) website and email update feeds to automatically provide updates on any further literature on my subject area. I did not place any limits on my search, including date or country of origin. However, if the article was not written in the English language, it was excluded from the search.

To obtain information from unpublished and project work and research conducted in the area of postsecondary food insecurity in Canada, I began to search the grey literature via Google. I also contacted a local community nutritionist, explored listserves for food security, and spoke with the University of Lethbridge Students' Union (ULSU) manager. I obtained a two additional reports / documents via emails and phone calls pertaining to postsecondary student food insecurity (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008; Ferguson, 2004). Additional data

(shared by the ULSU Manager) were obtained from the ULSU's internal statistics regarding use of its food bank (C. Pokarney, personal communication, November 2009). As well, the National Chair of the Canadian Federation of Students indicated that their British Columbia (BC), Ontario and Manitoba offices have been collecting data on student food bank use and though she had agreed to share this information with me once she obtained it, further attempts to obtain this data were not fruitful.

In order to ascertain that I had exhausted the literature search, I emailed and spoke with Canadian Institute of Health Research (CIHR) Research Chair in Food Security and Policy Change, Dr. Patty Williams, of the Department of Applied Human Nutrition, Mount Saint Vincent University, and the CIHR Research Chair in Gender and Health. I also contacted Dr. Lynn McIntyre of the Department of Community Health Sciences, University of Calgary. Finally, I spoke with the Director of the Ryerson Centre for Studies in Food Security, Dr. Cecilia Rocha of the School of Nutrition, Ryerson University (P. Williams, personal communication, November 17, 2009; L. McIntyre, personal communication, November 9, 2009; C. Rocha, personal communication, November 17, 2009). All three confirmed that, to their knowledge, there was no further published literature nor documents they were aware of on food insecurity in this target population.

Literature Review: Linking Postsecondary Students and Food Insecurity

Published research.

A total of five quantitative and one qualitative published research studies were obtained that link postsecondary students and food insecurity. Additionally, one quantitative research proposal was obtained from the published literature.

Quantitative literature.

Late in 2009, in a cross-sectional survey of 441 non-freshmen students randomly selected from classes, Pia Chaparro, et al.. published a study which assessed the prevalence and possible predictors of food insecurity among postsecondary students (Pia Chaparro, et al., 2009). Data collected during 2006 at the University of Hawai'i at Manoa utilized the USDA's *Household Food Security Survey Module* (U.S. HFSSM) to measure food security status. Additionally, demographic social determinants data were collected along with a spending patterns survey.

Results found food insecurity was a substantial problem among the students. Twenty-one percent (21%) of students (one in five) surveyed were identified as food insecure and 24% of students (one in four) were at risk for food insecurity. Being of Hawaiian or Pacific Island ethnicity was the most significant predictor of food insecurity - 13 times greater odds as compared with Japanese students. Researchers were unable to establish an association between money management skills and food insecurity but believe their spending patterns survey instrument was suspect. The researchers hypothesized that the limited scope of the spending patterns survey questions (in an attempt to limit survey length), as well as their choice not to collect credit card use and student debt data, may have obscured the students' use of credit to alleviate their own food insecurity.

Hughes and his colleagues (Hughes, et al., 2011) published the results of their cross sectional survey of university students at a Queensland, Australian university, which determined prevalence, distribution, and severity of food insecurity, as well as behavioural adaptations within a sample of university students. Sampling 3% of the total

campus population (n=13,800), the researchers utilized a 10 minute self-administered questionnaire developed from the food security measurement items from the USDA *Community Food Security Assessment Toolkit* and the *Australian National Nutrition Survey*, along with unique questions which concentrated on “students’ food habits and experiences of food insecurity during their current year of university” (p. 28).

Using a single item measure of food insecurity (“In the last 12 months, were there any times that you ran out of food and couldn’t afford to buy more?” p. 29), results showed that the prevalence of food insecurity (with and without hunger) in this sample population was 12.7%, which was more than double the national rate (5.2%). This data infers that university students were at a significantly higher risk for food insecurity than the general public. More than 25% of participants from the single item measure item lost weight “as a result of having inadequate money to buy food” (p. 29).

Additionally, with a second more in-depth analysis and multi-item measurement of food security (which was deemed by the researchers to be more sensitive to variety of aspects of food insecurity), 46.6% (almost half) of participants experienced some level of food insecurity. Approximately one quarter of students experienced more extreme levels of food insecurity which included hunger. An association was found between food insecurity and lower self health assessment among students. Researchers confirmed previous studies which correlated low income with an increased prevalence of food insecurity. Additionally, as compared to those students who were food secure, researchers were able to draw a statistically significant relationship between personal finances and time management, and there were suggested links between behavior adaptations and coping strategies. “Having a job, budgeting, and relying on others for

financial support were commonly associated with students experiencing food insecurity” (p. 29). In order to meet their financial needs, students reported working a weekly average of 16.9 hours (+/- 8.9 hours) “to support themselves despite reduced academic success” (p. 31). Students on government assistance were measured as “20-39% below the poverty line” (p. 31). Though 10% of the study participants knew that support services such as a food bank was available to them, only 3.8% utilized these services. Ultimately, Hughes, et al. suggested that university student food insecurity is linked with both socioeconomic and demographic attributes as well as government policy ‘misalignment’ which inadequately supports students while simultaneously extolling the benefits of university education.

Two research teams studied different aspects of food insecurity at the University of Alberta Students’ Union. Meldrum and Willows (2006) evaluated the adequacy of student loans funding against the risk of food insecurity among students at the University of Alberta. They developed a nutritious seven day menu, and then priced corresponding grocery lists at a grocery store near campus and a discount grocery store, which was travelling distance away from campus. They also priced the menu for ‘skilled’ and ‘unskilled’ shoppers. The results were compared with the current loan allocation by the Canada Student Loans Program. They found that food insecurity risk existed despite better shopping skills and budgeting. Students were not able to buy sufficient nutritious food within the current loan funding levels. Willows and Au (2006) further studied the nutritional quality and costing of the University of Alberta’s food bank hampers and found that the campus food bank program was “not the solution to food insecurity on campus” because hampers could only be obtained twice monthly (p. 104). Nutritional

adequacy as compared to the Edmonton Nutritious Food Basket was poor. A further equivalent of \$12 per week was needed to bring the hamper to accepted Canadian nutritional standards.

The *Campus Hunger Count 2004* (Ferguson, 2004) compiles survey information from 46 campus-based food banks. It includes information on initial impetus for opening, year of start, and user statistics for the month of March 2004. The impact from decreased federal transfer payments to provinces in 1996 and 2003, and the consequent increase in student tuition are discussed, as well as the students' negative deficit between student loans income and outgoing expenses. This placed the student in a position of "forgo(ing) food purchases" thus creating a nutritional deficit (p. 9). "The implications of a poor diet are worth further investigating as a determinant of student population health" (p. 9). Ferguson also postulates why the Canadian national *HungerCount 2003* study by the Canadian Association of Food Banks (CAFB) shows decreasing numbers of student food bank users. Ferguson believes this student statistic an inaccuracy in data analysis because the annual Canadian national HungerCount collection by CAFB does not, in fact, collect *any* information from *student food banks* at postsecondary institutions. Yet, according to Ferguson it appears that student food bank use is on the rise. As of 2009, the CFAB has begun to recruit student food banks to participate in the CFAB's annual HungerCount. This is still in process (D. Kranenburg, Executive Director, Meal Exchange and Student Food Network, personal communication, Sept 17, 2009).

Rondeau (2007) announced her intent to "understand the experiences of food insecurity for student clients of the Food Bank and the University Alberta" through collecting data via an online questionnaire (p. 1). Unfortunately, and because of a lack

of participants, the research was cancelled (K. Rondeau, Master's student, University of Alberta, personal communication, October 13, 2009).

Qualitative literature.

A qualitative study from the University of British Columbia entailed two focus groups with students from the general populace and two focus groups with dietetic students to determine how students identify healthy eating characteristics, behaviours, barriers and benefits (House, et al., 2006). Principle barriers from non-dietetic students included lack of time, lack of food choices on campus, bad taste of healthy foods, and expense. Dietetic students perceived fewer barriers and did not identify expense as an issue. The study concluded that although not generalizable, results indicate that dietitians “must try to understand our clients’ definitions of healthy eating and their barriers to achieving it, which likely differ from our own” (p. 14).

Neither the quantitative nor qualitative researchers were explicit in which theoretical perspective guided them in their study, however it is clear the ultimate purpose of these studies was to expose aspects of food insecurity and nutritional inadequacy in postsecondary students to highlight the problem. Therefore a social justice and health promotion perspective is implicit in their published papers.

Reports and statistics.

During the literature search, a number of reports and statistics surfaced which help inform this search of the available literature related to postsecondary student food insecurity. The Alberta Community / Public Nutritionists Food Security Subcommittee and Dietitians of Canada (2008) produce a report entitled, *Cost of Eating in Alberta*, which was last completed in 2008. The document places the issues of food insecurity

within the Alberta context, providing background information, statistics, references and recommendations. Included in the document are four household scenario descriptions one of which includes a single male student with loan and low waged summer employment. Generally speaking, a food budget should not exceed 15% of net income; housing is considered unaffordable if over 30% of net income. In 2008, the approximate cost of a healthy diet for a male student was 29% to 40% of his net income; additionally housing would cost this student between 33% and 46% of his net income. Not yet included in this budget are transportation, tuition, books and other costs of living. (Net income is based on current student loan rate and working four months of the year). It appears from this document that there are a number of social determinants of health at play when it comes to the affordability of being a student.

There is unpublished data regarding student food insecurity and eating habits at the U of L (Bron, et al., 2008). This particular data was the impetus for my own thesis topic. During a four day period, mid semester in Fall 2007 (October), and Spring 2008 (February) semesters, nursing students from the U of L Health Sciences program, under my supervision, conducted campus wide surveys using convenience sampling. Six hundred and ninety-five (695) and 828 U of L students (respectively) – approximately 10% of the on campus population – completed a 22 question survey related to eating habits and food security. The questionnaire was adapted from the *2002 University of Lethbridge Student Health Survey* (Meyer & Weber, 2003). It included questions on demographics, eating patterns, meal planning, intake of vegetables and fruit, knowledge of campus food bank, and Good Food Club among other questions. A relevant sample question was, “in the past 3 months, have you ever gone without food because you had no

money for meals.” Additional questions asked, “if yes, how many times have you gone without food in the past 3 months?” Similar two questions asked if the student had any friends who had gone without food. Results of both surveys are displayed in Table 2.2.

Table 2.2

Good Food Club Survey Results: Fall 2007, Spring 2008

Food Security Questions	Fall 2007	Spring 2008
Past 3 months student gone without food	16.4%	15.4% (n=127)
If yes, how many times (student)	Not asked	Two times = 32.4% (n=36) Three times 16.2% (n=18) Range 1 – 60 times.
Past 3 months friend gone without food	26.2% (n=182)	25.8% (n=84)
If yes, how many friends?	Not asked	1 friend = 39.3% (n=84) 2 friends = 33% (n=71) 3 friends = 15% (n=32) Range 1 – 12 friends
If yes, how many times (friend)	Not asked	Not analyzed (poor response rate)

(Bron, et al., 2008)

Despite the fact that the U of L surveys from 2007-2008 had some limitations related to sampling bias and validity of the food security questions (surveys were conducted at busy locations across campus; the U.S. HFSSM validated questionnaire was not utilized), they suggest that there are food security issues within the student populace, and support the other studies that show postsecondary students are at risk for food insecurity (Bryman, Teevan, & Bell, 2009a)

In March of 2009, the University of Lethbridge Health Centre conducted a Nutrition Survey which included questions related to food insecurity, food bank use, nutritional intake and energy levels (Weber & Carter, 2009). Weber and Carter are “concerned” that of the 344 university students participating in this survey (between October 2008 to March 2009), 20% of respondents “had gone hungry in the past 6

months due to financial issues”; 16% of students agreed they would likely utilize the services of a food bank; 44% are not eating Canada’s recommended amount of vegetables and fruits; and 15% of students felt they did not have the energy to complete their ‘activities of daily living’ (p 1).

Themes Drawn From the Published Literature

There is a dearth of published research and literature related to food insecurity among the postsecondary student population; however, themes may be drawn from the existing literature.

Knowledge, time and budgeting.

“The ability to follow a healthy diet depends on having sufficient knowledge, money and time. Low-income families often lack these basic social and material resources” (Drewnowski & Eichelsdoerfer, 2009, p. 1). House (2006) and Meldrum and Willows (2006) agree that for students, healthy diets are not only dependent on skill and money, but also on time. Poverty can exist in both realms as “time poverty and economic poverty go hand in hand” (Drewnowski & Eichelsdoerfer, 2009, p. 2). Meldrum and Willows therefore specifically designed their study to utilize an inexpensive yet simple and quick way to prepare a seven day menu. Hughes, et al. (2011) also found links between personal finances and time management in students who food insecure but did not expand on this finding.

Researchers identified that a barrier to nutritious eating for students was the ability to shop for healthy foods while keeping to a budget (House, et al., 2006; Meldrum & Willows, 2006). Being a ‘skilled’ or uneducated grocery shopper is a factor in food security for postsecondary students, but so is access to a less expensive grocery store.

Meldrum and Willows purposefully compared “skilled and unskilled shoppers” shopping in both higher priced local (close to the university) market and a discount grocery store (farther away from the university). They found that although they were unskilled, students shopping at the discount store still fared better than the skilled shopper at the local market (Meldrum & Willows, 2006). Hughes, et al. (2011) did not find significant associations between cooking skills, transportation to shops and cooking/storage facilities, between food secure and food insecure students.

Student loan funding.

Hughes, et al. (2011) found that students receiving government assistance were 20-39% below the poverty line. Available literature that compared student loans with the cost of food consistently found that the loans did not cover the cost of what would be considered a nutritional diet – as compared to Canada’s 2002 Food Guide. The Cost of Eating in Alberta 2008 document reports that a maximum of 15% of after tax income should be spent monthly on the food budget (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008). The food budget does not include any personal products – only food. Furthermore, no more than 30% of before tax income should be spent on shelter (including electricity and gas). Their analysis shows that a healthy diet for a male 19-24 years costs \$270 to \$297 per month representing 29 to 40% of the student’s estimated net income. This same student would likely spend between \$265 and \$430 per month on shelter (sharing one third of a rented dwelling with two roommates) which represents 33 to 46% of his monthly income. Monthly income for a student subsisting only on student loans (and \$1,350 from four months summer employment, less tuition, books and supplies) is estimated at \$941 per month. This

leaves between \$14 and \$411 for all other expenses including general household operation, personal care expenses, transportation, prepared meals outside the home, activity and recreation, etc. The 'elastic' food budget would rapidly shrink in this scenario leaving students vulnerable to food insecurity. Meldrum and Willows (2006) found that even with students following an economical diet, "food costs will be high in relation to the money received from loans" (p. 46) and "students reliant on financial assistance likely have insufficient monthly income for a nutritionally adequate diet" thus are at risk for food insecurity (p. 43). Although not explored further in her study, House reports students found cost was a barrier to eating healthily (House, et al., 2006).

Campus food banks.

To respond to the food insecurity issues of their peers, students' unions across Canada have established campus food banks (Ferguson, 2004). Rising costs of postsecondary education was the reason the food banks were established. The University of Alberta Students' Union began a food bank in 1991 because "the growing problem of hunger among students (Meldrum & Willows, 2006, p. 43). In his 2004 research, Ferguson counted 51 campus-based food banks across Canada. He contacted each food bank and was able to gather information, and collate data and statistics from 46 of these food banks. He tracked food bank use over a one month period. Key findings show that of those who used the food banks (during 2004) 47% of students were single, 44% had children and of those, 34% were single parents. Student food banks across Canada helped 3,121 clients during March of 2004. The Canadian Alliance of Student Associations (CASA) will likely repeat this study in the next few years (S. Keys, Policy Analyst, CASA, personal communication, November 13, 2009). Interestingly, Hughs, et al.

(2011) found that only 6.6% of participants knew of local food banks, and only 2.3% actually utilized them.

Although food bank use is considered a secondary measurement of food insecurity, it is noteworthy that in the Food Bank Canada's 2009 *HungerCount* document, there was a dramatic increase (18%) in the use of food banks across Canada in the period of one year, i.e. March 2008 compared with March 2009 (Food Banks Canada, 2009). Even though postsecondary institutional food banks are not specifically delineated in the *HungerCount* 2009, the University of Alberta (U of A) Campus Food Bank statistics follow this increasing food bank utilization pattern with a rise of almost 100% over the last two years (A Seibert, Executive Director U of A Campus Food Bank, personal communication, August 13, 2010).

University of Lethbridge Students' Union Manager, Cheri Pokarney provided raw internal statistical data from the University of Lethbridge Students' Union (ULSU) Food Bank which indicates, since June 2007, the numbers of single and family hampers they have disbursed has been on the rise (personal communication, December 2009).

Although the data warrants more analysis, it gives a sense of ULSU Food Bank use.

Between September 1, 2009 and November 18, 2009, the ULSU Food Bank provided 60 single hampers and 22 family hampers to U of L students.

Despite the efforts of students' union food banks to alleviate food insecurity and hunger on campuses, Food Banks Canada believes that food banks are "not a long-term answer to the problem of hunger in Canada" and will ultimately not solve food insecurity and the other social determinants of health (p. 3). They recommend that government/policy issues need to be addressed at a national level by implementing "a

federal poverty-reduction strategy with measurable targets and timelines,” increasing and widening the Working Income Tax Benefit program, increasing the child tax benefit, and increasing funding for rural housing (Food Banks Canada, 2009, p. 3). The need for strong government leadership (provincially and nationally) in addressing food security and the other social determinants of health is a common theme, echoed by McIntyre, Meldrum and Willows, Pia Chaparro, Ferguson and the Canadian Alliance of Student Associations, Raphael, Tarasuk, The World Health Organization, Dietitians of Canada and the Canadian Senate. (Canadian Senate, 2009a; Dietitians of Canada, 2007; Ferguson, 2004; McIntyre, 2003; McIntyre & Rondeau, 2009; Meldrum & Willows, 2006; Pia Chaparro, et al., 2009; Raphael, 2009b; Raphael, et al., 2008; Tarasuk, 2005; Tarasuk & Vogt, 2009; World Health Organization, 2008).

Summary: literature review postsecondary students and food insecurity.

“University students appear to be at risk of food insecurity, both as a product of their socioeconomic and demographics attributes and also as a result of an apparent misalignment of government policy” (Hughes, et al., 2011, p. 31). It is agreed that post-secondary students are at risk for food insecurity and would benefit from measures such as:

- Advocating for increased student funding (Meldrum & Willows, 2006);
- Addressing social policies and federal-provincial education transfer payments (Ferguson, 2004; Hughes, et al., 2011);
- Informing citizens on the issues and supporting “actions in Alberta and Canada that address poverty and food insecurity” (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008);

- Increasing the nutritional quality of food hampers and increasing awareness that postsecondary students are at risk for food insecurity (Hughes, et al., 2011; Willows & Au, 2006); and
- Further investigating the prevalence and the impact that food insecurity has on academic performance, health, and coping of postsecondary students.

These measures would enable policy makers to “assess the magnitude of the problem” of postsecondary food insecurity and “formulate effective strategies to reduce its prevalence” (Pia Chaparro, et al., 2009, p. 2102).

It is worth mentioning that, in addition to food banks, some students’ unions have integrated further interventions for food insecurity into their programming. During my search of the grey literature via the Google search engine, I discovered established campus programs such as the Good Food Box (a buying club for fresh produce), the national Student Meal Exchange program, student food networks, and nutrition information programming and referral services. Although compiling a list of the intervention programming on Canadian campuses is beyond the scope of this chapter, it is evident that students’ unions food bank’s food hampers are not the only strategy being used to address postsecondary student food insecurity.

Literature Review: Interviewing the Food Insecure

As there was no available qualitative research describing the interview process within the postsecondary student target population, a second literature review, limited to published studies on interviewing the food insecure, was conducted in order to inform the semi-structured interview guide used in this thesis study. The review produced seven

studies which describe the types of questions asked of those who are experiencing food insecurity.

Hamlin, Beaudry, and Habicht (2002) used inductive inquiry to interview 23 groups and 12 individuals experiencing food insecurity in urban and rural Quebec City. The purpose of the study was to understand food insecurity from the perspectives of the households who experienced the phenomenon (p. 119). The interview guide consisted of 12 questions. Grounded theory guided analysis of the transcripts. The interview questions were broken down into three categories: manifestations and chronicity; management of access and strategies against food insecurity; and risk factors, vulnerability and causes (Hamelin, et al., 2002).

Wicks, Trevena, and Quine (2006) completed 22 semi-structured interviews with adults who attended a local soup kitchen in Sydney, Australia to determine food insecurity experiences and coping strategies of the participants. Interview questions came from seven topics areas: frequency and severity; sources of food; satisfaction with quality/quantity; access and preparation; coping strategies; socioeconomic details; and concurrent health factors. Themes from the interviews were identified inductively (Wicks, et al., 2006).

Wolfe, Frongillo, and Valois (2003) used grounded theory to inform their in-depth interviews in addition to an enhanced version of the adult U.S. AFSSM instrument to understand food insecurity in 53 low income urban elders and develop a conceptualization of their experience. Interview questions surrounded usual foods, eating environments; food preparation and shopping; influences and experiences getting food; and nutritional adequacy (Wolfe, et al., 2003).

Marco, Thorburn, and Kue (2009) described interviews with 25 individuals experiencing food insecurity using a 33 question interview guide in addition to the 10 question adult U.S. AFSSM screening. The purpose of the study was to explore and examine experiences and coping strategies of people experiencing food insecurity, and the role of social support in their lives. She distinguished the difference in experiences between rural and urban Oregonians. Content analysis informed their data analysis procedures (Marco, et al., 2009). Kempson, Kennan, Sadani and Adler (2003) in their qualitative study on coping strategies identified by limited-resource individuals versus nutrition educators in New Jersey, shares 6 focus group questions utilized in their research.

In exploring the experience of food insecurity among 21 young mothers (15-24 years of age), Stevens (2010) utilized the U.S. HFSSM, cognitive interviews (to validate the survey module for this young, less educated population), and semi-structured interviews. Factors that contributed to food insecurity in young mothers were income, affordable food sources, housing and transportation. In email conversations, she shared some of her specific semi-structured interview questions with me (C. Stevens, personal communication, April 29, 2010).

In her doctoral dissertation, Goetz (2008) used mixed methods design to explore food insecurity among those with severe mental illness who were participating in an energy-enhancing, weight loss program. She used the U.S. AFSSM 30 day module to measure food insecurity prevalence in 72 severely mentally handicapped adults, face- to face- interviews with 28 of these individuals, and she conducted subsequent focus groups with the interview participants. Survey questions were included in the document.

Category headings included: experience/awareness, application, experience, experience/psychological, opinion, and psychology. Specific questions were asked about access, abilities, barriers and overcoming these barriers, and personal / household experience of food insecurity. Further details of the literature review findings related to interviewing the food insecure are described in Chapter Three of this thesis.

Lethbridge Context

Lethbridge population, rental vacancy rates, and rents.

In 2010 Lethbridge, Alberta boasted a population of 86,669 people (36,413 households) with 36% of the total population residing in West Lethbridge, and the remainder of the population residing in North and South areas (City of Lethbridge, 2010). West Lethbridge, located on the west side of the Oldman River (locally know as ‘the Westside’), has shown the greatest increases in population for the city, more than doubling its population during the past 20 years. Two vehicle bridges connect West Lethbridge with the remainder of the city which is located on the east side of the river. The University of Lethbridge is located in West Lethbridge and was one of the first developments in the area.

Canadian Mortgage and Housing Corporation (CMHC) data reported by the Lethbridge Housing Authority show rental apartment vacancy rates for Lethbridge averaged 3.4% in 2004, 0.4% in 2007, and 1.7% in 2008 with average apartment rents \$603, \$ 674, and \$746 during the same years, respectively. Average apartment rents showed an 11% increase from 2004 through 2007 and another 10% increase from 2007 to 2008 “further decreasing the availability of affordable housing in the City” (Lethbridge Housing Authority, 2008, p. 10). In April 2011 Lethbridge’s vacancy rate averaged 6.4%

with the vacancy for two bedroom apartments at 5.7%, and three bedroom apartments at 4.9% (Alberta Housing and Urban Affairs, 2011a, 2011b; Canada Mortgage and Housing Corporation, 2011). Lethbridge rents were higher than both the two similarly sized cities of Red Deer and Medicine Hat, while vacancy rates were marginally over the provincial average. Vacancy rates and average rents for four Alberta cities (2009 to 2011) are presented in Table 2.3.

Table 2.3

Comparative Table of Vacancy Rates and Average Rents, Alberta
(Apartment Structures Three Units and Over)

City Vacancy Rate (Average cost of rent – 2 bedroom apartment)	April 2009	April 2010	April 2011
Lethbridge	3.1% (\$825/month)	5.8% (\$843/month)	6.4% (\$859/month)
Red Deer	3.9% (\$858)	8.7% (\$840)	6.4% (\$820)
Medicine Hat	4.3% (\$689/month)	10.7% (\$682/month)	9.4% (\$692/month)
Calgary	4.3% (\$1,106)	5.3% (\$1,082)	3.4% (\$1,040)
Alberta	8.5% (\$1,069/month)	14% (\$1,023/month)	5.5% (\$1,029)

(Alberta Housing and Urban Affairs, 2011a, 2011b; Canada Mortgage and Housing Corporation, 2011)

University of Lethbridge student residence has a near 0% vacancy rate during the university year, with about 1,200 students waitlisted for 600 beds in student housing accommodation (D. Butterworth, Family Townhome Administrator, U of L, personal communication October 25, 2010).

University of Lethbridge campus.

The University of Lethbridge was established in 1967, taking residence on its permanent West Lethbridge site in 1972. The grounds are located on the west side of Lethbridge, across the river from most of the business and residential areas of Lethbridge. Over time, residential areas have grown around the university with approximately half of Lethbridge's 80,000+ population now located on the 'Westside'. There are fewer businesses, including supermarkets, on the Westside as compared with the eastern portions of Lethbridge. I spoke with City Planner's office with the City of Lethbridge to determine why this is the case. Apparently the ratio for supermarkets to population is 1:15,000. With the Westside population at over 31,000, one Safeway store has been inadequate for a number of years. However, there was a recent announcement that SaveOn Foods will be opening a store very near the Safeway location in late 2011, and this was confirmed by the City's Community Planning Manager, Maureen Garening (personal communication, October 26, 2010). According to Ms. Garening, the City does zone for commercial development such as grocery stores; however, it relies on businesses to do their own market research as to when and where to open businesses.

At the U of L there are accommodations available on campus for both single students and those who are married and/or with families (University of Lethbridge, 2010b). There are three types of on campus residence available to U of L Lethbridge campus students: 1) traditional style student residence (University Hall with single and double furnished rooms for students in their first year of study who are new high school graduates); 2) apartment style residence (Kainai House for single students in first year – one, two and four bedroom furnished units; Piikani House for students in second-plus

years of study; and TsuuTina for students with spouses/roommates) and; 3) unfurnished, four bedroom, townhome style residences (Siksikia House generally assigned to married and single students with families and/or single students in their fourth-plus year of study).

I spoke with Donna Butterworth, Family Townhome Administrator with the U of L regarding the numbers of students utilizing housing on campus. For Fall 2010 semester, approximately 8.2% of students registered at the Lethbridge campus were living in campus residences. Currently the U of L campus residence can house 587 single students, plus there are 30 family units with up to one, four, or six people, depending upon the number of bedrooms and beds in the one, two, or three bedroom units. There are approximately 1,200 applications each September for the approximately 600 beds on campus. The vacancy rates for more than the past five years in students residences has been hovering around 0%, therefore, in 2011 renovations to University Hall (UHall) will added 33 bedrooms on the fourth floor, plus an additional 32 more scheduled to open in 2012. As of October 25, 2010, there was one empty bed on campus (personal communication, D. Butterworth, October 25, 2010). The costs for student housing for the 2010-2011 school year was as follows:

- Traditional student residence (UHall) costs start at \$1,112/semester for a shared room up to \$1,904 per semester for a large suite.
- Apartment style residences (Pikani and Kainai residences) for single students, usually sharing, cost from \$2,220 to \$3,532 per semester.
- Tsus Tinsa residence houses single students sharing with spouse/roommates costs from \$2,124 per semester for a small apartment to \$2,308 per semester for a large apartment.

- Townhouses (unfurnished) for families (Siksika Residence) cost \$811 per mo for one bedroom, \$926 per month for two bedroom, and \$986 per month for three bedroom units. Students would be required to sign a 12 month lease on the townhome.

Students who live in UHall and Kainai residence must purchase the U of L's Residence Dining Plan (Fall 2010 Plan Pricing: Value Plan \$3,074 per eight months or Commuter Plan \$2,557 per eight months). Kainai House residents have the option to purchase a reduced plan (Aperture Park Dining Plan at \$1,836 per eight months). "The Residence Dining Plan is...intended ... to be a core part of your weekly dining...it is not intended to cover all your meals in a given week...(and) should cover approximately 12-14 meals throughout the week...remaining 7-9 meals per week can be made up... (through)...cooking or prepared food at home, going out for meals, etc." (University of Lethbridge, 2010a para. 7-8). Additional funds added to the meal plan allows the student to eat all meals on campus. If the student does not spend all the available funds over the two semesters, the remaining balance is forfeited. I spoke with Anne Kanyo, Office Coordinator for Food Service and Catering on campus; she estimates that there are 325 students who participate in the available meals plans. Of this number, 225 students live in UHall (and must participate according to policy) and another 100 live in Kainai House (and must participate in at least the modified plan). As mentioned previously, the three types of meal plans costs range between \$1,074 and \$1,836 for eight months. Ms Kanyo was unable to provide a breakdown as to how many students are on which of the three meal plans (personal communication, A. Kanyo, October 25, 2010).

During the 2010-11 school year, on campus there were four food venues distributed around the campus and one 'Food Court' located in the Students' Union building, containing six independently owned restaurants and The Zoo, a campus pub. Students can purchase food from any of these venues, or if they purchased a 'dining plan' at the U of L, they may use their campus identification (I.D.) card as a debit card towards their dining plan. Available food venues during the 2010-2011 academic year included: CJs with a variety of foods and beverages in a cafeteria style environment; Fresh Express serving sandwiches and pizza; The Station, making sub sandwiches and pre-made salads or soup; and Tim Hortons, serving sandwiches, soups, and pastries. The food court was comprised of : Icey's Mexican Food and Frozen Yogurt; Subway for sandwiches; Hiroba Japanese style food; Pronghorn Grill with burgers, fries, chicken pasta; Juice Faire wraps, pitas and smoothies and; Coffee Company with coffee drinks and local baking.

University of Lethbridge student profile.

In addition to the Canadian and U of L data presented previously, additional information on U of L students was made available to me via special request through the U of L's Institutional Analysis department (Institutional Analysis, 2010b). Student fall enrolments representing the last six years at the U of L Lethbridge campus (as of August 31, 2010) broken down by gender, program and international students and are represented on Table 2.4.

Table 2.4

Lethbridge Campus Enrolments (University of Lethbridge) Fall 2005 – Fall 2010						
Lethbridge Campus Enrolments	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010
Total Enrolment	7087	7099	7151	7050	7315	7274
%male	44.4%	43.8%	43.6%	42.8%	42.3%	42.1%
%female	55.6%	56.2%	56.4%	57.2%	57.7%	57.9%
# International Students (% Int'l to total enrolment)	621 (8.8%)	599 (8.4%)	536 (7.5%)	463 (6.6%)	396 (5.4%)	387 (5.3%)
%male to total Int'l enrolment	53.1%	55.6%	56.0%	54.2%	51.8%	53.0%
%female to total Int'l enrolment	46.9%	44.4%	44.0%	45.8%	48.2%	47.0%
Undergraduate Students (% total UL campus enrolments)	95.1%	96.3%	96.0%	94.8%	92.4%	93.5%
%male undergrad students	44.5%	43.7%	43.7%	43.2%	42.6%	42.1%
%female undergrad students	55.5%	56.3%	45.3%	56.8%	57.4%	57.9%
Graduate Students (% total UL campus enrolments)	4.9%	3.7%	4.0%	5.2%	7.6%	6.5%
%male grad students	43.1%	45.4%	40.3%	36.6%	39.2%	42.2%
%female grad students	56.9%	54.6%	59.7%	63.4%	60.8%	57.8%

Institutional Analysis,* 2010. (*Permission granted by University of Lethbridge Institutional Analysis, Jing Zhu.)

This data shows an overall increasing trend in the percentage of graduate student enrolments as compared to undergraduate student enrolments at the U of L, and also shows an overall increasingly higher percentage of female students to male students in all categories except International students, where male enrolment is increasing.

The 2009 Survey of Graduating Students, U of L data show that 55% of eligible U of L undergraduate students responded to the survey (overall Canadian university student response rate = 44.6%) (Canadian University Survey Consortium, 2009). Other data from this survey include:

- Average GPA (grade point average) of U of L students graduating in 2009 was 3.12 out of 4;

- 24.5% of U of L students interrupted their studies for one or more terms (Canada = 22.7%) because of employment (8.9%), travel (5.6%), financial reasons (5.1%), and other reasons such as illness, family, etc.;
- 6.5% admitted to a delay of completion due to financial issues when asked this specific question;
- 17.3% have lived at some point in U of L on-campus housing with 68% reporting very satisfied/satisfied with U of L residences compared with 81% for other universities;
- 31.1% had received some services from U of L's financial aid services (Canada = 24.9%);
- 39.8% reported having no debt at graduation (Canada = 42%);
- Average debt at graduation \$25,868 (Canada = \$26,680). Debt sources were:
 - Government student loans \$23,171 (Canada = \$22,973);
 - Financial institutions \$15,153 (Canada = \$14,862);
 - Parents/family \$14,597 (Canada = \$14,436);
 - Other \$7,992 (Canada \$8,500);
- 59.8% received an academic scholarship (Canada = 46.8%);
- 57.5% employed during current academic term (Canada = 61.5%) working an average of 19.6 hours per week (Canada = 17.9%);
- 32.8% report working having negative impact on their academic performance (Canada = 28.6%);

- 43% of students intend to pursue grad studies but 57.4% say debt level will have great/some impact on taking further education in the first year after graduation (Canada = 56.2%); and,
- 93.7% of students were satisfied or very satisfied with the overall quality of education they received at the U of L (Canada = 90.2%).

Additionally, according to the CUSC survey of first year students, the single most important ‘contact’ in their decision to attend the University of Lethbridge was ‘word of mouth’ followed by advice from high school counselors, and then campus visits (Canadian University Survey Consortium, 2010). The same survey rated Lethbridge students’ primary motivation to attend university. The primary reason most commonly rated was to ‘get a good job’ (86%) followed by, preparing for a specific career (78%), and third to ‘get a good education’ (66%).

Overall, the above data shows that slightly less U of L students carry debt upon graduation than the national average, and of those who do have debt the overall amount is slightly less than other Canadian students. As well, U of L students receive more academic scholarships than their Canadian peers. However, U of L students access campus financial services more frequently than other Canadian students, they interrupt their studies more often for financial reasons, and they work more hours per week during their studies which appears to comparatively have a higher negative impact on their studies. Additionally, U of L students appear much less satisfied with their campus housing than their Canadian counterparts. Finally, students are primarily motivated to attend university to achieve increased economic and career advantage.

Statistics and Details on Student Food Banks

In an effort to become more knowledgeable on campus food bank utilization in Canada, I contacted Food Banks Canada's Research Coordinator, Cherry Marshall in order to request these specific statistics (C. Marshall, personal communication, December 6, 2010). She was able to provide provincial and national data on the percentage of adults assisted by food banks who are also post-secondary students, and the percentage of households who report student loans/scholarships as their primary source of income, in comparison overall total individuals and households assisted by Canada's food banks. The Research Coordinator explained, however, that the data she shared was very likely in-accurate as many students' union food banks do not report their statistics to Food Bank Canada (FBC). This is an area that FBC is working to improve. Therefore the statistics shared by FBC are small and the trend was until recently decreasing, with the percentage of postsecondary student adults assisted by food banks dropping from 4.9% in 2007 to 2.6% in 2010. However this percentage increased to 4% in 2011. Households reporting student loans/scholarships as primary income in 2010 was 1.6%.

In addition to contacting FBC, I also attempted to contact a number of western Canadian university students' union food banks to ask for their food bank use data. After many phone calls, I only obtained data from a few food banks, and only have data from two in any detail. After sharing my difficulty in obtaining university students' union food bank data directly with the FBC Research Coordinator, she surmised that this data may be difficult to obtain for a number of reasons, which could include the rotating elected leadership within university students' unions.

University of Lethbridge Students' Union Campus Food Bank.

Through discussion with ULSU Manager Cheri Pokarney (there is no written source of history available and limited statistical information regarding food bank use), I was able to ascertain that their ULSU Food Bank was opened in 1991 but was active intermittently until 2004, when it opened on a full time basis (personal communications, C. Pokarney). It is open Monday through Friday throughout the year. Current students, staff or faculty at the University of Lethbridge are eligible to receive a hamper; however, anecdotally, it is very rare than anyone other than students request a hamper (personal communication, C. Pokarney). Any student attending the U of L is eligible for this service regardless of full time or part time status, or living off or on campus. The ULSU Food Bank provides single hampers for those individual students (single or married with no children) who request them, but also provides family hampers (single hampers enlarged to provide for the students' family members) on request. Consideration is made for individual dietary requirements. Students may return to the food bank every two weeks however, they may only receive up to 10 food hampers per academic career (for example, 10 visits over four years for an undergraduate student), unless other arrangements are made.

Non-perishable hamper contents are determined by availability of donated food items. This hamper is intended to feed a single student (or family) for five days. Additionally, when available, the Food Bank also includes a \$25 Safeway gift card with each hamper so that students may purchase perishable food items to supplement their hamper. During 2009/2010 food bank cash donations totaled \$6,627.65. The ULSU engages in a number of fundraising activities each year to boost donations.

Up until recently the duties of the ULSU Food Bank have been the responsibility of elected student volunteer positions such as the ‘VP Internal’. Citing the need for confidentiality and continuity, as of September 2009 the responsibility of Food Bank Coordinator was given to a permanent ULSU staff member, the Health and Dental Administrator (Curtis, 2010). She is responsible for new client intake, making and distributing food hampers to students, and maintaining records and statistical database for Food Bank usage. She reports to the ULSU Manager, who in turn reports to the U of L Students’ Union elected executive.

According to data received from the ULSU Food Bank Administrator, two hundred and sixty nine (269) food hampers were distributed through the ULSU Food Bank during 2008 to 96 clients. Table 2.5 provides the available client usage statistics for the ULSU Food Bank. Statistical data collected by the ULSU are broken down by single or family and new clients. Statistical data reported are not broken down by gender, family composition, age, student status (e.g. international student, undergraduate or graduate student) or any other demographic. There is, however data similar to that represented in Table 2.5 that is broken down by month. This is the most up to date breakdown of data available.

Table 2.5

University of Lethbridge Students Union Food Bank Statistics

ULSU Food Bank Stats	# single student clients	# family clients	Total single hampers distributed	Total family hampers distributed
2007 (Only partial year data available)				
2008	65	31	143	116
2009	67 (2.9% increase from 2008)	27 (14.8% decrease from 2008)	126 (11.9% decrease from 2008)	83 (23.1% decrease from 2008)
2010-2011 May-April	Data not available	Data not available	135	35

Source: ULSU* Food Bank Administrator October 21, 2010, October 5, 2011
 (*permission granted by ULSU Manager, Cheri Pokarney)

The 2009-2010 (Sept-Aug) annual report from the ULSU provides further food bank usage data (Table 2.6). The data in Tables 2.5 and 2.6 do not appear consistent which may reflect the history of different food bank administrators and inconsistent tracking of food bank access data.

Table 2.6

ULSU Food Bank Usage 2009-2011: Annual Reports

	# of New Families	# of New Singles	# of Family Hampers Given Out	# of Single Hampers Given Out
2009-2010 (May-Apr)	11	59	26	177
2010-2011 (May-Apr)	# new customers 60	n/a	113	36

(Curtis, 2010, 2011)

University of Alberta campus food bank.

Through telephone discussions with the newly appointed Executive Director of the University of Alberta Campus Food Bank (CFB), Ashley Seibert, I was able to collect a variety of data related to their food bank operations (personal communication, A.

Seibert August 13, 2010). Additional information provided through Willows and Au (2006) was also confirmed with Ms Seibert. The U of A Campus Food Bank (CFB) is open year round, Monday to Friday with more limited hours during the summer and over Christmas holidays. It services U of A students and clients who are “members of the University of Alberta Community” which include students, staff or alumni. They are independent from the other food banks in the city but they do work in cooperation with the other Edmonton city food banks.

Clients may make a hamper request every 2 weeks with no limit of hampers they can receive over the year, however notice of 1-2 business days is required with only first time users receiving a hamper immediately. Hampers follow the Canada Food Guide as much as possible to provide a 4 day supply of food for each member of the household. Special requests can be made for those clients with special needs (health, religious, cultural). Many clients are well educated about nutrition and will request such items as whole wheat pasta over white pasta. The food hampers used to be called ‘emergency food hampers’; however, as the CFB has noticed that there is an increase in the number of clients who do return for another hamper(s), they have dropped the word ‘emergency’ from their language. Clients must register, in person, with the CFB. They must show proof of their association with the U of A community, and photo identification for themselves and some form of identification for each member of their household who will share in the hamper. Intake occurs via an interview which asks details about academic program, sources of income, dietary requirements and financial situation.

During 2009/10, two thirds of the Campus Food Bank clients were undergraduate students with the rest being graduate students, staff and alumni. During 2009/10, 31% of

those served were children, which is up 6% from the previous year. In previous years the adult/child ratio was typically 75% adults to 25% children. During 2009/10 the overall access to the CFB increased by 20% over the previous year. It is thought that the decrease in the number of hours graduate students are allowed to work (from 16 hrs down to 8 hours) without jeopardizing their funding, partially accounts for this increased usage. There is a statistic that 46% of the overall clients for 2009/10 were international clients; however, apparently this figure is suspect because students self-identify themselves as international students who in fact may be Canadian citizens or classified by the university in some other way. This data will be collected differently during the 2010/11 academic year.

Total clients (including family members) serviced in 2009/10 were 2,097. This figure includes all members in the family of the student (client) who is requesting a hamper. 'Client' refers to the main contact in the household. The total number of new 'clients' in 2009/10 was 131. There were 836 hamper requests in 2009/10 – an increase of nearly 100% in a two year period from 2007/08 (419 hamper requests). Total clients also increased in one year (2008/09 – 2009/10) by 20% and increased over two years from 1,199 in 2007/08 to 2,097 in 2009/10, by 75%.

Willows and Au (2006) write that at the U of A, in the 2003/04 academic year, hampers were distributed to 630 unique clients from 278 households. In total, hampers were distributed with sufficient food for 2,339 persons. Over one third had children; 41.3% had two children; and 23.1% had more than two children. Because the format of the data I received from my phone conversation with the CFB differs from Willows and Au's article, I am unable to make direct comparisons with the 2003/04 academic year.

However, it appears that numbers of clients and requests for hampers have increased dramatically over the past six years. CFB intends to change their database system for collecting their statistics so that relevant data can be more easily produced for CFB staff to utilize, look for trends etc.

The Executive Director of the CFB believes that coming to the Campus Food Bank for assistance is difficult for students; however, there may be slightly less stigma over the past year as the economy is so poor of late. The CFB has a dedicated budget to purchase foods and also receives donations. Additionally they receive some food from the Safeway Distribution Centre. According to their website, the CFB holds a number of events to support their charity (University of Alberta Campus Food Bank, 2010).

University of Calgary campus food bank.

During August 2010, the on-campus food bank distributed 253 food hampers to University of Calgary ‘needy’ students. This represents an increase of 140 hampers from August 2009. “We have had a surplus (of food) the past two years, and this is the first year we’ve had empty shelves” (Gerson & Storry, 2010, p. 2). The food bank is unable to “peg a specific demographic” of student who utilizes their services as there are a variety of students who request hampers (p. 2). The University of Calgary (U of C) Campus Food Bank is coordinated by two students paid to share one position. These students are ‘trained’ by students’ union staff in order to maintain consistency. Eligibility criteria include, current student status, or alumni up to two years post graduation, staff and faculty of the U of C. The following statistics food bank usage are collected: number hampers given out (various sizes depending on number of people being helped), total number of people being helped, undergraduate or graduate student status, full time or part

time status, reason for coming in and source of income. Further information was pending but I was ultimately unable to obtain this data.

Other university food banks

Attempts to obtain data from other western Canadian universities all failed.

Campus Food Banks Conclusion

Though I was unable to provide an exhaustive review of western Canadian university campus food bank usage, the University of Calgary and University of Alberta data indicate that campus food bank use is on the rise, although statistics also show a decrease in hampers distributed by University of Lethbridge Student' Union food bank. It is apparent that there is a wide variety in the type and amount of data being collected by campus food banks in Alberta, making comparisons between the universities difficult and also making comparisons from year to year within universities challenging.

Conceptual Frameworks

In order to ground and enrich this study, two conceptual frameworks served to inform the data collection tool development and study analysis. Each framework brings a unique lens from which to explore University of Lethbridge postsecondary student food insecurity. The first framework is the social determinants of health (SDH) as described by Dennis Raphael. He describes 12 economic and social conditions which determine the health of Canadians. The underlying subtext of the SDH is that there are socially derived inequities which affect the conditions in which Canadians live and work, and which directly or indirectly affects the quality of our health. Within this framework, food is identified as a basic human need which not all Canadians are afforded. The second framework surrounds the concept of structural violence as described by Farmer (2005)

and Galtung (1990). Structural violence theory postulates that organizational structures systematically affect those people who are associated with the organization, particularly those with little influence, and indirectly exerts violence towards these “underdogs” (Galtung, 1990, p. 293). This violence affects the health of individuals who often remain powerless to change the structure – yet this violence is, in fact, avoidable. Educational organizations and governments at all levels make decisions that affect university student life, including funding allocations, setting tuition fees, and determining what food will be sold at the local university cafeteria.

Social determinants of health (SDH).

“The primary determinants of individual and population health are the living conditions – the SDH – to which people are exposed” (Raphael, 2009a, p. 194). This means the SDH are the “primary determinants of whether individuals stay healthy or become ill” and “also determine the extent to which a person possesses the physical, social and personal resources to identify and achieve personal aspirations, satisfy needs, and cope with the environment” (Raphael, 2009b, p. 2).

Perhaps one of the most prolific and most recognized Canadian writers on the SDH is Dr. Dennis Raphael. He has advocated for the SDH model in over 150 of scientific publications, numerous books, lectures and multimedia (Clifford Beers Foundation, 2009). He organized a major conference and ‘think tank’ event which evolved the structure of the original Ottawa Charter SDH list to what it is today (Raphael, 2009b). He was included as one of the handful of witnesses bringing evidence to the Standing Senate Committee on Social Affairs – Senate Subcommittee on Population Health (Canadian Senate, 2009a). During a recent Canada wide conference I attended,

there was current and resounding consensus on his above definition of the SDH (Estable & Meyer, 2009).

Although the roots of the social determinants are over 150 years old (Raphael, 2009b), some key modern documents and reports related to the SDH development include: 1978 WHO Alma-Ata Declaration; Ottawa Charter on Health Promotion (1998); Epp Report (1986); WHO Commission on the SDH (2005-2008); Health Canada Taking Action on Population Health (1998); Canadian Population Health Initiative (CPHI 2004); Health Canada Overview of the SDOH (2004); PHAC Response to the WHO CSDH (2007); Chief Public Health Officer's Report (2008); National Coordinating Centre for Determinants of Health (2008); WHO: Closing the gap in a generation – health equity through action on the social determinants of health (2008); and A Healthy, Productive Canada: A Determinant of Health Approach from the Canadian Senate Subcommittee on Population Health, 2009 (Estable & Meyer, 2009; Raphael, 2009b; Raphael, et al., 2008)

The Epp Report lists the ‘determinants of health’ as follows: income and social status, social support networks, education and literacy, employment/working conditions, social environments, physical environments, life skills, personal health practices and coping skills, healthy child development, biology and genetic endowment, health services, gender, and culture (Epp, 1986). This is the list currently utilized by Health Canada's Public Health Agency of Canada (PHAC).

In an attempt to illuminate “the deteriorating state of numerous social determinants of health” under the existing framework, York University held the 2002 Social Determinants of Health Across the Life Span Conference, which engaged 400

leading researchers and community workers to consider the “public policy and action implications” of the determinants, (Raphael, 2008, p. 490). Out of this conference came 12 social determinants of health which were consistent with previous formulations of the determinants of health, however, they were better “aligned with existing government structures and policy frameworks” actively responsible in these SDH areas. They were also consistent with the Canadian general public’s understandings of what contributes to health, (Raphael, 2009b, p. 7). Table 2.7 shows the SDH from the York University conference compared to the Public Health Agency of Canada.

Table 2.7

Determinants of Health Frameworks	
<p>The 12 <i>social determinants of health</i> identified by the organizers of the York University Conference are:</p> <ul style="list-style-type: none"> • Aboriginal status • early life • education • employment and working conditions • income and its distribution • unemployment and employment security • social safety net • gender • social exclusion • health care services • food security • housing 	<p>The 12 <i>determinants of health</i> as identified by Public Health Agency of Canada (PHAC) are:</p> <ul style="list-style-type: none"> • culture • healthy child development • education and literacy • income and social status • employment/working conditions • gender • social support networks • social environments • physical environments • health services • personal health practices and coping skills • biology and genetic endowment

(Public Health Agency of Canada, 2010; Raphael, 2009b).

This particular Social Determinants of Health framework work provided a sound framework for the philosophy, methodology, and analysis of food insecurity experiences among postsecondary students for this thesis project. It is apparent from the literature that food security is affected by a number of policies and agencies that control and affect

these 12 SDH; postsecondary student food insecurity may be particularly influenced by education, employment, gender, Aboriginal status, housing, income, social safety net and student loan income. These determinants are deliberately delineated in Raphael's framework making it logical, during analysis, to link factors and concepts with particular social determinants and the policies and organizational structures which affect them.

Although the SDH are inextricably linked with the notions of social justice (i.e. fair and equitable treatment of people) and reduction of socioeconomic inequities in health, they are also not without some criticism. The Public Health Agency of Canada includes 'culture' as one of their determinants of health (DOH); Raphael's version includes 'Aboriginal' peoples (Public Health Agency of Canada, 2010; Raphael, 2009b). Waldram (2009) argues that the notion of culture, in research, has been reduced to merely a variable in epidemiological research. In fact, much of how the SDH are informed are from the quantitative collection of epidemiological data. This categorizing of Aboriginals by "biological heritage" (p. 57), "legislative or self-identification criteria" (p. 60), or "cultural similarities" (p. 62), does not allow for "broader views of culture within (mental) health research" (p. 57). Waldram contends that researching Aboriginal people results in an "overpathologizing bias" which does not allow for "examination of Aboriginal cultures in a contemporary context" (p. 71). Aboriginal peoples within Canada have received unjust treatment through many centuries so the cultural assumptions which come with being Aboriginal are value laden. Smylie (2009) writes:

In both developing and developed countries, Indigenous people face some of the heaviest burdens of ill health. Although all of the classic socio-economic determinants of health (such as income security, employment, education, food and shelter) apply to Indigenous populations, there is evidence that the societal processes of European colonization are a fundamental and underlying determinant

of health (International Symposium on the Social Determinants of Indigenous Health, 2007) p. 280.

As a result, statistics show that life expectancies for Canadian First Nations peoples are five to 14 years less than the general population (Smylie, 2009). According to the National Aboriginal Health Organization (NAHO) there are specific and broader Determinants of Health for Aboriginal peoples, and which include, “colonization, globalization, migration, cultural continuity, access, territory, poverty and self-determination” (National Aboriginal Health Organization, 2007, p. 8).

It is not possible to separate politics, justice, and equity from the SDH. The fact is that the SDH are complex concepts that are context driven. The literature shows that key to food insecurity is income distribution and housing. A number of subpopulations vulnerable to food insecurity have been studied. Women are found to have a higher prevalence of food insecurity than men. Aboriginal people living off reserve are among the most food insecure in Canada. Households with children have increased food insecurity as compared to those without children. Yet little research exists on the subpopulation of university students. Why is this?

Many students subsist on limited student loan and part time employment income. Power (2005) writes that “income has direct and indirect effects on healthy eating, mediated through social class” (p. S37). Perhaps students are in social class flux, i.e. changing social class by virtue of increasing their educational level; yet, research shows that higher levels of education alone do not protect households from food insecurity (McIntyre et al., 2002; Power, 2005; Tarasuk & Beaton, 1999). Does this affect how postsecondary students are viewed by student loan funders? Do we believe that students are temporarily impoverished but will soon earn high incomes (and change their socio-

economic level) once they graduate university – so they can just ‘tough it out’? Is the ‘poor student’ accepted as normative? Do we believe that students are not wise with their education dollars and choose partying over food and text books? “Given the likely impact on student health, learning and social outcomes associated with food insecurity, this issue should not be considered as an accepted aspect of the impoverished student experience, but as a major student health priority” (Hughes, 2009, p. 1973).

Structural violence.

In addition to the SDH, structural violence theory provides the opportunity to study postsecondary student food insecurity through examining the existing structures of health and education. Structural violence is a concept generally first ascribed to Johan Galtung (Farmer, 2005; Farmer, et al., 2006; Ho, 2007). This concept has been applied in anthropology, clinical medicine, psychology, education and sociology, and political science (Galtung, 2010). “Structural violence theorists define violence as the avoidable disparity between the potential ability to fulfill basic needs and their actual fulfillment” (Ho, 2007, p. 1). Early structuralists such as Levi-Strauss established that structures “influence human and group behaviours” and “structures that affect people include language, relationships, traditions and rituals” (Rogers, 2005, p. 135). Structural violence essentially describes how, organizationally, social structures and institutions (e.g. political, economic, social, cultural) are arranged such that they systematically and indirectly exert violence through racism, classism, sexism, ethnocentrism, gender inequality, etc. These structures are considered violent because they cause injury to people, and this violence, according to Galtung, is avoidable.

Structures relate to hierarchies and hierarchies are inherently unequal. These inequalities are often invisible as they are universally accepted by the general populace and can be the cause of violence (Galtung, 1990). These structural inequalities are enhanced by the unequal sharing of power, causing resources to be disproportionately allocated, with “top dogs” receiving the best share and the “underdogs” being exploited and possibly “so disadvantaged that they die (starve, waste away from diseases) from it” (Galtung, 1990, p. 293). Structural violence theory has been applied to human rights discourse and Ho (2007) builds the argument that “when agency is constrained to the extent that fundamental human rights cannot be attained, structural violence becomes a structural violation of human rights.” (p 1).

Physician, anthropologist and activist Paul Farmer’s work with modern preventable, treatable and/or curable, epidemics such as human immunodeficiency virus (HIV), acquired immune deficiency syndrome (AIDS) and tuberculosis (TB) in Haiti and Africa links structural violence with health and health outcomes. He defines structural violence as “violence exerted systematically – that is, indirectly – by everyone who belongs to a certain social order... [and it]... inform[s] the study of the social machinery of oppression.” (pg 307). Farmer believes that hegemonic structures impede individuals from fighting back against oppression and that this causes a “preventable social disorder that exacerbates biological disorders” (Farmer, 1999, p. 4). Farmer also argues that health is a basic human right but this right becomes violated because, despite excellent and modern treatments available for many diseases such as HIV and TB, people go untreated and uncured in places like Haiti. He believes that the structures which inhibit appropriate delivery of health care are indeed examples of structural violence.

Ultimately, structural violence “stop[s] individuals, groups and societies from reaching their full potential” (Farmer, et al., 2006, p. 1686).

Lane, et al. (2008) in their multilevel methodological study on structural violence, urban retail food markets, pregnant mothers and low birth weight babies found that pregnant women who live closer to supermarkets (that sold health-promoting foods), as compared to pregnant women who live near corner stores (which sold much fewer healthy foods and had a thriving business selling tobacco products and lottery tickets) have less incidence of intrauterine growth restriction (IUGR) which causes low birth weight babies. They write, “structural violence emphasizes the role of unhealthy environments in poor health and shortened survival” (p. 417). They further explain that in North America, citizens are encouraged to engage in self-care and adopt healthy lifestyles and choices. However, under the shadow of structural violence and the systemic inequalities it brings, it is difficult to take complete responsibility for one’s health when one cannot control such things as wages, income, where one can afford to live, and the geographic limitations which may create a food desert.

An examination of the history of higher education reveals that academic and intellectual pursuits (for the affluent who could afford to attend universities) was linked to the concept of social mobility, and the vocational niche provided by colleges offered opportunities for those with “lower aptitudes... the poor, people of color and first generation families” (Hanson, 2009, p. 990). Earlier in the 20th century, intellectual pursuits were valued over material pursuits; and, where knowledge was an end to itself and graduates from liberal arts universities were employed in fields “not directly connected to their major” (p. 989.) However, there is evidence that material wealth has

become much more important to Americans than in the past causing both colleges and universities to compete with each other for four year degree program funding in order to meet the needs of the demanding student/consumer (Hanson, 2009). But, with university undergraduate tuition increases of more than 247% in Alberta over a 16 year period, increases in university enrolment of Aboriginal, visible minorities and those with disabilities – students who typically have less financial means – how do university modern students make financial ends meet?

CCHS and other economic data from Statistics Canada show that women, on average make less money than men in our society and are at higher risk for poverty and food insecurity (Raphael, 2007). Yet 57% of students who enroll at the U of L are female and 65% of graduates are women (Canadian University Survey Consortium, 2009; Institutional Analysis, 2010a). This may be explained by structural violence theory, and research from the Measuring The Effectiveness of Student Aid (MESA) Project: “Since the mid-1980’s women have been increasingly more likely than men to attend universities and now outnumber men in the ratio of three to two (Christofides, Hoy, & Li, 2008, p. iii). According to Christofides, et al. this trend has continued in a number of countries including the United States. They believe the main reasons for this (based on studies by Jacob, 2002 and Goldin, et al. 2006) are that proportionally women gain more economically and financially from a university education than do men, “women are better prepared for admittance to post-secondary education” (p. iii) and, apparently females begin aspirations towards university at an earlier age than males and therefore are more likely to follow through on these aspirations. However Christofides et.al also cite the

feminization of the education system and curriculum, or behavioural attitudes of females as other possible explanations.

Universities, according to feminist writers, are male-dominated in their traditions – both intellectually and institutionally “situating women and many men on the periphery of the institution” (Schick, 1994, p. 7). Schick points out that elitism of universities is part of the historic fabric of the institution. “The traditional university education was designed for and by upper- and middle-class white men” and even though women make up over half of the student population, this has not changed the hegemony. This stands to reason as at the U of L during 2009/10, only 23% of full professors were women, 40% of associate professors were women, and 46% of assistant professors were women (Institutional Analysis, 2010a). Structural violence and postsecondary student food insecurity can be examined through the lens of the hegemony of university structure and hierarchy, with longstanding expectations that students have the means to pay for all expenses associated with their schooling. The number of full time student loans have increased by 48.4% over 15 years, yet student loan recipients in Alberta decreased by 9.2% over the same period of time (Canadian Association of University Teachers, 2009). Full time university students are also increasingly engaged in full time employment which affects their studies (Canadian University Survey Consortium, 2009).

Another lens that structural violence provides is the view of postsecondary student health and their experience with food insecurity. Linking food insecurity and health also supports Farmer’s contention that health is a human right – and if there are structures at the university that are impeding health through indirectly creating a climate

for food insecurity, this becomes a source of violence towards students at the University of Lethbridge.

Finally, structural violence in the form of geographic violence presents unique issues at the University of Lethbridge. Students at the U of L live in a food desert. The closest supermarket selling a large variety of healthy foods opened only seven years ago and is located 3.7 kilometers from student residences on campus (Google, 2010a). Prior to this time, a small convenience store located just outside the university gates (now no longer in business) provided the closest store to purchase some foods. There are number of fast food restaurants within a 1.7 kilometer radius of the university gate which include Dairy Queen, Taco Bell, and Booster Juice, Kentucky Fried Chicken, Little Caesars Pizza, plus an East Indian take-out restaurant, a Chinese food restaurant and two local eateries/pubs. In the last year, Shoppers Drug Mart opened just outside the campus gates and they sell limited packaged foods and perishables (staples) at increased price levels. There are three liquor stores within 3.1 kilometers of the university campus (Google, 2010b).

Students who choose to live on site or eat on site are also provided with challenges. During the 2009-2010 university calendar year a petition, supported by the local students union, was circulated in order to protest the lack of healthy and fresh food choices on campus. Additionally, international students and students who choose to be vegetarian have even more limited choices. Currently the U of L maintains a 'food policy' document which allows the food preparation company Sodexo, a part of the Marriott chain, to exclusively provide food to all the food venues on campus. Students staying in residence during their first year at the U of L are required to purchase a U of L

food package as part of their residence package. It is important to note that, as college/university food is a multibillion dollar business, and Sodexo is one of the three largest corporate providers of campus food in North America, this structure might be slow to respond to student discontent (Krehbiel & Meabon, 2006).

Structural violence supplies a unique lens with which to examine the hegemony and authority of university setting, health, and geography with relation to the experience of food insecurity among postsecondary students at the U of L. Farmer credits Roman historian Tacitus when discussing the historic context of structural violence which, when history is “erased,” “distorted,” or forgotten, adds to Tacitus’ “desert of peace” i.e. obliteration of history leading to the acceptance of the status quo (Farmer, 2004, p. 308). He suggests that exploration of the historical roots of a problem “is not a popular process” (p. 308) especially with longstanding “ubiquitous” structures, but is necessary in order to uncover the underlying causes of issues, bring them to the forefront in order to challenge existing power structures (Farmer, 2004, p. 1686).

Conclusion to Chapter Two Literature Review

The available literature and data revealed that that the issue of postsecondary student food security is complex and not just a matter of obtaining the cash flow needed to attend university. The published literature did not showed much about the prevalence of postsecondary student food insecurity, and shows even less about what postsecondary students living with food insecurity experience. Evidence gleaned from university food banks, Statistics Canada, government and organizational reports begin to illuminate the story behind the food insecure student and what structural and social causes might lead to food insecurity in this population. Postsecondary tuition fees have risen almost 250% in

the last 18 years, with Alberta showing the highest increases in Canada. The number of students working to pay for their education is on the rise, and Lethbridge students are working more hours than the national average to pay for their education.

Also affecting the cost of education is cost of housing – but with near 0% vacancy rates in student residence and 0-3% city-wide, there is no limits to what landlords can charge for accommodation. Living with family or relatives presumably keeps expenses lower for university students but only 18% of U of L students live with family or relatives as compared with 38% nationally. Student debt is rising more quickly than the cost of living. Sixty percent (60%) of Canadian university students leave school with anywhere from \$37,000 to \$ 44,000 of debt. U of L students access financial aid services more readily than other Canadian students even though they receive more scholarships than others across Canada.

The literature showed that, populations (including postsecondary students) who were food insecure would forgo food purchases to pay bills. Student loan funding appeared to fall short of being able to afford an adequate nutritional diet which in turn affected growth and development, micronutrient levels, academic performance and concentration, mental health and risk of chronic disease. There were strong indicators from local studies that there was a higher prevalence of food insecurity on the U of L campus than the national and provincial averages (7.7% and 6.3% respectively).

According to the literature the issue for students does not appear to be only about money and finances. The literature showed that time, knowledge and skill, transportation and proximity to a supermarket, and lack of food choices all played into food security issues for postsecondary students. Campus food banks arose because of an identified

need – yet experts believed that food banks are not the answer to food security issues. There are underlying structural issues leading to structural violence, and social determinants of health that all come to play. We know that women, women with children, and Aboriginal peoples access Canada’s food banks in greater numbers than other Canadians. Is this true for university food banks as well? U of L’s Lethbridge campus is made up of 58.4% females and 4% Aboriginal students; however, from what I have gleaned at this point, students’ union food banks either do not at all, or do not consistently, collect or utilize gender, age, student year status, nor cultural data when they distribute food hampers to ‘needy’ students.

Yet, after all the barriers outlined in this literature review, University students chose this path. They sacrificed in the short term in order to gain the longer term socio-economic benefits of a university education. When I was searching for published studies on food security issues with postsecondary students, I contacted Dr. Lynne McIntyre, co-author of the Food Insecurity chapter of Dennis Raphael’s 2009 book on the social determinants of health (McIntyre & Rondeau, 2009) via personal email. On November 9, 2009 she wrote to me, “You are tapping into a pretty unique area.” I appeared to be standing in undiscovered country. This led me to my primary research question:

- 1) What are the experiences of food insecurity among students at University of Lethbridge?

My three secondary research questions include:

- 2) What do University of Lethbridge (U of L) students perceive to be the factors or barriers which contribute to food insecurity for themselves and for the postsecondary student population at the U of L?;

- 3) What strategies are most commonly used by postsecondary students at the University of Lethbridge to overcome barriers associated with food insecurity?; and,
- 4) To what extent do the SDH and structural violence account for the factors which contribute to food insecurity in this sample?

The intent of this study was to narrow the knowledge gap related of food security within this very important sub-population – students who will be future health professionals, philosophers, lawyers, and historians.

Chapter 3: Methodology

Food security is a global issue giving rise to health inequities affecting populations at all life stages (Canadian Senate, 2009a; Hughes, 2009; World Health Organization, 2008). The literature review established that post-secondary student food insecurity exists, yet is an understudied phenomenon. There were few studies to date which sought to understand the experiences of the food insecure postsecondary student (Pia Chaparro, et al., 2009; Rondeau, 2007). In this qualitative study I answered my four research questions by exploring the postsecondary student experience of food insecurity in adult, full-time students who attend the University of Lethbridge (U of L).

In this chapter, employing qualitative methodology, an exploratory design, and person-centered interview as method, I outline the structural methodology for my thesis study. I describe how, between October 2010 and April 2011, 15 participants (n=15) were recruited and accessed through purposive sampling for face-to-face, digitally recorded, semi-structured interviews. The semi-structured interview guide used a person-centered interview approach (Levy & Hollan, 1998) and was contextually informed by the current literature, the social determinants of health (SDH) framework as presented by Dr. Dennis Raphael (2009b), and structural violence theory (Farmer, 2004; Galtung, 1990).

Ethical considerations which ensured the protection of participants, and strategies which addressed methodological rigor related to the qualitative design, are also discussed. Finally I briefly discuss the data analysis methods. The attached appendices provide samples of documents that were used in this study.

Methodology and the Qualitative Paradigm

It is generally acknowledged by social health researchers that the qualitative (or naturalistic) paradigm provides the best methodological approach to explore, understand, and generate new knowledge of the human experience as phenomena (Bryman, Teevan, & Bell, 2009b; LoBiondo-Wood & Haber, 1998). “In the qualitative researcher’s view, the human experience underlies conceptual understanding...subjective involvement in the objective world, then, is the origin of inquiry...contributing to a body of knowledge concerned with the variety of human experiences” (Munhall & Oiler Boyd, 1993, pp. xx-xxi). Denzin and Lincoln (2000) further explained that, “qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (p. 3). Thus, to best understand the experience and life-context of postsecondary students experiencing food insecurity, a qualitative methodology was warranted.

As there was little existing literature in the realm of postsecondary student food insecurity, qualitative research was also warranted to better understand the context (the underlying reasons, issues, needs, and barriers) associated with inadequate food supply in this population. In-depth interviews added rich details and provided insight into the postsecondary student condition related to their food security. Interviews sought to understand what students perceived their food secure barriers to be, and how they overcame such barriers. A purposive sample of 15 participants who accessed the U of L Students’ Union’s (ULSU) Food Bank were accrued. Ultimately, 15 students comprised the sample for the study, meeting data saturation.

Method

Interview as method and the person-centered interview.

As qualitative research is designed to explore, describe and obtain an in-depth understanding of human phenomena, it generally entails a smaller but more focused sampling of participants. The person-centered interview method provided flexibility to obtain in-depth, “meaning-level” stories which “get behind a participant’s experiences” (Berry, 1999; Hollan, 2005; Levy & Hollan, 1998; Valenzuela & Shrivastova, 2007, p. 2). The guided interview approach utilized an interview guide developed by myself to ensure all relevant topics were covered. In this research study the semi structured interview guide served two purposes. First, it served to ensure topics were covered which related to food insecurity within the context of the relevant social determinants of health. These included Aboriginal status, education, employment, food security, gender, housing, income and its distribution, social safety net, and social exclusion (Raphael, 2009b). Second, the interview guide ensured a person-centered interview approach was fully actualized.

Person-centered interviewing.

Person-centered interviewing is both a method and a data collection approach developed by Robert Levy during his anthropological fieldwork in Nepal and Tahiti. This method honours the participant as both informant *and* respondent simultaneously (Hollan, 2005). In the person-centered interview model, the interviewer shifts back and forth between asking open ended questions designed to both elicit *information* from the participant as expert in her/his own context (describing observations, cultural norms as ‘witness,’) and asking open ended questions designed to encourage the participant to explore the meaning of this context as *respondent* (Hollan, 2005; Levy & Hollan, 1998). “These oscillations between respondent and informant modes illuminate the spaces,

conflicts, coherences, and transformations, if any, between the [person-in-herself] (either in her own conception, or in the interviewer’s emerging one) and aspects of her perception and understanding of her external context” (Levy & Hollan, 1998, p. 336). Levy and Hollan also differentiate between the level of openness in respondent open ended questions, suggesting the constraints of the question can be widened or narrowed as needed.

As related to this research study, the benefit of person-centered interviewing when studying postsecondary students was in the blending of the two question strategy. As both informant and respondent, the student’s relationship to her/his context as a university student who is food insecure (where the ability to access food resulted from multiple issues) was preserved while the *meaning* that food insecurity brought to her/his lives were honoured. Sample questions from the semi-structured interview guide are provided in Table 3.1.

Table 3.1
Sample Interview Questions Utilizing Person-Centered Interviewing Technique

Participant	Respondent:	If you knew that you would not have enough money for food this month, who would you seek help from?
	Informant:	Is that typical for students in general? What would they do?
Participant	Informant:	What do students typically do to make ends meet so they have enough money for food each month?
	Respondent:	What do you typically do to make ends meet so that you have enough money for food each month?

Levy and Hollan (1998) emphasized that the interview setting be private not only to address confidentiality of the interviewee but also to “separate the respondent from family friends and acquaintances... (as the) ...presence of others automatically shifts behaviour and discourse toward public behaviour and socially proper responses” (p. 340).

Similar to other ethnographic research, they also emphasized the critical importance of prior appreciation of the culture being studied so that “the presence of significant variants” within the culture will be recognized and understood (Levy & Hollan, 1998, p. 338). Therefore, the literature review included literature on the context of both Canadian and the local university’s students.

Access, sampling and recruitment of interviewees.

Access.

In order to discover if this study was feasible, i.e., key agency cooperation, I spoke with University of Lethbridge Students’ Union (ULSU) Manager, Cheri Pokarney (personal communication, October, 2009) early in the development phase. She confirmed that the ULSU would assist me in this research in any way possible, including facilitating my access to students using ULSU’s food bank. Upon ethical approval from the Human Subject Research Committee at the University of Lethbridge, a formal letter of request was sent to Ms. Pokarney (Appendix B). Access to the students was granted. Recruitment into the study began in October 2010 and was completed in April 2011.

Sample and sample size.

As suggested by Janice Morse (2000), the qualitative research method required an approximate sample size of 20 interviewees to provide sufficient useable data to reach “saturation” (p. 3). In a 2006 qualitative research article which discussed the experiences of food insecurity in urban soup kitchen consumers, saturation occurred at 22 interviews (Wicks, et al., 2006). Stevens (2010) explored food insecurity among 21 young mothers through semi-structured interviews and the U.S. HFSSM instrument and was able to reach saturation.

To ensure a sample size of 20 was achievable from the ULSU Food Bank, the food bank's statistics were obtained from the manager. Sixty (60) 'single' and 22 'family' hampers were distributed to 31 students by the ULSU Food Bank between the months of September – mid-November 2009 (Pokarney, 2009). Therefore, there was deemed a sufficient population from which to draw upon and reach the estimated sample size. Inclusion criteria are described below. The ULSU had limited criteria for accessing their food bank. If a student had current U of L student status (part-time or full-time; living on or off campus) she/he may access the food bank every two weeks up to a maximum of 10 times in her/his academic career. The student was given a 'single' basket if they were single or married/common-law with no dependants. There were given an enhanced 'family' basket if they had dependants.

Inclusion criteria.

Inclusion criteria were developed to ensure that participants could speak to the phenomenon of interest and reduce bias in the sample proper. Inclusion criteria included:

- U of L students who received 'single' or 'family' hampers from the ULSU Food Bank;
- U of L students who were considered full time students;
- Students over the age of consent (18 years or older); and,
- Students received at least one food hamper from the campus food bank within the study time frame (October 2010 to April 2011).

Students' ability to speak and read English, and current student status at the U of L was presumed as this was a requirement in order to attend the university and subsequently be eligible to receive a food hamper.

To establish a more rich and diverse sample, students with dependent children were included in the sampling. There is a documented higher level of food insecurity in households with children (Health Canada, 2007a), and the experience of parental food insecurity is differentiated from individual food insecurity. Parents who have food insecure households will, most often, choose to feed their children before themselves (McIntyre & Rondeau, 2009; Power, 2004). Thus, the qualitative data was enriched with diverse and purposive sampling. Including the possibility of sampling of students with and without dependents provided a fuller understanding of their experiences (Morse, 1995). The decision to include only full time students relied on the assumption that the part time student had more available time for employment earnings thus potentially undermining the cohesiveness of the sample; however, full time students who worked while attending university were included in the sampling. Including only full time students in the study also served to create a common demographic among the sample. Nursing students were not eligible to participate in the study because, as a nursing instructor, I might potentially teach the student during her/his nursing education. Given the sensitivity of the issue and the position of ‘power’ that I have as an instructor, it was determined that excluding nursing students would protect their privacy and confidentiality and prevent potential ethical issues from arising.

Recruitment of participants.

A letter of invitation explaining participation in the study was included with each hamper distributed by Students’ Union staff (Appendix C – Flesch-Kincaid reading level grade 10.5). Via the invitation letter, students were requested to contact me to discuss their interest in participating. If the student agreed to participate in the study, a 60 minute

interview time was arranged within one to two weeks from the time of the initial contact. Students chose to contact me through phone calls, emails, or texting. The interviews took place in a private meeting rooms on campus which I booked prior to the interview. Prior to the interview, participants were emailed the demographic questionnaire (Appendix D) which they completed and brought to me on the day of the interview. Students were compensated for their time through a \$30 gift card to the Safeway grocery store. Ethical considerations for this study are discussed later in this chapter.

Data collection: instruments and procedures.

Data from the participant was collected using two approaches – demographic information, and a semi-structured interview. The interview questions were developed utilizing person-centered interviewing techniques as described by Levy and Hollan (Hollan, 2005; 1998).

Demographics.

A demographic data sheet (Appendix D) was emailed to the participant prior to the interview and then collected at the time of the interview once the consent forms had been reviewed and signed. Data categories were informed by my literature search on food insecurity and the two frameworks: the social determinants of health; and, structural violence. Questions about gender, income sources, expenses, living arrangements, transportation, family and support systems were all important to provide an accurate picture of food insecurity in the students' lives. As time, access, geography and knowledge were barriers noted in the postsecondary student food insecurity literature, I included related questions in the demographic data.

Semi-structured interview guide.

Questions and topics for the semi-structured interview guide (Appendix E), were derived from: 1) the social determinants of health (specifically: food security, housing, income and its distribution, social safety net, and social exclusion); 2) structural violence (structures and organizations/institutions that came in contact with or influenced the student), and; 3) the literature related to postsecondary student food insecurity. Gender, Aboriginal status, education and employment status were collected in the demographic questionnaire and explored further during the interview. Also informing the interview guide was published qualitative literature, describing interviews with individuals who were experiencing food insecurity (Goetz, 2008; Hamelin, et al., 2002; Kempson, et al., 2003; Marco, et al., 2009; Stevens, 2010; Wicks, et al., 2006; Wolfe, et al., 2003).

Not all articles described methodology nor shared their interview questions; however, the topic areas/categories with which they developed their questions displayed a number of similarities. A table of categories by author is provided in Table 3.2. Coping, access, chronicity/manifestation, risk factors/causes, social/organizational supports, transportation and shopping, confounding health problems, and food preparation figured in at least four of the seven studies.

Table 3.2
Interview Topics and Findings in Qualitative Food Insecurity Studies (by Author)^a

	Marco	Hame- lin	Kemp- son	Wicks	Wolfe	Stevens	Goetz
Food Access	x			x	x	x	x
Food Quality	x			x		x	
Food Pricing	x					x	
Food Preparation	x			x	x		
Coping Strategies and Management	x	x	x	x		x	x
Transportation and shopping	x				x	x	x
Chronicity / Manifestation	x + HFSS M	x + HFSS M		x	HFSSM enhanced	x + HFSSM	x + HFSS M
Risk factors Causes, contributing factors, barriers	x	x		x	x	x	x
Social / organizational supports	x	x		x		x	x
Eating environment					x		
Education						x	x
Food safety			x				
Employment	x					x	x
Income	x					x	x
Expenses	x					x	x
Family roles		x				x	x
Living with others						x	x
Imagining solutions		x					
Confounding health problems				x	x	x	x
Nutrition						x	

^aCare has been taken to include the pertinent questions in the interview guide.

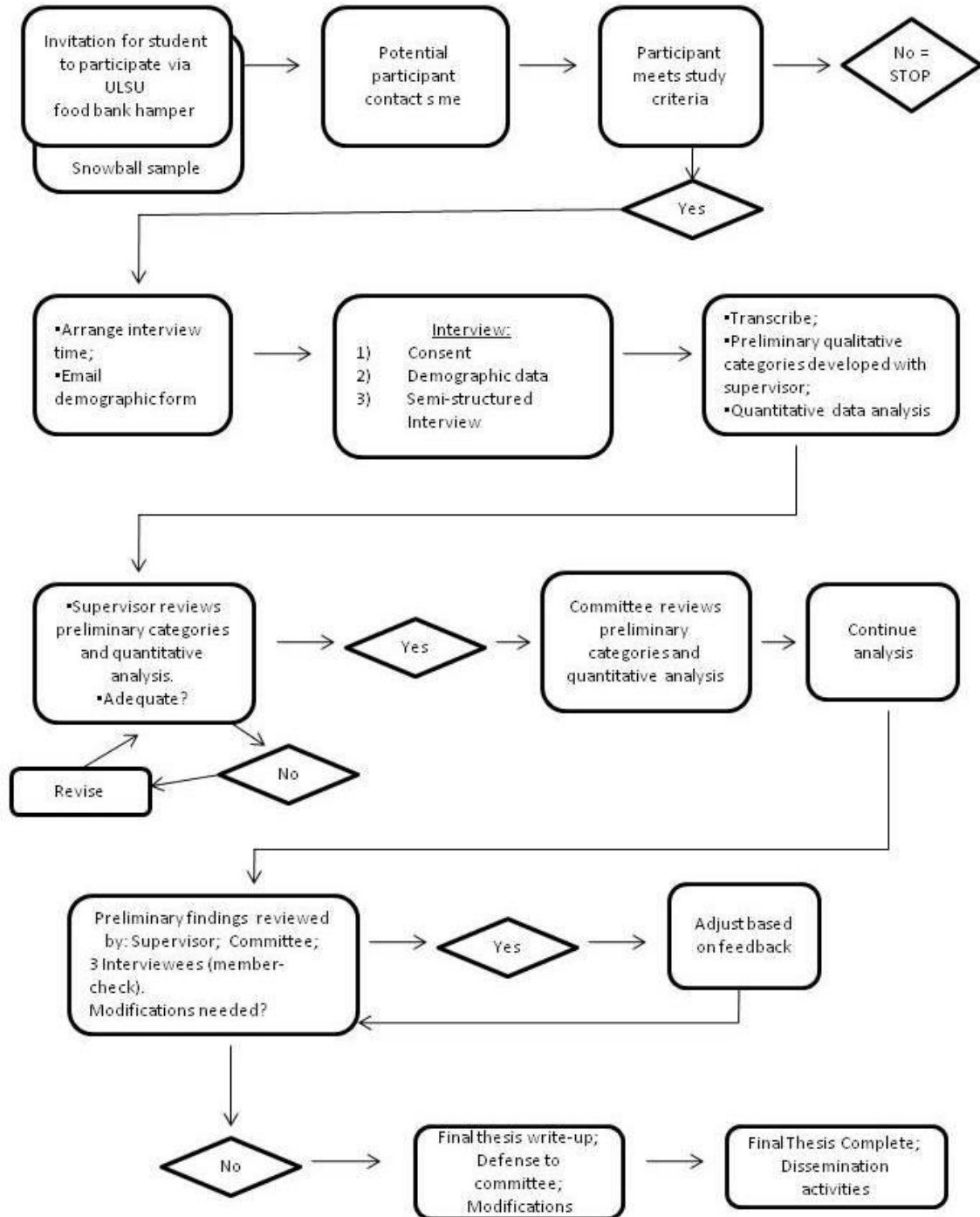
Pia Chapparo, et al. (2009) explored the spending patterns of postsecondary students. They were not able to establish an association between food insecurity and spending patterns but also admitted that their survey instrument was limited and did not include the use of credit and debt. They inferred that there were preconceived notions regarding students' spending habits and how students budget their dollars.

When researching the topic for this study, I heard numerous comments that students spend their money on pizza, beer, expensive coffee drinks, electronics and clothing. Thus, students allegedly chose to miss meals in order to purchase what they wanted; and, students budgeted poorly which was why they did not make their dollars stretch until the end of the semester. I added a question on this topic to the interview guide in order to explore the students' perceptions of these notions.

To summarize the data collection process, the sampling strategy (convenience sampling) garnered 15 participants who accessed the ULSU's Food Bank between October 2010 and April 2011. All 15 participants met the study criteria and voluntarily agreed to take part in the study. The demographic data sheet was emailed to the participant and collected at the interview once informed consent was established. Subsequent to this, the semi-structured interview took place. Figure 3.1 shows a flow map of the process that was used in this thesis study from recruitment to final write-up and dissemination.

Figure 3.1

Flow Map of Research Activities



Qualitative data analysis.

Qualitative data analysis was conducted utilizing Burnard's 14 stages of thematic content analysis adapted from Glaser and Strauss's grounded theory approach and other content analysis frameworks (Burnard, 1991). This method assumes that data are collected via audiotaped interviews which are transcribed verbatim. Through categorizing and codifying transcripts "the aim is to produce a detailed and systematic recording of the themes and issues addressed in the interview and to link the themes and interview together under a reasonably exhaustive category system" (pp. 461-462). Janice Morse (1995) provided guidelines on the principles of data adequacy and saturation.

In stage one, I wrote pre and post interview field notes, and memos about possible ways to categorize the data. Stages two to four included becoming 'immersed in the data' through the reading of transcripts, note-taking on general themes, refinement of categories and headings and finally ordered headings collapsed in broader categories. I worked closely with my supervisor during these stages (and throughout the data analysis process) so that my techniques became refined, enhanced, and validated. During stages five and six I further refined categories and sub-headings with independent feedback from my thesis supervisor in order to "enhance the validity of the categorizing method and to guard against (my own) researcher bias" (Burnard, 1991, p. 463). Adjustments to the categories were then made.

During stage seven I ensured all aspects of interviews had been covered, enhancing validity as adjustments were made through discussion and validation. Burnard's stages eight through ten involved developing a coding scheme via colour coding, cutting and pasting the categories. At this point, a story board process was

introduced to provide a chronological story of the emerging themes and categories.

During stage eleven I worked with my thesis supervisor to reach consensus agreement of the category system and the analysis. During a progress review meeting, committee members were also invited to review the work and offer their perspectives. Further adjustments were then made. Stages twelve through fourteen involved refining the organization of the data findings, and writing up the sections with commentary that linked examples together with the literature.

Once preliminary analysis was accomplished, I drafted an executive summary of preliminary findings (Appendix F) and, using this document, I attempted a member-check with six participants. I recruited a representative sample from three common participant-types: a single participant, an Aboriginal participant, and a married/common-law participant with a dependent family. The purpose of this member check was to validate the initial findings and reach an agreement on the completeness of the data that fully explained and described their experiences, assisting to ensure the validity and credibility of the research findings. Anticipating that participants were busy with their studies, and the length of time from the time we last spoke, I increased my odds of receiving a reply by emailing two participants from each category (a total of six participants) a copy of the preliminary results. Only one participant responded: “I find your info to be VERY accurate. Hopefully studies such as yours will be able to promote change.” Because of the content of this response, I did not alter the study findings. Once preliminary findings were reviewed and validated with the participant and my supervisor via consensus agreement, I finalized writing the research results in the form of a thesis chapter.

Burnard's predetermined 14 step process allows novice researchers such as me to ensure trustworthiness when analyzing data that represent people's personal experiences and provided credibility to the qualitative research process. He provided two useful methods to check validity. First, colleagues (my thesis supervisor with committee input at key points) read transcripts and identified and validated a category system. Second, participants reviewed preliminary study findings and 'main points' (via the member-check).

Methodological trustworthiness (rigor).

It is important for the researcher to establish that her research is trustworthy through adequate and sound methodology. Utilizing Lincoln and Guba's (1985) criteria for trustworthiness (which parallels rigor in quantitative research) positioned the thesis study research findings as credible, transferable, auditable and confirmable.

Credibility.

Lincoln and Guba describe credibility as the qualitative researcher's equivalent of quantitative research's internal validity (Lincoln & Guba, 1985). Thus, the research should be carried out in a way that accurately describes the social reality as it is recognized and validated by the participant (Bryman, et al., 2009b). Credibility was established through prolonged engagement, progressive subjectivity and member checks (Lincoln & Guba, 1985).

In this research, credibility was maintained using a number of strategies. The data collection tools were piloted and validated with three students (non-participants in the study) who represented a cross section of potential student participants: one male, one female, one international female. All three students were graduate students attending the

U of L. The instruments were adjusted based on these students' feedback and suggestions, thus assuring content validity. Also, adjusted was interview length - from 80 minutes to 60 minutes. Additionally, the demographic questionnaire was reviewed by a statistician who also suggested improvements. Verbatim transcription of interviews, protected the data set and added credibility, i.e. participants' perspectives were maintained, including the nuances and subtleties of their answers to the interview questions. As well, by ensuring *prolonged engagement* with the phenomenon of interest by means of fifteen, 60-minute interviews, as a researcher I was able to more fully understand the participant-students' experience of food insecurity. Field notes were made before and after each interview describing my observations of the participant, recording my thoughts and comments of the interview experience. Ongoing *peer debriefing* with my thesis advisor ensured evolving findings, analyses and conclusions were reasonable. Pilot testing the study instruments with three diverse university students also added to the credibility of the data collected.

Progressive subjectivity was addressed through initial introspection of my own preconceived notions of the phenomenon; and, personal journal of my expectations, reflections and constructed findings before and after each interview. During each interview I self-monitored to avoid "systematic distortions in understanding that can bias" the interviews and analysis (Levy & Hollan, 1998, p. 347). I debriefed the journal entries regularly with my advisor in order to challenge my preconceived notions, and seek out possible misinterpretations. I endeavored not to "afford too much privilege to (my) original construction" and undertook privileging the participant's constructions of knowledge and truth as they unfolded (Guba & Lincoln, 1989, p. 238).

Once the data had been provisionally coded and analyzed, I sought out a representative sample of six participants through their email addresses (as obtained in consent form) to *member check* the preliminary findings. They were invited to provide feedback to me through email communication and/or phone call on the completeness and accuracy of the categories and descriptions of postsecondary student food insecurity so that I could address any gaps in the data and findings. This ensured that any errors or misunderstandings were addressed. One student out of six did provide feedback, fully agreeing with the preliminary results. The student suggested no changes, so none were made. Once the member check had been conducted, I moved forward with the final thesis document.

Transferability.

Transferability enables the reader to apply the research findings to other contexts. Guba and Lincoln suggest it is not the role of the naturalist researcher to ensure findings are transferable. Instead, “providing a database that makes transferability judgment possible” is the goal (Lincoln & Guba, 1985, p. 316). In this thesis research, an accurate account of methodology, method, data and findings were recorded, and in-depth, “thick descriptions” (Geertz) of the student-participant’s experiences were sought (as cited in Bryman, et al., 2009b, p. 133).

Auditability.

Auditability refers to the dependability and consistency of qualitative research. Accurate and complete record keeping is essential. Thus, key decision points and processes were journalled throughout the research. The final thesis document created an accurate record of decisions made throughout the research.

Confirmability.

Confirmability refers to the researcher “acting in good faith” (Bryman, et al., 2009b, p. 133). In order to meet the confirmability criteria, I used the participant’s own words to substantiate the research findings. In addition, the regular debriefing with my thesis advisor verified the findings and shed light on any theoretical bias on my part.

Ethical Considerations

My research proposal was submitted for ethical review to the University of Lethbridge Human Subject Research Committee (HSRC) prior to any research activity. A certificate of approval was obtained from the HSRC on September 8, 2010. Ethical considerations for this research were informed by Trochim (2006) who identified the basic elements, principles and requirements of ethics in social science research as: voluntary participation, informed consent, risk of harm, confidentiality, anonymity and right to service. The following were the main ethical considerations in this research study.

The very nature of being a student made the target population in this research vulnerable and thus required special consideration in establishing ethical soundness. There were additional vulnerabilities through the participant experiencing social inequities because of food insecurity, other SDH, and structural violence. Thus, ethical principles and strategies designed to protect the participants were embedded in the research design and addressed in the informed consent process and consent form (Appendix G – Flesch-Kincaid reading level grade 13.3).

First, my request to access the ULSU’s food bank and students did not occur until ethical approval was granted. I had no involvement in the distribution of invitational /

recruitment letters and the students themselves initiated contact with me. Participants were the age of consent in Alberta – 18 years and older. In order to not coerce the student into participating, I carefully scripted my response to the student's initial contact with me (Appendix H). Potential participants were reminded prior to accepting my invitation and prior to the interview that participation was voluntary. I disclosed in the letter of invitation and verbally that that I was graduate student *and* an instructor within the nursing program and thus I was an employee of the university – and that this, in no way, affected the students' ability to receive services from the ULSU or the university. Their anonymity and confidentiality was maintained despite my dual role. In order to maintain professional distance from the study participants and to protect their privacy, nursing students were not be eligible to participate in the study.

Through the informed consent process, participants understood that their interviews (raw data) would be audiotaped and accessed by myself, the transcriptionist (who signed an oath of confidentiality, Appendix I) and my supervisor, Dr. David Gregory. Additionally, the participant understood that their words and stories may be published and their identity would be protected by using a pseudonym. Given the intimate and unique data collected, in the analysis chapter of this thesis, some participants were assigned more than one pseudonym to doubly assure their anonymity.

Demographic data was published only in aggregate form. All data continues to be kept in a locked file cabinet in my office (which also has a locked door), computer access to data is password protected, and all data will remain secured for five years and then will be destroyed through confidential shredding and the permanent deletion of computer transcript files.

The letter of invitation and the consent form assured participants of their right to service. That is to say, I assured the participant that her/his participation would not affect her/his access to the food bank, nor negatively impact any income received from government/loan/scholarship benefits. Both documents also addressed risk of harm, which was twofold. First, protecting the participants' confidential information in study presentations was maintained by ensuring no identifying information was included. Second, the participant risked possible anxiety or emotional discomfort from discussing a potentially emotional topic, so each participant was given the name and phone number of a student counselor along with a brochure from the university's counseling centre.

Participants were offered a \$30 Safeway grocery store gift card for taking part in the study. This compensated them for approximately 60 minutes of their time, which is substantial in the life of a busy university student. It was made clear to the participant that receipt of the gift card was not in jeopardy if the participant chose to remove him/herself from participating in the thesis study. During the interview I asked each participant if, once the study was completed, they would like an executive summary sent to them via their U of L email address, and I retained the email addresses of only those students who provided their email addresses for that purpose. Participants understood that by participating in the study they also consented to be contacted to participate in a member check during the analysis phase of the study. Finally participants were reminded of the above information once again just before signing the consent form, including their right to terminate their participation without negative consequences, and their receipt of the gift card regardless of their choice to terminate. No participants removed themselves from the study.

Dissemination

Once this study is completed, I plan to provide an executive summary to consenting study participants and the ULSU stakeholders, and to widely disseminate my findings to organizations that are interested in student life and/or food security. These may include: the Canadian Association of Student Associations, Alberta Health Services, Growing Food Security in Alberta, and Food Bank Canada. As well, I plan to disseminate my findings through journals that examine healthy public policy.

Conclusion to Methodology

In this chapter I have presented the structural methodology and methods framework consistent with a qualitative, exploratory study on postsecondary student food insecurity. I described sampling and recruitment strategies used to accrue 15 participants, presented attributes of person-centered interviewing as method, and provided data collection tools which include a demographic questionnaire and a semi-structured interview guide. Qualitative data analysis followed content analysis techniques as described by Burnard (1991). I also included appendices that address ethical considerations and the data collection tools.

“Given the likely impact on student health, learning and social outcomes associated with food insecurity, this issue should not be considered as an accepted aspect of the impoverished student experience, but as a major student health priority” (Hughes, 2009). It has been suggested that policy changes related to the social determinants of health can be effected by “collecting and presenting the stories” of those who are most impacted by the determinants (Raphael, et al., 2008, p. 231). Further examination of postsecondary student food insecurity through the lens of structural violence also

suggested opportunities for policy or organizational change. It is my hope that the students' 'stories' and experiences of food insecurity presented in this research will not only add to the dearth of literature on this topic – they may assist policy makers to develop strategies to address postsecondary student food insecurity as a health priority.

Chapter Four: Results

Food security is a public health issue in Canada exemplified by an 18% increase in food bank use across Canada. Increasing numbers of postsecondary students are also accessing onsite campus food banks. This qualitative study sought to understand the experiences of food insecurity among students at the University of Lethbridge (U of L) who had accessed the Students' Union Food Bank. Recruitment was primarily through an invitation placed by University of Lethbridge Students' Union (ULSU) employees in food hampers received by university students.

Over a seven month period, October 2010 to April 2011, fifteen, full time university students participated in the study. Data were collected from participants in two formats; a demographics/information questionnaire (Appendix D), and an in-depth, semi-structured, individual, face-to-face interview (Appendix E). This chapter offers demographic descriptions of research participants, data analysis (quantitative and qualitative data), and a summary of findings.

All 15 participants chose to contact me after receiving an invitation to participate in the study in their ULSU Food Bank hamper. All 15 students met inclusion criteria and all 15 interviews were conducted on the U of L campus in private meeting rooms. The duration of most interviews ranged from 50 to 60 minutes in length, with two interviews extending to 77 and 91 minutes. The ULSU Food Bank, over the same 7 month period, recorded distributing 107 single hampers and 25 family hampers to students. Some students likely received hampers more than once during this time period, but there is no record of how many individual students the ULSU Food Bank served during that time.

Interviews were audio-recorded and transcribed verbatim. Transcripts were reviewed for accuracy and any identifying data was removed or slightly altered so as to maintain the anonymity of the participant and the confidentiality of the interview data. Additionally, some students whose interviews or circumstances might reveal their identity were assigned up to three pseudonyms.

Describing the Participants - Demographics

A demographic profile was derived from the questionnaires returned by participants. One participant did not turn in her demographics questionnaire; however, I was able to extrapolate demographic data through the interview process. Participants' ages ranged from 20 to 36 years, with a mean age of 26.8 years, and a median age of 24. Five of the 15 participants were male (33.3%), and 10 were female. Although the ULSU did not collect statistical data other than numbers of students who utilize the Food Bank service, anecdotally from the Food Bank Coordinator, approximately half of students who utilized the food bank were male and half were female. Thirteen (13) of the participants were at an undergraduate level, with the remaining two involved in graduate level studies. Two of the participants were 'International' students (students from out of country who were not Canadian citizens). Five participants were of Aboriginal descent (two male and three female), hailing from two Canadian provinces/territories and all five were receiving band funding to attend university. Two participants lived in rural settings and commuted to the university; the remainder lived within the Lethbridge city limits. Nine participants (60%) were first generation university students (their parents had either not attended or graduated from university). Of these nine participants, one reported that he/she had a parent who graduated from a two year college diploma program. Presented

in Table 4.1 include the participant demographics by age, gender, Aboriginal status, International student status, program year and years at the university, rural/urban status, and first generation university students.

Table 4.1

Demographics

	Frequency	Mean; Median; Mode	Range
Total Students in Study	15		
Age	8 (20-25y) 2 (26-30y) 5 (31-36y)	26.8y; 24y; (multiple modes)	20y-36y
Gender - Male	5 (33.3%)		
- Female	10 (66.7%)		
Aboriginal Status	5 (33.3%) (2 male; 3 female)		
International Student	2 (13.3%)		
Undergraduate Students	13 (86.7%)		
Graduate Students	2 (13.3%)		
Program Year		2.53; 3; (multiple modes)	1y-4y
Years at this University		2.63; 3; 3	1y-5y
Live Off Campus	13 (86.7%)		
Live On Campus	2 (13.3%)		
Live Off Campus – within City Limits	11 (73.3%)		
Live in West Lethbridge (off campus)	10 (66.7%)		
Live in South Lethbridge (off campus)	1 (6.7%)		
Live Off Campus – Rural Commuter (45-60 min. 1-way)	2 (13.3%)		
1 st Generation University Student (neither parent graduated university)	9 (60%)		

Note: Some participants fall into more than one category – in order to maintain anonymity, statistics have not been broken down further.

Dependents and living with people / pets.

All 15 participants stated they lived with others. These ‘others’ were described as roommates, spouses, common-law partners, boyfriend/girlfriends, and children. Six participants who did live with other adults indicated that this other person(s) was also a full time student(s).

Three participants were single (but shared expenses with roommate(s)) with no dependents; four participants were married or had a common-law spouse or boyfriend and no dependents; seven participants were married/common-law with dependent children; and one participant was single parenting. Note that two participants were living temporarily away from their spouse. Of those seven participants with children, two participants lived on campus and five lived off campus.

Of those seven participants who did have children, the number of children for each participant ranged from one to seven, with mean of 2.71 and a median and mode of 2.00. Ages of the participants’ children ranged from 3 months of age to 17 years. The frequency of marital status and child status of the 15 participants are presented in Table 4.2.

Table 4.2

Frequency – Marital Status / Child Status

Marital / Child Status	Frequency
Single, without roommate - no children	0
Single, with roommate / share expenses – no children	3
Single parenting	1
Married or common-law or living with boyfriend – no children	4
Married, or common-law – with children	7
TOTAL	15
Temporarily living away from spouse (with or without children)	2
Students who lived with another full time university student	6
Students with children - number of children	Range = 1-7 Mean 2.71; median/mode 2.00
Ages of children	Range = 3 months – 17 y
Living on campus + with children	2
Living off campus + with children	5

Almost half of participants (7 of 15) reported owning and caring for at least one pet at home. Number of pets ranged from one to eight pets; however, the participants with the higher number of pets included small animals such as fish and gerbils. Six (6) of the participants reported owning at least one or more cats or dogs.

Income, savings credit, and ownership.

Participants reported a variety of income sources which included, limited band funding for Aboriginal students, student loans, summer earnings, scholarships/grants, educational trust fund, spouse’s income, tax refunds, federal family allowance, and part time work. Five (5) of 15 participants (33.3%) reported being employed part time during the school year.

Nine (9) of 15 student participants did not have any emergency savings, while 6 of 15 (40%) created a small “nest egg” in case of emergency. Five (5) of 15 participants

had no credit cards, 7 had credit card(s) and were able to pay off the balance, while 3 participants had credit card debt and maintained the debt by making minimum payments, as they did not have the funds to pay off the balance.

Participants indicated their spending priorities by rank ordering a list of common expenses such as rent, tuition, entertainment, food, phone, etc. – generally from 1 to 10; however, some participants grouped items/categories and rated them the same and others added items to the list such as child care. Therefore in some cases participant rankings topped out a level 5 priority while others went on to give 11 levels of rankings. No table is provided on spending priorities given the great variability of the data. Overall, tuition was among the top priorities for participants who did not have their tuition subsidized. Participants did rank books slightly lower than tuition. Another top priority was housing and utilities (gas, electricity, water). Some participants purposefully chose accommodations which included utilities in order to ensure the integrity of their budget, i.e. costs remained the same each month. Overall, food for in-home eating was ranked just under or equal to housing, utilities, tuition and books. Conversely, entertainment and eating out was ranked last, just behind clothing. Those with children gave high priority to childcare and expenses related to children, including health care. Transportation as priority ranged from first to almost last.

All participants (including those who were married) but one (who did not live with other adults) indicated they shared monthly bills with another adult. One participant owned his own home with the remainder 14 participants rented their accommodation. Eight participants owned a vehicle that they could utilize at any time they needed to shop for groceries. The other seven participants, in order to procure groceries, used a

combination of asking for rides from friends, borrowing a car, taking a bus, or taxi.

Income, savings, credit and ownership are listed in Table 4.3.

Table 4.3

Income, Savings, Credit, and Ownership Data from Student Participants

	Frequency (%)	
Student Income Sources	Limited Aboriginal Band funding; student loans, summer earnings, scholarships; grants, educational trust fund; spouses income, tax refunds, federal family allowance, part time work.	
Primary Income Source was received Monthly	7 (46%)	
Student Employed Part-Time During School Year	5 (33.3%)	
Students With Modest Emergency Savings	6 (40%)	
Students with Credit Cards	10 (66.7%)	
Able to reliably pay off balance	7 (70%)	
Not able to reliably pay off balance	3 (30%)	
Students who rented	14 (93.3%)	
Students who owned their own home	1 (6.7%)	

Shelter and kitchen facilities.

All 15 participants reported they had a reliable and safe place to sleep. One participant reported less than adequate cooking facilities with only a microwave, a mini-bar fridge to store food, a toaster oven and a two-burner stove to cook. (See Table 4.4).

Shopping and cooking knowledge, budgeting confidence, shopping, and living.

Participants grocery shopped at a variety of supermarkets. Participants listed from one up to six stores (mean 3.36, median 3.0) from where they obtained their groceries. Walmart was most frequently reported by 13 participants, followed by the

Canadian Superstore (10) , Westside Safeway (10), Sobeys (5), Costco (3), and the nearest corner store (3). The two rural participants shopped both in Lethbridge and at their local rural store. Only one participant in this study utilized the University's meal plan. He deposited money onto a food card in order to purchase lunches while at school.

Twelve (12) of 15 participants reported adequate knowledge to shop and prepare nutritious and balanced meals. Three participants felt they lacked adequate knowledge in this regard. Five participants were the main cooks for themselves and family; eight participants shared cooking with their spouse, while one participant relied on her spouse as the main cook. Thirteen participants were completely confident in their skills and abilities to create and maintain their school year budget. Shelter, kitchen facilities, shopping, meal plan, primary cook, cooking knowledge, and budgeting confidence data are all reflected in Table 4.4.

Table 4.4
Shopping and Cooking Knowledge, Budgeting Confidence, Shopping, and Living

	Frequency (%)	Mean; Median; Mode	Range
Reliable shelter	15 (100%)		
Adequate cooking facilities	14 (93.3%)		
Grocery stores regularly frequented		3.36; 3.0 (multiple modes)	1-6
Stores accessed			
Walmart	13		
The Canadian Superstore	10		
Safeway (Westside)	10		
Sobeys	5		
Costco	3		
Nearby corner store	3		
Uses University Meal Plan	1 (6.7%)		
Adequate knowledge of shopping/preparing nutritious balanced meals	12 (80%)		
Participant = main cook for themselves/family	5 (33.3%)		
Participant = relies on spouse to cook	1 (6.7%)		
Shares cooking with spouse	8 (53.3%)		
Confident in skills/abilities to create/maintain own budget	13 (86.7%)		

Sources of knowledge regarding ULSU Food Bank existence.

Participants became aware of the ULSU Food Bank from numerous sources such as the ULSU website, student targeted literature such as student newspapers and leaflets, friends and their own counsellors/advisors. Listed in Table 4.5 are the rank-ordered sources of information. Some participants recalled knowing of the food bank from multiple sources and this is reflected in the table.

Table 4.5

Knowledge of Students' Union Food Bank Existence

Knowledge Source	Frequency.
Students' Union website	5
Student targeted literature	4
Friend	3
Counsellor/Advisor	2
University class	1

Cost of living data.

Though collected, it was difficult to make sense of, conduct comparisons, or see patterns in the data I collected regarding cost of living. Participants reported these figures both as singles, and as family members. Some participants had books and tuition subsidized while others did not. Some participants collected monthly incomes while others earned money through the summer – and some did both. Two examples of data that were not useful included rent and food costs. Rent for a single person was as much as one third less than a participant with a family. Food costs were much higher for a participant with a family than a single participant. I believe that the reason that it was difficult to analyze this data was a consequence of poor question construction which did not take into account or anticipate the great variety of participants (single, married, with and without children) who entered the study along with the complexity of how they secured their income and how they reported both income and cost of living. Therefore, I have chosen to not report the cost of living data collected.

Qualitative Data: Student Interviews

All 15 interviews were transcribed and manually coded line-by-line. Through thematic analysis (Burnard, 1991), that is, reading, re-reading, coding and subsequent organizing of the coded data, a classification scheme was developed from the transcribed

data. Emergent patterns were derived from classifications – data that emerged as a similar pattern was noted to be of particular importance. Recurrent patterns were assembled and later divided into categories which were eventually organized to develop and support themes.

The social determinants of health and person-centered interviewing provided an overarching context for describing the student participant experience. Early data were analyzed using a story boarding process, that is, similar data (on Post-it notes) were initially grouped together and displayed large poster-papers. Each poster-paper with grouped data was then given a temporary name (heading/category) which described these data. As more individual data was added, data was moved, re-ordered and re-grouped under similar categories until a consistent grouping and sequencing of categories was apparent. Categories were then placed in a proposed sequence for the purpose of visualizing the ‘story’ of the participant experience. These data were then entered into a Word document and subsequent data were matched against the existing categories and story board, and categories were added to, shifted and amalgamated in accordance with new data.

Thematic analysis, enacted through the story board process, resulted in four themes emerging from the narratives which reflected: 1) context of the individual student (Student As Person And His/Her Food Basics - with two main categories); 2) the vulnerability of students related to food insecurity and the circumstances which lead them to contact the food bank (The Vulnerable Student: Pathways to the Food Bank – with four main categories); 3) structural and organizational factors which impinged on the lives of students (Structural Issues Affecting Students - six main categories) ; and, 4)

students reflections on emerging maturity and perseverance in the face of adversity (Post Script – Reflections on Maturing and Persevering – with two main categories). Themes and categories are presented in Table 4.6.

Table 4.6: Themes and Categories

<u>Table 4.6: Themes and Categories</u>	
<u>Theme 1: Student as Person and Her/His Food Basics</u>	
<ol style="list-style-type: none"> 1. The Context and Constraints of Being a Student <ol style="list-style-type: none"> a. The Complex Student b. Striving for Health c. Students and Supports d. Living With Others e. Time f. Sub-Populations: Cultural Values, Religious Beliefs, International and Graduate Students 2. Food Basics and the Student <ol style="list-style-type: none"> a. Food Procurement and Selection b. Food Preparation, Knowledge and Meals c. Food Security Systems <ol style="list-style-type: none"> i. Food Opportunities ii. Personal and Financial Support for Food Security iii. Food Security Action Planning 	
<u>Theme 2: The Vulnerable Student - Pathways to the Food Bank</u>	
<ol style="list-style-type: none"> 1. Supply and Demand – Limited Finances <ol style="list-style-type: none"> a. Income, Debt and Savings b. Budgeting in Action <ol style="list-style-type: none"> i. Vigilance ii. Coping with depleting resources – the juggling act c. Students’ Pathways to the Food Bank <ol style="list-style-type: none"> i. The Shortfall Pathway ii. The Cumulative Pathway iii. The Catastrophic Pathway d. Suffering 2. The Food Bank Connection <ol style="list-style-type: none"> a. Knowledge and Referral to Students’ Union Food Bank b. Feelings About Food Bank Use c. A Gendered Experience 	
<u>Theme 3: Structural And Organizational Factors Affecting Students</u>	
<ol style="list-style-type: none"> 1. Housing 2. Costs and Demands Associated with Classes, and Attending University 3. Food Deserts and Geography <ol style="list-style-type: none"> a. On Campus b. Off Campus 4. Student Loans, Scholarships Systems, and University Environment <ol style="list-style-type: none"> a. Scholarship Funding Models b. Student Loans c. Encouraging Debt 5. Student Suggestions For Systems Change <ol style="list-style-type: none"> a. Funding and Fees b. Budgeting Skills c. Nutritional Skills d. Access to Food 	
<u>Theme 4: Post Script - Reflections On Maturing and Persevering</u>	
<ol style="list-style-type: none"> 1. Maturing <ol style="list-style-type: none"> a. Transitions b. Social Pressure to Spend c. Litmus Test 2. Persevering 	

Theme 1: Student as Person and Her/His Food Basics

This first major theme describes the intra-personal and inter-personal impact of the student's personal context and the student's relationship with food. The student as person formed the foundation or bedrock of the student experience. Participants brought and juggled numerous personal roles and responsibilities with them as they embarked on their student career. In addition to the role of student they may have been supporting a family of their own, or they may have been emotionally supporting their parents. They strove to be healthy and strategically placed personal, financial and food supports around them. Participants adeptly managed their limited time, travel, finance, and nutrition to the best of their ability, being as prepared as they could for the future in order to make their finances and food last as long as possible.

Context and constraints of being a student.

The category, "Context and Constraints of Being a Student," speaks to the context, or circumstances and perspective, the university student brings with her/him to student life. Participants, in addition to their university student role, described numerous responsibilities and burdens they faced within their life contexts. One subcategory revealed an intricate complexity to the students' lives. A testament to this complexity was that student participants attempted to maintain a family life, a working life, and a healthy life while being a full time university student. In another sub-category, though the participants accessed the food bank, it was important to them that they financially supported themselves as much as possible. Simultaneously they also endeavoured to place supports around them (personal and financial) to ensure their best chance at success as a student, and in their other roles. Other sub-categories, time and living location, had

also become constraints within the students' lives, as they balanced such tasks as traveling to classes, part-time work, and grocery shopping with studying, spending time with family, cooking, and eating. Additionally, for some participants, what made them 'who' they were, were their personal religious beliefs (such as Mormonism's belief in stockpiling food in case of disaster) and their general cultural values (such as Aboriginal values of community and sharing).

The complex student.

Data revealed that in addition to being full time university students, participants maintained a number of roles and responsibilities which shaped who they were within the context of their day to day lives. Student participants were concurrently parents, spouses, sons, daughters, and employees, with all the responsibilities accompanying these roles. These included providing food, clothing, and offering emotional support to their family and ensuring health needs were met. Each participant provided a unique and complex personal story, with unique burdens such as single parenting, personal or family health issues, just to name a few. Dianna, apologized to me when she explained her complicated life.

Dianna:

I'm sorry, I'm complex, hahaha

However, it is because of the uniqueness of these stories that I chose not to share these individual's detailed narratives, because these very accounts may make participants easily identifiable to the reader. Participants have more than one pseudonym throughout the analysis in order to mask their identity, and maintain their anonymity. In general, listing some of their context, roles, and burdens may help the reader to better understand

‘the student’. Included in their context was: pregnancy, breastfeeding, temporary separation from spouse, marital strife, single parenting, multiple children of all age groups, illness of spouse/child, personal illness, parents’ sudden financial downturn or illness, limited parental support, spousal unemployment, previous substance abuse, recent immigration, limited monthly funding from agencies, delayed or decreased student loans, and limited personal and social connections within the city and surrounding area of Lethbridge. Participants interviewed had more than one role and more than one issue they managed. These undermined the participants’ ability to juggle their personal context with their ability to maintain food security for themselves and their family and resulted, in part, in their accessing the food bank for assistance. They needed help so they would not be hungry. In order to illustrate this, Grace describes a small portion of her life’s complexity and why she needed to ask the food bank for a food hamper.

Grace:

It’s always bad, like being a student, I just don’t have enough...I can’t buy food enough for a whole month...then I don’t pay a bill. I won’t pay my light bill one month, my daycare bill another month. One bill won’t get paid so that I can buy food for my children. ...And then the weather being bad, and I was sick, the added expense of gas and heat...I just needed the food and I needed to get food for my children to be able to eat you know.

Striving for health.

All participants reported that they valued and strove to eat as healthily as they could. They desired health for themselves and for their families. The following excerpts from Oliver and Greg exemplify the importance they placed on a nutritionally healthy diet.

Oliver:

We don't eat the garbage food, junk food. It really deteriorates you, makes you tired and you don't have any energy during the evening. The rule of thumb is 50% at least with the meal has to be vegetables or fruits, or salads.

Greg:

Like I could just buy pasta in bulk or a big bag of rice and just pour tomato sauce over every day so everyone would be full up but you know not much quality...How long can you sustain that in terms of health, I don't know.

Many participants referred to Canada's Food Guide or nutrition classes they attended as a resource or frame of reference for achieving healthy eating.

Ellen:

My nutrition knowledge came from the university program that I am in...and I brushed up on the Canadian Food Guide.

Fiona:

I learned from pre-natal classes.

Participants' concern with and application of their nutrition knowledge, challenges the common myth that students in general do not care about healthy eating. Participants also found their attempts to eat healthily sabotaged by lack of funds to purchase healthy food.

Dianna:

Diet wise right now with the money, I don't get enough of that iron and vitamin C at the same time...so now I try to supplement with vitamins when I can afford to.

Catherine:

It's very hard trying to eat healthy on a budget, cause the stuff that is healthy costs more than the stuff that's not good for you.

Kevin:

We've had a couple of days, like at the beginning of January, where we didn't really have any food. We had pasta, but no sauce or anything. So it was just eating plain pasta... I'm not meeting my nutritional needs at this moment because we put our baby first...We just buy all the food that our baby needs and then

worry about us second... Our baby has a lactose allergy so we had to get the really expensive formula.

Participants attributed health issues to their nutritional insufficiency. Six participants reported stress from chronic worry about food, five complained of difficulty concentrating, and five felt tired or exhausted.

Fiona:

I'm worried about what I'm going to feed my kids, or what I can feed them that they'll be happy with you know, that's good and healthy.

Ellen:

I was just getting stressed out and not eating right (only Ichiban Noodles) and that was affecting my studies.

In addition to her difficulty concentrating and exhaustion, Alice identifies her stress as cyclic, returning each month as she runs low on money.

Alice:

I always manage you know, I always manage to get through each month and once that month's stresses are over, a relief for a little while but then the next month comes along...it's another different story. I feel like I just don't have enough energy and this way it's really hard to concentrate, like I'm just too tired and exhausted because I just didn't eat in the morning and I go through pretty much most of the day and just kind of walking around on fumes trying to do my work and it gets pretty hard.

Other health related issues identified by participants were sleep issues, weight gain, weight loss, low iron levels, low vitamin C levels, protein insufficiency, headaches, and loss of consciousness.

Kevin:

Since I've been low in protein I've had headaches more often I'd say – I actually attribute it to that.

Judith:

I got sick and they didn't know what was wrong. I passed out and they don't know if they were seizures but twice I passed out in November. And you know I wasn't eating, I'm still not eating, you know...I lost weight in the last year...like sixty pounds...I don't eat just so my kids can eat.

Ellen:

It's (Ichiban noodles) very unhealthy, it doesn't give you much nutrients, kind of something to fill your belly but I'd probably say it's contributed to stress and lack of sleep. And then lack of sleep leads to more stress too.

Additionally there were three participants who were pregnant and then breastfeeding during their full time education. They discussed their difficulties meeting nutritional expectations for iron and calcium.

Esther:

I've been at the point where I've had no...like very little food and lived off rice and cream of mushroom soup but I know that wasn't going to work with being pregnant so that's kind of when I finally reached that point where I just needed to make sure that I had the basics like milk and eggs and bread and you know, just even the basics. So I went to the food bank for help.

Alice:

The main thing was I had to take vitamin supplements for iron...I was really low in iron...I really wouldn't say that I had a very steady diet throughout the pregnancy.

These participants, like Nathan, turned to the food bank to help assist them to meet at least some of their nutritional needs.

Nathan:

I have been accessing the food bank because it gives you a good stock of pasta like, and some canned soups and then they give you \$25 to go spend in Safeway for your veggies and dairy and stuff, so that's kind of been keeping me running.

Student and supports.

Participants strove to be as financially self supporting as they were able through avenues such as summer employment, students loans, bursaries, scholarships, and/or part

time work during the school year. For them this was an important part of being independent of parental help while being a student. Help from parents for some participants was present if needed, as described by Ingrid and Harry.

Ingrid:

I don't like asking my parents for help. I want to show them I can do it on my own. But then again it's kind of hard. Thank God for like your parents.

Harry:

I suppose we're fairly independent in the sense that we're not going to be like you know running to people every time something goes wrong. I'm 33 years old, if I phone up my mom and say, I haven't got enough money to buy food, people would have started panicking, do you know what I mean?

Not all university participants, however, had parents who are able to assist them in times of financial need and, like Barb and Oliver, were solely responsible for their schooling.

Barb:

I so support myself for school, I pay for everything because my parents can't. I've had some family issues with my parent's business failing. The food bank helped ease my stress a little bit.

Oliver:

I can't exactly phone my mom and ask for money because she's on a pension so I just do things for myself.

And some participants such as Dianna, would not access their parents out of choice. As she became older she felt that she needed to be more independent of their assistance.

Dianna:

I always got help from my parents, when I was much younger, but now that I'm 31, especially now that I'm married and 31, they have a harder time, and I have a harder time, asking if I need help.

Asking for help could be complex for participants who needed to reach out to family. When asked who they consider their financial supports to be, some participants such as Ingrid and Janet readily accessed their parents or family members, knowing they would receive help.

Ingrid:

We as students struggle. Well my parents help me out a lot...basically like when I look at other people who don't have parents that are there for them and they kinda have to be like on their own and struggle and like..um food security. It's very hard like you know having food all the time because food is expensive."

Janet:

My dad like he gives me money for tuition every semester and he pays for my books and stuff like that. I had a job but it really didn't pay for a lot of things, so he always sends me money and things like that.

Other participants such as Greg, Dianna, Barb, and Catherine, found that asking family for financial created hurdles for them as these were conversations or reactions that they would rather avoid. Having the right timing, knowing 'when' to ask for assistance, was also a factor for some participants.

Greg:

I'd ask my parents. But to contact my family or my wife's family (in another country) and say 'gee...we haven't got enough money to bide us over...can you give us some money?'...It probably would have been a gift but people would have started panicking. I've been away from home for years and, if I phone up my mom and say, I haven't got enough money to buy food, do you know what I mean? So it's kind of like a last case scenario in a sense, you know.

Dianna:

My parents aren't well off and so I don't want to constantly be going to them.

Barb:

My parents, even though they're suffering with money financial issues right now, they won't let their kids starve. So if I told them you know I have no money to

buy my food because I have to pay my tuition and rent and what not or else I have no place to stay around here and my family is five hours away so like if somebody could take me in...If I tell them you know I need a hundred bucks this month for food well I know they'll give it to me. I just don't want to have to put that on them. So it's not like my family isn't there to help me if I need them....I won't end up starving.

Catherine:

When money's getting tight we start to ask family for help kind of thing. And just little bits, like what we know is within our means. And knowing when to ask (for help from parents) and when not to ask.

Participants also maintained personal supports: individuals and/or networks of people with whom they could talk and ask advice in times of stress; or, those who they could ask favours of such as babysitting, and rides to the grocery store. These included parents and other family such as siblings, spouse, boyfriend/girlfriend, friends, university advisors, university counsellors, and health providers. Some participants such as Mark, had a rich support network,

Mark:

Mainly my brothers, like when I need help you know. If I want to go to someone, it's my brothers, my friends.

Some participants such as Oliver identified fewer personal supports.

Oliver:

Myself and my girlfriend I guess...my mom phones once a week or something. We just basically talk about stuff, but not really. I'm pretty self-sufficient in my matters.

Living with others.

All participants lived with others such as roommates, boyfriends, spouses and children. Living with others impacted both choices and finances of the participants. For example a roommate negatively affected food security and finances for Lynda. Parents

such as Fiona needed to take into consideration their children when setting priorities for spending, working, and studying. Nick's spouse had different ideas on spending priorities than he did, and that disagreement could negatively affected the family budget.

Lynda:

And my roommate...a lot of her food was taking up most of the fridge and it did hinder my food storage. And she had a particular way of doing things that's not very conscientious about turning off light you know and how much you wash and how much you cook...the electricity bill goes up and we all have to split it in three...but once in a while it starts encroaching on my own funds, then that becomes an issue.

Fiona:

I have to increase my hours at work but then that means I won't be able to see the kids because I have to work Boxing Day and I feel guilty because they need me there...One bill won't get paid so I can buy food for my children...I can't always be at the library [studying] because I have to be home with my children.

Nick:

Like the thing about it is like, my wife wants to go out; she wants to go watch a movie eh, like she hasn't seen a movie in a long time. And I told her we can go do that, and I told her *or* we can just, like we got the Internet, we got...we got Cable at home, we can rent a movie there (instead). And then we can just take that money and just put it, just have it you know. You never know if we're going to need it...

Time.

Time also impacted the lives of these full time student participants. They reported juggling their time between classes, studying, shopping, cooking, eating, family and friends. Some found that striking a balance among all of these commitments was difficult as well as a barrier to shopping, cooking and eating. Dianna explained how her lack of time affected her energy and ability to cook, while Barb voiced how driving distances took time thus affecting shopping practices and finances through gasoline consumption.

Dianna:

I just seem to neglect me because I'm tired and I just don't want to make dinner and I know that I'm starving. You can have all the food in the world but you know if you don't take the time to cook the meals, the food pretty much useless.

Barb:

Lethbridge I find it's too big for us and we don't have the time and the gas to be hopping around for every grocery store to get what's on sale...so we just stick to Walmart.

Consummate time management increased the ability for participants to cope with competing demands and simultaneously maintain their nutritional health. One participant, Ingrid, commented on the importance of organizational skills as a student, and how it helped her ability to cook and eat. Despite her already stringent scheduling, this same participant planned to take on a part-time job to help with her financial pressures. Her time will become even more precious.

Ingrid:

I'm very organized...I'm organized to the point where I write stuff that I need to do every hour, like okay for two hours I'll do this. And from six 'til seven I'll cook supper. And in-between while I'm cooking and I'll still be doing my homework and then after supper I'll rest for like half an hour and that's how I manage.

Sub-populations: cultural values, religious beliefs, International and graduate students.

The variety of student participants who entered the study provided me with the opportunity to comment on sub-populations within the general university student population. Aboriginal participants and Mormon participants may have common or general community beliefs and values, such as sharing resources or preparing for future global disaster; International student participants looked at food and transportation with a

different perspective; and Graduate student participants seemed to be analytical about food security issues.

Aboriginal participants voiced that they had some advantage over non-Aboriginal students with respect to personal and financial supports. They described the closeness of family and friends within their community, food supports such as the NASA (Native American Student Association) food cupboard, and the University of Lethbridge transition courses that teach personal skills such as financial budgeting, development of good study habits and time management, as assets. Additionally in terms of formal financial support, they discussed the advantage of being funded to attend school through paid tuition, books and a monthly stipend, along with occasional extra band funding.

Nick, Ingrid and Paul explained.

Nick:

Yeah, it's good thing about being native. I've got family plus I'm not far from home eh. So I've got lots of relatives in the city...Other students don't have the back up of closeness of family...Like I could phone somebody if I'm really down, I can go down to the NASA lounge and eventually somebody (friend or family member) will get back to me with money in like half a day. Like they (non-Aboriginal students) don't have their family, like a lot of these students don't have a family close by and they don't have the extra things that Natives get eh? ...You know like a lot of time – about five times a year – we get money through our Band, distribution money we'll get a \$100 here. And lately it's been the residential school money. Aboriginal students have an advantage.

Ingrid:

The NASA lounge has free food...it's there for students, for the Aboriginal students who can't afford to buy lunch....I look at non-native students and yeah they could go hungry too...when I look at us, and then we could just as easily go down to the NASA lounge and have a burrito or something. Whereas them, they have nowhere to go....What I'm trying to say is that like Aboriginal student get a lot of help here at the university.

Paul:

Not everyone has paid education so I may as well take advantage of it.

Aboriginal participants appreciated and valued the social supports inherent in their cultural values as well as the band, government, and university support that were afforded them. These important supports assisted them with an additional avenue for food security.

Conversely, Aboriginal participants described unique challenges and burdens that non-Aboriginal students did not have to deal with such as feeling obligated to financially assist their relatives, even to their own and their family's detriment; and being stereotyped as needy addicts. One participant, Judith, spoke about labeling Aboriginals as alcoholics and the societal expectation that she was not capable of being food secure.

Judith:

They more or less expect 'me' (emphasizes ME) to not have food and stuff you know. Because I'm Aboriginal and you see people walking down the street drinking and you know they use (alcohol, drugs) you know. It's still there, some people will still think that, you know...

Another participant, Nick, spoke about his ambivalence with his culture where he feels obligated to share his resources to the point of risking his own family's food security.

Nick:

A lot of people around me, like in my culture do have problems with like money management, eh, then when we have money, family members are borrowing off us, then it throws us into a dilemma, where we're out of bread... You've got to be able to know when to say no, like you can't always be saying yes...always backing each other all the time because you got to know your own limits too. You can't just help someone out and then put yourself in into it...Especially nowadays, like back then it wasn't a problem eh, you go all the time to hunt, get everything, grow your food you know. But now it's like hunting is obsolete....but we've been working it all out. Like I find through my culture it always seems to find a way to survive.

A third participant shared his experience around the cyclical nature of hunger and survival as a young child out in the bush with his family. Because of this experience, he accepted that, in life, there would be times of food security and food scarcity.

Oliver:

You just have to come to terms with it...when hunting was lean, I was hungry.

All Aboriginal participants interviewed expressed, at some point during their interview, that through their faith, they believe that at some point, food would become available again.

Judith:

I pray, like, my spirituality and whatever, and that seems to work, help me to have faith you know, and food comes up sometimes you know, or something always somehow works out you know.

Nick:

When I lived on the reserve, like I never really worried about food, like the fridge would be empty and all that and if we didn't have the money it seems like somebody would show up with something or have something eh, so it all worked out. I'd get home and we'd sit there and friends would show up and drop something off to eat, or somebody would show up with something to eat...We just never really kept the fridge full, but like it just looked like we had no groceries.

Some Aboriginal participants discovered while at university that there was little difference between students, Aboriginal and non-Aboriginal, when it came to struggling with hunger, food security issues, and parental/financial support. At some point, in their eyes, a student was a student and each student had similar experiences regardless of background and funding differences. For Alice, this change in perspective broke down the stereotypes previously described by Judith, and normalized the struggle of hunger and suffering among students.

Alice:

It seems that I used to think that my...you know that ours were the only people that dealt with these kind of issues [of hunger], but it doesn't seem that way, it seems like the majority of the students do...but maybe they have a lot more support from family it seems...like my parents aren't very financially stable to help me out and I don't have a lot of family... I think most of the students here...I think even students that have students loans. 'Cause they have to learn how to budget too right? And it just seems like everybody's struggling, and it's normal. You know in the beginning I felt a little bit ashamed about it until I realized well everybody is dealing with the same thing so it's not that bad you know.

For Paul, the only real difference for him was the funding models – otherwise all students had the same experiences with food in-security.

Paul:

The only difference between me and non-Aboriginal students is that the band kind of helps me pay for education, so that's probably the difference there.

Participants who followed the Latter Day Saints (LDS) religion placed additional emphasis and importance on stocking up food for global disasters. This resulted in participants bearing added pressure to become food secure, and added guilt for not having enough or dipping into the stockpiled foods. To assist with stockpiling food at a reasonable price, as part of a general church mail-out, LDS participants received a weekly newsletter from their church telling them which stores had food items at cheap prices and informing them what items they could bulk purchase at a economical price.

Dianna:

Our church teaches one year supply of food and water...I couldn't survive for 2 weeks with what I have right now.

Janet:

Like we have some food storage that we go through but I don't really like eating the food that we have, it that makes any sense. Just cause like it's nice to have like if we ever got to the point where we couldn't buy more groceries we would still have that food to eat.

The two International student participants' experiences with food and food security brought several different perspectives on prices and priorities. Greg commented on Canada's comparatively high price of meat, particularly chicken and pork, than his country of origin.

Greg:

In the grocery store I go hunting around for meat that is 30 to 50% off, that's going to go out of date the next day because then we can buy things we wouldn't normally be able to buy because I find that meat and fish products are quite expensive in Canada. Chicken is atrociously expensive in Canada, and I don't know why that is. Well it's kind of more expensive than beef. And in (country of origin), chicken they give it away.

Anne additionally commented on the high price of fresh food in Canada. In her country, with a longer growing season, she was able to grow a viable and fruitful garden, and the grocery store prices of fresh produce were much less expensive – so she learned to adapt here in Canada and try to purchase and cook only food that was in-season or well priced.

Anne:

I grew up in [another country] and we had a huge garden but in Canada produce may not always be what I want, but what is affordable. So, I mean we just get more creative I guess because I was really shocked when we moved here at how expensive food is compared to [her country]. So for example the Chinese vegetables are quite cheap so we cook with those. Instead of buying like peppers and squashes, we buy like bok choy and things like that which are healthier and a lot cheaper. I mean we obviously change by season...there are things that I don't buy just because of the cost, like melons, like my kids love melons and they're just really expensive here so I don't buy them.

As well, both participants were able to compare transportation systems, and city layouts from their home cities. In their home countries they were close enough to shopping to walk every day and purchase fresh foods. Here in Canada, they both felt it necessary to purchase cars because of the long distances to grocery stores.

Anne:

I mean just to eliminate having to drive and do the shopping every time, I mean you know here you have to drive everywhere. For example when we lived in like an urban setting we would just do the shopping every day because you could just walk but here we obviously don't want to be wasting fuel to go back and forth.

Undergraduate and graduate participants reported similar experiences with regards to food security. As there were only 2 graduate students participating and 13 undergraduates, it was difficult to engage in comparisons between the two. The graduate participants I did interview (n=2) engaged in lengthiest interviews I had, and both participants seemed much more analytical and critical about broader food security issues both personally and systemically. Harry, who had travelled to many countries, thoughtfully compared supermarkets and the availability and use of convenience foods in two different countries.

Harry:

In Europe they'll have rows and rows of convenience food, it's taken over half the supermarket in London for example because people just don't have time to cook for themselves, so they want microwaved meals – just press the button, you know. It's amazing considering the lifestyle there and here. You would consider North America is faster paced in many ways but they don't have as much convenience food...you would think it would have seeped into the system.

Food basics and the student.

University student participants had elaborate, thrifty and time consuming systems in place to procure and select their food. These included setting nutritional priorities (e.g. buy 'healthy' food before 'junk' food), meal planning for up to 1 month at a time, strategic shopping at pre-chosen stores for the best 'deals', and arranging transportation to shop (e.g. public transportation scheduling, coordinate rides with friends). They also used a variety of strategies to ensure they remained food secure. They would take advantage of opportunities such as free meals, activate their financial and food support

systems as needed, and ensure if at all possible that they were stocked at home with food in their pantry and freezers. Participants vigilantly maintained these multiple and elaborate systems to ensure they had enough to eat – and at the right price. Though these systems took time, they also became ‘second nature’ within the students’ lives.

Food procurement and selection.

Setting priorities, discerning what to buy, and meal planning were important tactics employed by participants. Participant spending practices were prioritized. Essentials like meats and vegetables were purchased first; non essentials such as ice cream, were purchased last. Within these ‘essentials’ participants also set their priorities – making lists to be certain that they purchased only necessary and affordable nutritious foods. They ensured that they ‘kept to the list’ by not shopping when hungry.

Barb:

I buy the healthy stuff first, vegetables and lean meats. Just because I like steak, well yeah, I can’t buy steak.

Ellen:

I make a grocery list and I don’t buy anything that’s not on the list...I don’t go grocery shopping when I’m hungry cause then usually that’s how you end up with all this extra stuff because you’re like ohh that looks good...I’ll take that.. I learned – I don’t go grocery shopping hungry. I make a list and stick to it.

For the most part, participants such as Dianna meal-planned prior to shopping (some participants planned one to two weeks ahead, and some a month ahead) in order to eat healthy and stick to their budget. With Brenda – a student with a family who has experienced recent hunger – prioritizing her bills, meal planning, and assessing her food stocks, were essential to ensure she and her family had enough food for the month.

Conversely, a few participants such as Heather (who had high level cooking skills) planned meals around sales thus, keeping her family food budget in line.

Dianna:

I think it comes down to meal planning, making sure I have a balance of everything. I don't think you can wing it.

Brenda:

I try to plan out meals, when I'm you know given my budget and I you know take care of bills then once I set the grocery budget I try to plan out like look at my pantry and say okay, what do I already have and what can I pair it up with kind of thing. And I try to do that, you know most of the time I write everything down and I try to just stretch it out you know cause that way it usually lasts me a couple of weeks.

Heather:

It's really like the reverse...we go and buy the ingredients that are less expensive and then we figure out what we can make with it.

However, some participants lacked the financial resources to plan their meals.

Oliver:

Whatever we pull out for supper...we cannot buy food enough for a whole month to plan something so it's a day by day basis. When we were both working, so the income was there, and we could take a whole month and then map it out what we were going to eat. It is not like that now.

In order to make their financial ends meet and still be able to purchase foods that they needed, participants were 'on the lookout for deals' in grocery store flyers (accessed through free newspapers and on-line listings). They took the time and effort to maintain an ongoing knowledge of grocery store prices and what food items would be considered 'a good deal' as well as what items they could purchase in bulk in order to save money.

Greg:

Last year we started going on line (to view store flyers) because you can look at things they have and a lot of it is bulk buying stuff...Knowing prices just becomes second nature, it's not like a fear thing. It's just become something you do.

Oliver:

I just keep an eye out on flyers. I riffle through the flyers...I kind of have them all set up and I try to juggle prices. I am keeping an eye out for deals.

Planning 'a big shopping' trip also became 'second nature' for participants. They took the time and effort to plan shopping at grocery stores with the best prices, and/or stores that utilized cards, points or coupon discounts. They carefully developed a 'pecking order' of which stores were accessed and under which circumstances. They were discerning as to which stores had the overall best prices. When they found 'a deal,' if they could afford it and had the shelf space and/or freezer facilities, they purchased bulk items and stored non-perishable or freezable food items. Participants appeared to take pride in their ability to be smart shoppers and getting the most for their money.

Dianna:

If you see a deal like its cans, like you can get ten for two dollars or something, ridiculous sale, you stock up. You're like I'm going to get triple what I normally would get you know. I like to just look for the deals and I like shopping around...you know you can save the extra money. There is so many coupons in flyers you can get...Superstore keeps their coupons up front, or like Costco, they usually hand out coupons at the door. I know that Costco is the best place to buy meat because it's always cheaper and you can buy in bulk and then portion it up and put it in individual bags, which of course means it doesn't get freezer burned and you can make it last longer. And then Safeway on the Southside [of Lethbridge] is going to be way cheaper than Safeway on the Northside or Westside, so I would shop there if I go to Safeway or Superstore. I guess I just kind of know what stores to go to and shop around. I try to really look around and price it out.

Fiona:

I have to be aware of prices like all over. I'll go to Shoppers, I'll go to Safeway, I'll go to Sobeys because they all have different items cheaper.

Ellen:

Superstore has the best reasonable priced food items however, it's across the city so if the roads are bad or if I don't feel like driving that far, I'll just go to Safeway and I have air miles though it's much more expensive there.

Janet:

We shop at Superstore or Walmart. We find it cheaper at Superstore than a lot of other places especially like Safeway or something. You can get really good deals at Safeway but we've found on the whole Superstore has like the biggest variety for the least price.

Greg:

Of course every store has things that they're cheaper than other stores. It's just the juggling act. If you buy products that are massively on sale that week at Safeway then you can buy things from there that are just as cheap as Walmart or other stores. But generally...when we do our big shopping we go to Canadian Superstore.

Generally, participants scheduled their shopping every two weeks or once a month. Some picked up extra perishable items between shopping periods and some did not. Lynda chose to do without because she felt that if she went shopping too often she tended to spend more money. For Lynda, shopping less often was a money saving strategy.

Lynda:

You know if you're going there more often, spending more money more often so it didn't really make any sense to, but usually what has worked for me is one month at a time. If my milk goes bad then I just do without until next month. Because the cereal is still going to be there and I can go a couple of weeks or whatever it is without milk.

Some participants found it economical to shop at specific times during the month such as: discount '15% Tuesdays', when perishable foods were discounted in certain stores; or, when there were added advantages to the shopping trip.

Heather:

We'll shop in the evenings at Safeway... they'll mark a lot of stuff down that needs to get sold that day so we generally tend to shop there on Wednesday evenings to take advantage of that. And we tend to shop Safeway in the morning when their bread is marked down and then freeze it.

Harry:

Safeway also discounts bread on the first Tuesday of the month [15% monthly discount event] so we go there for that. So for example we went there on Tuesday. We combined it with the morning run [to take children to pre-school] to do some shopping [at Safeway and Walmart]... Things that lead off of that like for example like you know, if you spend thirty-five dollars in Safeway then you get five cents off of fuel. So then like the fuel is \$1.04.9 at the moment, so you get it for 99.9 cents and so we'll fill up the car on one day when we go spend thirty five dollars. So I suppose you save a bit there you know which goes back into what I've got in food.

The previous quotation from Harry also shows transportation when shopping for food was an important consideration for participants. Those who owned their own vehicles weighted the cost of owning the vehicle and cost of gasoline versus the convenience of being able to shop whenever and wherever they needed to, with or without their children in tow. Additionally, the geography of Lethbridge (the larger distances needed to grocery shop) complicated participants' transportation issues.

Heather:

I'm really glad that we do have a car because for example I'm sure if we didn't have a car we would just go to Safeway, because that would be the closest and then we would miss out on a lot. Like, I don't like to buy produce there because it is so expensive and I know that would limit what we would buy. We wouldn't buy as much fresh produce which would affect our quality of food I think a lot. We also buy a lot of our meats and fish and thinks like that down at Canadian Superstore or Walmart and I wouldn't go down there without a car. That would just be too much of a hassle. Plus if you want to stock up then you're going to have all those bags to take back as well and you either have to go along and have one spouse look after the kids or take two small children all the bags which is just nightmarish to me you know.

Jim:

We've got our own car to ferry our kids back and forth every day to day care and yeah, I find it hard to think about people going shopping here without having a car. I'm from London and you know the public transportation system is fantastic. You could carry on your whole life without owning a car. Many people do. But here in Lethbridge forget about it. I don't know how they do it. I wouldn't even know how to get from my house to Walmart for example. How many bus changes it would involve, how long it would take me...and I can only carry two, four bags you know. It would be a nightmare. When we lived in urban settings we would just do the shopping every day you know because you could walk. But here we obviously don't want to be eating fuel to go back and forth.

Those participants who did not own a vehicle relied on others such as friends and family, or they utilized alternate modes of transportation. These solutions came with their own issues such as: carrying multiple grocery bags home from the bus (sometimes with children in hand); or counting on catching a ride to the grocery store with friends, and then discovering that this option was no longer available. The inconvenience and hardships of public transit and 'catching rides' limited food supply for students without vehicles.

Dianna:

It's annoying because buses don't run right to the Superstore, so it does limit what you can buy. Like I would love to have more food. If I had a vehicle, I probably would have a lot more. Having to take the bus you make sure you only take what you can carry.

Barb:

I do catch rides with friends like to downtown grocery stores. Mid-terms or finals are harder, just because my roommates are all busy so it's harder to coordinate a time where we can be able to do a little shopping together, just because we're all busy with our midterms and finals. I don't want to be 'like okay well I'm busy so you have to take me' because I don't want to take them away from their studies, that's not fair to them. So that's when it's a little tougher to have food in the house. Especially on like long weekends when everybody goes home and I stay behind because I live the furthest away. My roommates they'll go grocery shopping back home or go with their parents so after a long weekend you kind of empty out the fridge from stuff and they all come back and they've already gone grocery shopping but I still need to go.

Participants also commented that their geographic isolation, that is, living on the Westside of Lethbridge decreased their choice of available full sized grocery stores because they chose to live close to the University. They were frustrated with only one grocery store in West Lethbridge. The least expensive grocery stores were the farthest from where they lived. This affected their food security, making participants choose between three options: lower their nutrition standards by opting for close by ‘fast food’; forcing them to shop at more expensive, limited option, multi-function stores (e.g. a pharmacy); or travel greater distances to purchase what they needed.

Catherine:

It’s all fast food unless you go all the way to Safeway and that’s not within walking distance.

Janet:

It’s so frustrating. It takes almost 10 minutes to drive one way to the grocery store. Like the other day we just wanted green onions so we had to go all the way to Safeway to get green onions instead of to Shoppers Drug Mart because Super Sams Grocery Store [now closed out] used to be there.

Dianna:

Shoppers Drug Mart has some of the basics. It may not be the best food and it may be more money but you can still get food there.

Rural participants expressed unique issues with the cost of purchasing food in their communities. They compared these stores to ‘corner convenience stores’. That is, stores with limited food options at inflated prices. Purchasing food at their local store affected their food budget dollars and their health. Though they did purchase food from their local stores, they utilized the days they drove in for classes to purchase food from more affordable sources while in town.

Catherine:

We only have a small little local store and so sometimes they've got a good sale and sometimes to me it's just kind of a corner store I think. I don't even like to buy milk there because milk is two dollars more than it is in Lethbridge....It's got the basics and a few other things but it's not enough for me to do my shopping there...it's in the middle of nowhere like some of the prices are a reflection of that...and it's there for convenience.

Oliver:

I don't really buy meat or anything like that at our local store anymore because the last meat I bought I was coughing up phlegm for quite a while. I just keep an eye out for the flyers and shop in Lethbridge mostly.

When shopping, participants were discerning about what particular foods to purchase, looking for nutritious foods on sale, and outdated or damaged discounted foods. They were thoughtful and observant shoppers purchasing items such as dented cans, older meats, and expired products that non-students might purposely overlook. They bought food in bulk when prices were good so they could split them up for storage and stocked up on non-perishables. They stocked their freezer when they could afford to, or when they had the available storage space.

Barb:

I pick and choose. I second guess something I got and put it back and say I don't really need this. With chicken and pork ...I'll buy the ones that are on sale rather than the big fancy boneless sort of things

Lynda:

I try to be price conscious for everything I buy. I try not to buy junk, I try to not buy things like you know, ice cream and things that just add to the price without it really adding anything (nutritional).

Greg: P7-883

We stock up on dented canned goods.

Nathan:

If you go at certain times to Safeway they have all their meats marked down, like stuff that's expiring soon, like marked down 80%. You can pick up some cheap bulk meat. I can't stock up on anything that requires refrigeration or a freezer because I just have a mini-fridge and my freezer is like the size of a pizza box.

Participants were frugal about purchasing what they considered to be treats, attaching feelings of guilt to these sorts of purchases, and seeking approval or rationale for purchasing them. Fiona, who was on a limited income, could not afford these items and she cried for her children. Surprisingly she defines a treat for her children not only as junk food (ice-cream) but as also as fruit.

Barb:

The counsellor made me not feel bad about buying those little extra treats for yourself...so I do get something that I do want, but I make sure I get the stuff that I do need for my nutrition and that's on sale that I can afford.

Fiona:

[Crying] I'd buy my kids a treats, like ice cream. I'd buy them some apples and oranges because I can't take them to the movies.

Participants also considered a variety of alternate storage methods and systems which, if they could afford to put into action, would save them considerable money on food and simultaneously increase their food security. These included canning, dehydrating, vacuum sealing and starting a greenhouse. Two participants had experience and knowledge in the grocery industry and put this knowledge to use by purchasing 'loss leaders', out of date foods, and generic brands. They felt that they understood the marketing techniques of stores and were therefore able to successfully navigate their purchases so as to get the best value without being manipulated by the stores' marketing.

Heather:

I don't really have any qualms about buying meat that's 50% off I mean if you freeze it...I don't really have any issues because I worked in the grocery industry

and I know that like we used to have to mark down food when it was going to go out of date – the employees were allowed to buy it and I knew that there was nothing wrong with it, it's just you know, they put a date on it. Another thing is I don't have any issues about buying generic brands either. I realize that none of the retailers make any food. There will be two or three suppliers who make something like Cherrios and go by the name Tastios or whatever. So that makes shopping easier.

Oliver:

They put stuff on the end aisles and with a big sign that says 'Feature.' But the price didn't change. People buy that stuff up. You have to know your prices and look at the flyers for the loss leaders. Their whole psyche to trying to make people buy stuff...the way that they advertise stuff ...it affects how people and how they buy.

Food preparation, knowledge, and meals.

Participants identified that learning about and being able to cook well, and knowing what constitutes a nutritious and balanced meal, were strongly linked to their ability to remain food secure and healthy. Participants, though they valued and set goals towards healthy daily nutrition through defining what 'enough food' looked like for themselves and their families, in reality, often fell short of this ideal.

Participants' experience and exposure to cooking came from multiple sources including parents, websites, and television cooking shows. Some had developed better cooking skills than others. Ingrid only identified three of the four food groups in Canada's Food Guide as important for her nutrition and thought of potatoes as processed food, yet Heather's cooking skills allowed her to make healthy substitutions into complex dishes.

Ingrid:

I'm a good cook, I know how to cook, I know how to cook a lot of meals and I learned that from my mom...watching my mom cook supper. Say like fruits and a vegetable, a meat and like a starch you know. I try to get those three main things. My boyfriend's telling me to only eat potatoes once a week 'cause processed

foods make you gain weight. But I think I need to familiarize myself more with the food guide.

Heather:

We go and buy the ingredients that are less expensive and then we figure out what we can make with it...like using bok choy instead of something else...like Thai curries don't usually use bok choy but we put it in there because it's cheaper than egg plant....We watch cooking programs...I think part of this skill has derived from living in different countries where you have different things available and you have to figure out what to make...I come from a family where both my parents loved to cook...my parents used to fight over who got to cook that night.

Participants who admitted that they did not know how to cook well, reportedly ate more unhealthily. A lack of cooking skills along with a limited budget put Alice at risk for food insecurity.

Alice:

I am always on the go, so I purchase fast, easy food to make. I don't cook very well. My partner does most of the cooking. Our budget is very limited, so we usually purchase unhealthy fast food because it is cheaper.

Janet:

That's an issue for me because I'm a picky eater too...if I knew how to make more things that I'd actually eat, I'd think we'd have a lot more variety and get a lot more like nutritional benefits from our meals.

However, when students in the study were short on time or were home late from classes, they admitted to (even those with good cooking skills) eating easy and quick meals such as perogies, soup or 'KD' (Kraft Dinner).

When asked how they would describe "having enough food" as a student and/or parent, participants had a variety of responses which included: number of meals available per day; quality and variety of food; volume of food stored for future use (so as not to worry); the availability of condiments; and, the ability to not worry about feeding their children each day. Most participants defined meals as three per day (protein + starch +

vegetables) with snacks in between which included yoghurt, fruit, granola bars, carrot sticks and other foods that would be considered healthier choices. A few participants skipped breakfast and we instead ate two meals or grazed all day and ate one main meal when they arrived home.

Fiona:

Being able to get through the week and having kids lunches...it's mainly about my family and feeding my kids. Sometimes I won't eat, I'll eat one meal a day.

Nathan:

Essentially having enough food meals that you're always full, but I'm growing to realize that that's not always the right situation because you have enough food, you can have enough Kraft dinner but that's not proper nutrition...I guess having enough food and having enough proper food like the vegetables and the dairy and the protein and all that through the day.

Ellen:

Is like a week's worth at least, just because. And you know you have like the whole week of school when you're concentrating, you can still focus on your classes and still not have to worry about having supper or what's for supper tomorrow, or what's for lunch tomorrow.

Kevin:

It's the ability to feed our child and then us second and basically so that we can actually have dinner instead of just scrounging on what's ever left...yeah at least one meal a day.

When asked afterwards, if they felt they had 'enough food' some participants, like Mark said 'yes', re-defining 'enough food' to mean he had something to eat that day even though it was not his ideal meal; or, participants would re-define 'enough food' to mean that their children were able to eat that day, then make an excuse for themselves that they were not hungry. Many other participants such as Fiona and Kevin admitted to much less than ideal food availability.

Mark:

Well mainly my family, I sometimes I won't even eat, I'll eat one meal a day eh, cause you don't get hungry sometimes.

Judith:

No, I'm not eating [crying] so that they [her children] can eat.

Kevin:

No, it's little more pasta than we usually like to eat because it's really cheap – and a lot of soup too. I usually have quite a bit of protein in my diet so I'm feeling it right now.

Food security systems.

Respondents placed emphasis on being food secure. They set up multiple systems and supports in an attempt to ensure their food security, and to be prepared when food stocks or income was low. This included: taking advantage of food opportunities such as free food events on campus or at other venues; eating at or taking food from parents and relatives; visiting at the home of friends in the 'hope' of a meal; and, setting up storage systems in their pantries and freezers.

Food opportunities.

Free campus food was an issue for participants because of how, when, and where the events were scheduled and advertised. Fiona found she was geographically too far from the event to participate.

Fiona:

My classes are at noon so it makes it hard...Many free lunches happen in U Hall which is too far when my classes are located at the opposite end of campus.

Nathan:

I used to [look for free food on campus] but it seems like I can't even find where they're advertised anymore until the day of, and it's already too late by the time I see the advertisements.

Other helpful (and appreciated) opportunities for participants to obtain food for themselves or their children arose throughout the semester. Examples include: participants' children were fed while attending early childhood intervention program; and, a local city food bank distributed free groceries in the university's Atrium each semester. Janet was pleased with the quality of the food bank's 'give-away'.

Janet:

And the stuff is really good stuff!

Personal and financial support for food security.

Eating at or taking food from parents/relatives was a successful support for some participants and aided in their food security. Only one participant spoke about pooling resources in the form of a potluck.

Catherine:

If we start running out of stuff we'll stop by mum and dads' for dinner.

Oliver:

My girlfriend's grandmother gave us milk crates full of canned stuff, beets and you know stuff like that, carrots and stuff. And her dad said, just when you come back, just bring all the empty jars and we'll give you some more.

Although friends were good personal supports for participants, options such as visiting a friend in the hopes of a meal (food security support) was not always reliable.

Alice:

Sometimes I'll go and visit a friend and *maybe* they'll offer supper.

Fiona:

I can't just drop in because of my children...I don't want to impose on people. I can drop by on my sister and sometimes she will feed us.

Other backup systems to assist the participants' food security were church, community/city food bank, ULSU Food Bank, and borrowing money or food from friends. One participant mentioned dumpster diving during his earlier student years. In addition to financial or personal supports described earlier in this chapter, participants also described the role of their parents, relatives or spouses in assisting them to have food available at home.

Ingrid:

I usually just ask my parents and they'll come and save us...they always look in my fridge and if we don't have enough food they they'll go and buy me some new food and stuff.

However, involving family to help with food could become complicated for participants.

Dianna, who temporarily lived away from her husband while she was attending university, found it difficult to admit to him over the phone that she was short of food.

There were a number of participants like Fiona who were concerned that asking their parents for food might place their parents in a position of food insecurity.

Dianna:

I won't admit to my husband I am struggling because I know he'll be quite angry...I told him "you don't have the money and you need to eat too."

Fiona:

I could ask my father if they have anything extra (food to lend) but he is having a hard time because he has had surgery this year and they are just barely getting by.

Food security action planning.

As previously discussed, participants developed a food security action plan by stocking their pantry or freezer. These behaviours became second nature to some

participants like Heather. Two male participants kept a supply of protein powder as a backup for depleted meat/protein resources.

Heather:

My mom taught me always to have food on hand, my parents did the same thing. I would tease them that they think the Apocalypse is coming because they've got so much food in the pantry but we were like canners and jam makers...our stuff from the garden...so yeah, we usually don't have much bare shelves – but it might not be what we prefer to eat you know.

Participants like Dianna believed in being prepared. However, not all participants had the ability to 'be prepared' with stocking their pantry because they simply lacked the money to do so.

Dianna:

We want to be able to be very prepared...you know Boy Scout model kind of thing.

Grace:

No I don't have any pantry. I can't because my kids eat it and they need to, you know.

Theme 1: Summary of Major Findings

- As individuals, full time university student participants bore many additional responsibilities in their roles as learners, parents, children, and employees. They juggled finances, time and energy in order to feed, clothe, and maintain the health of their family, support their parents through personal and financial issues, work part time, and maintain their grades.
- Although they valued their health and overall had a good working knowledge of healthy eating, participants found that they lacked the necessary finances to

maintain an adequate nutritional intake. This led to a number of health issues including stress, exhaustion, sleep issues, weight loss, and headaches. In one case, a participant experienced a loss of consciousness. Some female participants were challenged to maintain an adequate nutritional intake throughout their pregnancies and breast feeding.

- Participants valued being self-supporting students as much as they were able. However, in addition to summer earnings, loans and scholarships, participants developed safety nets (financial, personal and food supports) in order to manage and maintain their food security throughout the school year. These supports came from family, spouses, boy/girl friends, and other friends.
- Participants spent time and energy budgeting funds, procuring and storing foods. They planned meals and shopping trips, kept to a strict shopping list, and sought out the best stores with the best prices when shopping for food. They also prioritized purchasing the healthiest foods first before considering purchasing 'junk' foods.
- Participants prepared for future food insecurity periods by taking advantage of food opportunities such as food giveaways, free meals at the university or with their support systems, and by developing a pantry to store their sale food items and bulk purchases.
- Participants identified their ability to shop and eat healthy was sabotaged by a lack of financial resources, transportation, and time. Asking for assistance from family became complicated for some participants because of their older age, their

desire for independence, their relationship with family and their parent's financial situation.

Theme 2: The Vulnerable Student - Pathways to the Food Bank

The second major theme, 'The Vulnerable Student - Pathways to the Food Bank' describes the issues that begin to increase the participants' vulnerability in terms of their food security. These vulnerabilities were generated from a mismatch in monetary supply and demand, thus forcing participants in a position to ask for additional help from their support systems. Ultimately they got into a position of requiring additional help as they headed towards utilizing the campus food bank. The food bank became its own experience for participants, with associated negative feelings and gendered experiences. Participants described how and why they were unlike the 'stereotypical' student (reckless spending), and articulated how and why they persevered as university students despite their food insecurity.

Supply and demand – limited finances.

Key to successful food security each semester was having an adequate and continuous income throughout the school year, for example, monthly income from grants and/or scholarships, funds from summer employment, student loans, and possibility and Registered Education Savings Plans (RESPs). For participants, an inadequate annual income or the inability to adjust their budget for unanticipated expenses and emergencies, precipitated financial and personal crises. Ultimately they would not have enough food to maintain their health, nor that of their family, and they would endure suffering such as embarrassment, fear, hunger or personal dilemmas. Keeping unessential costs such as entertainment, new clothing, and purchased lunches to a minimum were strategies that

were only somewhat effective for participants in staving off a pay-cheque to pay-cheque existence. These participants juggled bills, time, and purchases to make ends meet. Eventually, and over time, they and their finances spiraled downward and participants ended up at the Students' Union Food Bank asking for assistance. In this study there were three dominant pathways to food bank use: 1) the Shortfall Pathway (when, for whatever reason, participant's money was consistently inadequate and insufficient for the ongoing demands of that person and his/her family); 2) the Cumulative Pathway, (when there were additive factors which in and of themselves were not catastrophic, but when combined they escalated the participants' risk and vulnerability incrementally); and, 3) the Catastrophic Pathway (when, for whatever reason, expected monies did not arrive). These pathways are described in detail further on in Chapter Four. Whatever the precipitating factors, these participants were desperate to receive some assistance while still maintaining and excelling in their student role.

Income, debt and savings.

A supply of money, whatever the source (see Table 4.3), the ability to adjust their budget with the confidence of succeeding, along with personal strategies to ensure a continuous flow of funds, helped participants 'make ends meet' as much as was possible. Almost half of participants received their primary income source on a monthly basis, which explains why so many participants needed to structure and maintain their budget on a monthly basis. Of the three participants who indicated they were not completely confident with budgeting skills, two identified that most of their money went to rent and bills. Consequently there was not enough remaining funds to sustain the participants and this precipitated their vulnerability with respect to food security.

Ingrid:

Well I'm not really...well I'm pretty confident but then again all my money goes just to rent and bills.

Getting a part time job seemed like a simple solution to resolve the lack of money to purchase food. Participants made difficult choices whether or not to work part time in order to boost their income and food security for the school year. There was a fine line for these student participants, between ensuring their food security and risking their grades (therefore their education), and their personal time.

Barb:

I can't work during the school year. It's with how heavy my class load is. If I work my grades will suffer and so then I see it futile being in school if my grades suffer. So I do try to work as much as I can in the summer to raise up enough funds to support me throughout the school year.

Nathan:

Sadly one year I did get a job because I knew I was going to need money...that was a kind of experiment I decided not to try again, haha.

Fiona:

I have to work three minimum paying jobs just to get by and I don't even see my kids, you know?

Ingrid:

I'm going to start looking for a job over the Reading Week...as soon as I get that job, I think we'll be more financially stable.

Three participants started school with pre-existing debt from credit cards or lines of credit. Others 'racked up' their credit cards while in school. Maintaining a monthly payment for credit debt affected the flow of available money they had each month to pay bills and purchase food. One participant could not afford the monthly credit card

payment. As soon as he paid his card, he needed to charge again to pay for gasoline and food.

Barb:

I haven't used my Visa card in awhile. That's just because of my stupid first year when I racked it up. I was excited about Visa and money and being on my own. Now I don't use it unless there is an emergency big purchase, then I'll put in on my Visa so I can slowly pay it off.... Now I pay the minimum balance.

Catherine:

A number of years ago we got ourselves in some trouble with credit...and now we're trying to dig out.

Oliver:

The credit cards eat up a lot of money too – when I came down here I was also kind of financially strapped and I was going to school before here too. The credit cards are pretty close to maxed out...they're always on the edge.

Some participants kept a small 'nest egg' of savings in case of emergency;

however, many were unable to do so because they did not have enough money each month to make ends meet. Having a nest egg of money reduced stress and worry for participants.

Nathan:

I'm not at the very end of my money but, I'm getting close so I figure I should keep some in saving just in case I need more for medical expenses or whatever.

Lynda:

My parents setup that (an emergency savings account) for me...I can't touch it unless like it's a life or death situation. Then it's there for me to be able to access.

Ellen:

I don't have savings...but that's why I was wanting to go look into a student line of credit, so I can just have that backup money. I have to go meet with the lady again to get a better understanding I think, but it feels like it might be a good idea.

I can always have that backup too, and that would really help and (be a) relief I think.

Budgeting in action.

Participants actively and managed their budgets for the year, despite their depleting monies. They developed over all strategies to manage their bills as well as specific strategies to save money. Despite rigorous planning, they coped with living ‘paycheque to paycheque,’ juggling their resources as they mapped out their next steps.

Vigilance.

Participants remained vigilant about their limited amount of money – even though it was depleting. They had an overall plan for spending their money, including a food budget. Barb (who relied on her summer savings), and Dianna (whose income was from summer saving, parents, and a part time job), portioned out their earnings for each school month. They target part of their budget for expenses first and then allocated resources for food. Greg (who received a monthly scholarship), placed food for him and his family at the top of his priority list.

Barb:

I’d always spend a hundred and fifty for my first month which is really good, otherwise I have a hundred dollar limit a month for food.

Dianna:

Usually like I bought like five hundred dollars at the beginning of the semester of groceries, and so I’ve been slowly living off that...I seem to have run out of food quicker than I was the money I guess. The food runs out before the semester runs out.

Greg:

Food is our number one priority and we don’t really spend money on other things, it’s not like we can take money away to put it back into food, because we don’t spend money on other things really.

For many participants their main budget strategy was to pay the bills first then, whatever was left was spent on food. Kevin (whose scholarship was unexpectedly delayed, but whose wife works a minimal paying job), placed first priority on paying essential bills and secondly on feeding his child. Whereas food for him and his wife fell to third priority. Alice (who also relied on a monthly scholarship) had the same strategy as Kevin.

Kevin:

Basically it all goes into one account and then it's take out money for car insurance and car payments, and then rent, and then how much is left...If it's like \$300 then we go to the store and pick up all the baby's stuff first and then however much is left, it's for us.

Alice:

When I'm you know given my budget and I you know take care of bills and then once I set the grocery budget I try to plan out – write everything down – stretch it out...I make sure my kids are fed first.

Participants had a variety of strategies to keep costs down and increase their food budget such as bringing lunch to school. All but one participant brought their own lunch. One student participant, Fiona, did not have enough money even to bring her own lunch so she was hungry for the day.

Fiona:

Sometimes I bring an apple but usually I save these for my kids lunches. I always think about my kids, they might need it you know.

A few participants made their own bread or baked cookies and snacks, and many participants stretched their meals with additional pasta or rice.

Alice:

I'll grab an extra big pack of like macaroni noodles or something and throw it in.

Participants who had them, relied on their pantries when times were lean. They bought bulk sale goods when they had money. Seven participants mentioned using coupons to save on costs and boost their buying power.

Ellen:

I'm a coupon girl too so that helps me stretch my budget...Superstore coupon wall and one-line coupons. PGBrandsaver.com sends you coupons in the mail.

Participants prioritized entertainment last because it was not a necessary expenditure. Entertainment could be costly and jeopardize the rest of their budget. This was surprising as university students are stereotypically known for their partying.

Alice:

It's not a necessity.

Oliver:

The whole bar scene, you know...bars cost money.

Because participants prioritized entertainment at the bottom of their list, they tended to engage in a wide variety of free or inexpensive entertainment activities such as walking, family skating, using the Internet, renting movies, occasionally purchasing a \$5 pizza from Little Caesars, gardening, playing with family and pets, and utilizing the University gym. Most participants were happy with their entertainment choices and in fact preferred them to going out to bars, parties, or other entertainment venues.

Heather:

I guess if we had more money I don't know that we would necessarily spend it on entertainment...perhaps we would have a sitter but I don't think we would really do that anyway...we just all like to be together.

Participants tried, not always successfully, to budget for family commitments such as Christmas dinner and presents for children in the family. This was important to

them. Grace was very sad that she could not afford Christmas dinner or gifts for her children even though she worked three part time jobs.

Grace:

I already went and applied for a Christmas Hamper...ask to put my children on the Christmas tree list so that my kids can get Christmas things....I feel bad, because I want to give my kids everything...I love my kids and I want them to have a good life (crying).

Some participants who had some prior experience collecting hampers from the food bank now used the food bank as part of their overall planning. This eased their budget and minds.

Nathan:

I kind of planned it in advance. Before I was running out I accessed the food bank...so I really didn't let it (hunger and stress) happen.

Participants used a variety of creative strategies to save or earn money so they could be food secure. These included: picking bottles; babysitting; downloading articles from the university library for free, instead of purchasing them from the book store in 'course packs'; purchasing second hand clothing and household goods at Salvation Army or Value Village; searching local website listings for free goods (e.g. FreeCycle.com); and car-pooling.

Coping with depleting resources – the juggling act.

Living 'paycheque to paycheque' was common among student participants on either a monthly basis or on a semester basis. Participants were hypervigilant regarding their food and finances yet they arrived at 'the brink' each month, each semester. In some cases, despite their best efforts to budget and plan their food expenses, they simply run out of money and food.

Dianna:

I seem to run out of food and money before the semester is out.

Catherine:

The last few days before the next payday we're kind of scrounging and it's been more difficult because I live out of town and we have to accommodate for fuel costs for me to drive to town and then child care...

Janet:

We are on the brink – a \$90 difference between what we spend and what he (boyfriend) makes each month.

Oliver:

My (monthly) income covers pretty much everything and I'm left with probably \$5 or \$10 for money...then I use a credit card...whichever one can take the hit...having to dip into it again for food and gas.

To try to fill their financial gaps, participants described a balancing or 'juggling act' with bills, time and shopping. They also described their coping strategies for deepening debt, risking critical obligations such as their rent, electricity, and child care, as well as their existing bank debt which could get them into worse financial trouble. Once they juggled bills, it seemed as though there was no way to get themselves out of this downward spiral or progression. Even when they found the money somewhere, it had to be paid back.

Alice:

One month I'll skip one bill here to pay the bill here. And this' kinda how I'll juggle it.

Catherine:

I can put you know my whole pay check on there (credit card), so it looks like I'm um paying this huge monthly payment on it, and then I just take the money out of it (laughs). I know how to cheat the system.

Fiona:

When you don't pay a bill, which one?.. The day care bill is already behind so it has to be paid this month. Or like one month I'll pay the electricity but won't pay the gas. I'll do this if we need food, or if the kids need clothes.

Alice:

I was low on my rent and my landlady gave me an eviction notice so I explained it to them [monthly scholarship administration] and they said, well okay we can pay your rent but we'll have to deduct it from your cheques.

To cope with these dire circumstances, increasing debt and the resulting lack of food, participants turn to whatever resources they could muster: credit cards, lines of credit, emergency bursaries, family and friends.

Ellen:

I ask for wild meat from some friends...one friend offered to get another food hamper for me from the food bank.

Lynda:

I ration out the amount of food that I can eat in a day. And I have spent time at my friend's house. I have really good friends for that, where if you're hungry they'll feed you, there's not even a question like you're the guest...My parents provide \$250 a month – I have learned not to ask for more.

Participants also began to change their priorities. When their food security disappeared, those participants with dependents immediately began to feed their children first.

Fiona:

I'll cook and I'll feed them and I don't eat, I make sure that they...if they want seconds they get seconds, and I won't eat, I sacrifice that for my children.

Participants with vehicles changed their driving habits.

Kevin:

I cut back on driving to save on gas. I take the bus.

Despite their qualms about risking their school marks, they started part time jobs when money became tight. Lynda's last experience was not successful but this time she was determined to budget her time more wisely to make her job work.

Lynda:

Now that I have a job...I will find a way to get around it or move out (of her apartment)Getting a job was for having the flexibility and freedom of being able to buy certain things I need, but yeah, food is actually a big thing that was on my agenda when I was looking for a job as well...(her marks suffered with previous part time job). But it was probably more of my fault...once you come back from work you just go home and do whatever, rather than going and get cracking on something. This time around, I'm really planning on doing things differently. All I know is that I'm glad I now have a part time job because it will definitely give me a lot more leeway now.

Another way that participants reported coping with depleting resources included reaching into the back of their pantry for whatever food was there. Ellen and Nathan talk about the nutritional down side of eating the last of their food.

Ellen:

We had cans and stuff...we didn't have luxury of picking out what we wanted to eat and stuff, like cause we had very limited options so we pretty much just ate like Ichiban noodles and just all the cheap stuff that there isn't really any nutrients or anything.

Nathan:

Kraft Dinner. There is a pile of it left in my house leftover by someone else who lived there before, but it's not very nutritious and it's not healthy , so I try to avoid eating it when I can but...

Finally participants listed other options such as prayer, charities, pawning valuables, and showing up at construction sites to obtain 'odd jobs.' This cyclic struggle of juggling food and money became wearing, as Dianna explains.

Dianna:

I am tired of being broke...I worry all the time...I just want to be done so I can get a job.

Students' pathways to the food bank.

Strategies and 'balancing acts' inevitably failed. The participants had actively juggled their funding with minor successes, but ultimately with futile results – and then they made the choice to ask for assistance from the food bank. These 'tipping points' (the decision point to ask for food bank assistance when all the supports they had put into place for themselves had failed) were a result of a compilation of factors. And the result of journeying towards and reaching this tipping point was emotional and characterized by suffering.

The data exposed three main pathways that precipitated this 'tipping point'. In the Shortfall Pathway, the student participant's money was, for whatever reason, chronically inadequate and insufficient for the financial demands of that person and her/his family. Monthly income was always short falling and had been since the outset of their university career. The Cumulative Pathway involved participants whose circumstances with money created small but significant additive factors which, in and of themselves, were not catastrophic (an extra book purchase here, a seasonal increase in electricity there) but which, when added up, escalated the participant's financial crisis causing him/her to seek help. The Catastrophic Pathway was an emergency situation whereby expected monies did not arrive on time or would not arrive at all, causing a crisis in the participant's budget. Whichever path the student participant followed, the trajectory was ultimately the same – a trip to the food bank.

The shortfall pathway.

Some participants suffered from a chronic shortfall in income. Each and every month they faced the same issues because of a lack of money. For Ingrid, Fiona and Alice, who received monthly scholarships which did not meet their financial needs, there was always a shortfall. The once a month 'payday' for them was a better 'day' but went downhill from there, until the next payday.

Ingrid:

All my money just goes to rent and bills...then we pay for our electricity and gas...and then we pay cable and Internet and phone, that's like extra, and then so basically what I'm left is just not even, like less than \$100 to last me the whole month. I just basically kind of stretch that out for about a week.

Fiona:

It's just always bad, like being a student, I just don't have enough...I'm always in the hole. At the beginning of the month it's better but then in the middle its worse you know...and it continues to get worse.

Alice:

It just seems like a consistent struggle month to month for me especially since I've become a student and even when I was upgrading my schooling. It's not just the budget. It's that the student living allowance isn't very much and I have a hard time stretching it throughout the four weeks. Maybe a week before we get family allowance or our last cheque, it's usually that's when things kind of get tough you know.

The cumulative pathway.

These participants started with an adequate amount of funding but had unexpected expenses which stole from their food budget. Through experience, they anticipated and planned for certain times that were worse, but that planning failed them as they could not anticipate every circumstance and expense such as health issues, moving mid-year, and needing to pay the damage deposit for a new apartment.

Dianna:

I try to buy more stuff at the beginning of the year and buy you know, a lot more of it [food] and spread out my money, but then things come up. You know you have to buy that for school, and then all of the sudden your money is gone. You're like, 'Where did this go?'...haha. Like I try to plan and then you have to dip into that food money, and then you just...yeah.

Heather:

The first time we used the food bank was because we had a lot of things to buy preparing for the baby to come. Then we came back and well it's always difficult starting up...get another apartment, so another housing deposit, the day care, preschool and everything you have to give a deposit. And we just applied for childcare subsidy but until that comes through then we had to put up like the full amount so it really ate up the reserves of money that we had. And then on top of that, the kids got sick. I went to the Students' Union office to find out about extended health coverage for dependents and it will cost another \$180 and I had just gone to the pharmacy and they told me I had to buy [a medical device] probably like \$60....And I just spent like \$70 on the medications. And you know it was just sort of like one thing mounting on top of another. And we haven't even gotten paid yet for another month and we had all these expenditures and I just felt a bit worried about it.

The catastrophic pathway.

Participants on the catastrophic path experienced unexpected delays in receiving funding, or unexpected major shortfalls before they started the year. This took the form of indefinitely delayed student loans, the student loan monies received were much less than expected, or a parental commitment or crisis which severely limited expected parental financial support. These participants 'stuck it out' and hoped that there would be a turnaround in their fortunes – but with mixed results. Likely Kevin would eventually receive his extra funding, but Barb and Dianna would not.

Barb:

I've had some family issues going on with father's business failing and stuff like that... I got to the food bank to help ease my stress a little bit...I do support myself for school, I pay for everything.

Kevin: (interviewed six weeks after the start of semester)

I am still waiting on a student loan. My wife is working but we've just moved so it's the whole damage deposit, first month's rent, all of that, so that's put us in a rough situation...We have no reserve right now with all the damage deposit and rent and all that. Hopefully all that has to be done (to correct the delay in student loan) is like a click of a button to release the funds. It's never happened before.

Dianna:

I'm the type of person that tries to plan as much as I can...I [unexpectedly] got \$10,000 from student loans for this whole year. Normally in the past for student loans I've gotten about \$13,000 so I was about \$3,000 short, so that's a big reason why money ran out so quickly.

Some participants persevered despite mixed issues – like Ellen who first had a 'catastrophic' event when her parental funding ran out, and now has 'cumulative' issues.

Ellen:

My parents started a trust fund when I was a baby, so that really helped with my first two years but that's pretty much exhausted now, and so basically I've just been going off of summer savings, my spouse [unemployed at present] and some scholarships. When we move to a new city it always seems to be the most difficult because it's the whole transition, the new city...you have to do that big grocery shop again...finding a job, getting another income. Just all of it tied together.

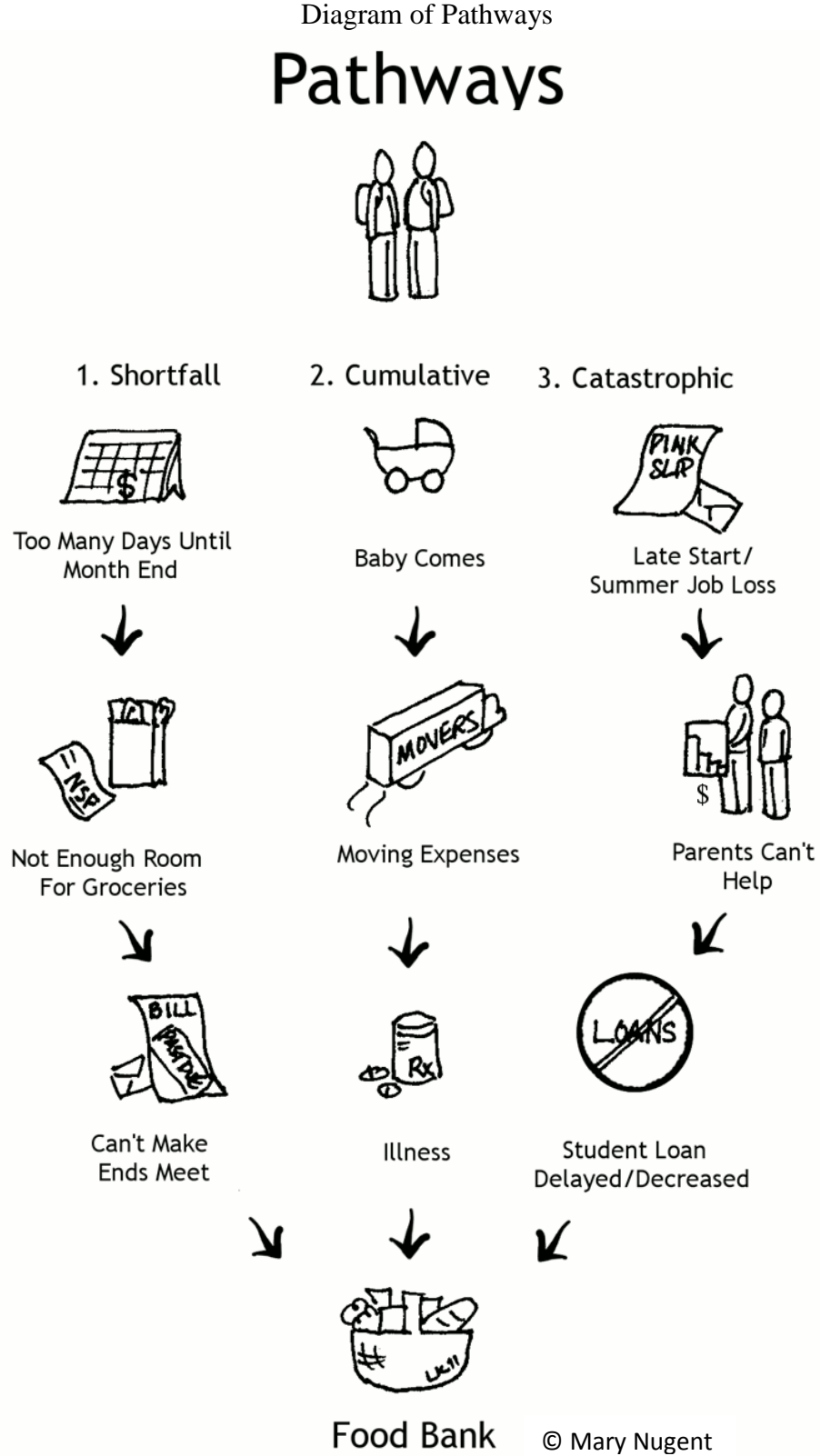
The three pathways to the food bank are further described in Table 4.7 and in an artist's diagram in Figure 4.1.

Table 4.7

Three Pathways to the Food Bank

Pathway	Description
Shortfall Pathway	Income chronically inadequate for the demands of the student and family. Monthly income always in short fall, and has been so since the outset of university year. E.g. monthly scholarship does not cover bills and food each month.
Cumulative Pathway	Student starts with adequate income but a series of unexpected expenses have left them short of money. E.g. sudden illness requiring medications, chiropractic treatment, damage deposit for rent and/or pre-school, the need to purchase reading glasses.
Catastrophic Pathway	Expected income becomes unexpectedly decreased or delayed. E.g. student loan lower than expected, parent's finances take a sudden downturn, summer earnings decreased due to student's layoff, delayed student loan.

Figure 4.1



Suffering.

Student participants who reached such a dire need for assistance, suffered emotionally and physically because their multiple support systems had unraveled or were insufficient. Participants became embarrassed over their circumstances and embarrassed to use the food bank; they worried and feared for their shelter, their health, and their children. They experienced guilt for small, seemingly innocuous purchases such as one beer as a treat, and for life changing issues such as not being able to meet the economic and nutritional needs of their family. They experienced marital strain, hunger, and were forced into near-impossible, no-win, difficult choices. Do I feed myself or my children? Do I risk my marks to take on a job in order to eat? Do I choose my pride or do I feed my unborn child? Do I leave school and start again with more money?

In her decision to access the food bank, Dianna's pride was challenged and she felt like a 'failure'; however, her responsibilities outweighed her dilemma and she overcame her personal obstacle, though her pride suffered. Dianna also made the difficult decision to temporarily leave university and come back when she was better able to support herself.

Dianna:

I keep a tight circle of people who know how bad sometimes my financial situation is....I probably would have accessed it (food bank) before but I'm kind of prideful and didn't want to ask for help. That's my big pride thing, just asking when I need help and you know student loans run out, and you just, you know you've got a month left of school and you don't have a month left of groceries. I really have a hard time admitting that I can't do it on my own. To admit that you can't do it on your own...you're a failure, that's how you feel. I know that's not true but that's how you feel. But it's just not me that it affects...I had to look out for the baby too....I know that I've had more food in the past but given the circumstances I'm just trying to get through until you know end of December and then I've made the decision I'll probably move home with my parents. Maybe I can work at an old job that I've worked at before, just enough that I can be able to

have food. ...I'm going to finish school...I will come back to school and finish because I only have ten classes. So I'm not going to quit, I refuse to quit.

Judith faced multiple, deep emotions and worries. She tried to keep her family together and away from the social services system. She felt judged by others for her short-failings. She had been chronically hungry and reported a 60 pound weight loss along with health issues. And she feared for her children's safety if she was not there to protect them.

Judith:

(Going to the food bank) it was hard because she (woman at food bank) wasn't very nice. I was a little ashamed [crying]...I'm trying to keep my family together and you know trying to keep my children together and not have Child Welfare involvement. And I don't drink, and I don't go out and you know they're safe, I don't bring anybody in...because when I was younger I was ...sexually abused you know abused by baby-sitters and stuff and I want to stop that cycle with my children. It was scary when I passed out...maybe it's because I'm not eating, you know. I don't want to die, like my biggest fear is you know getting sick. It was really scary for me you know. I don't want to die because nobody else can love my children like I do [crying] ...I want to be there to just raise my children because nobody else is going to provide for them or love them or care for them in the way I do, you know....

Janet described her experience the previous month, and how stressful and frightening it was for her. Greg talked about his guilt and whether he deserved a beer with friends.

Janet:

Like we've never like been down to the wire [with food] really except for last month when we were kind of worried about that for a little bit. But it's never really come to us starving or anything. We were moving into a new place, our damage deposit was being taken out plus my husband's student loan hadn't come, plus utilities and everything and so we were going to be down to like almost no money. Luckily everything like got so it was okay and like the people that had like owed us money and stuff were able to pay us back. It was scary...it was really stressful like being a grownup and having to deal with those kinds of things.

Greg:

Friends keep asking me, oh are you going to come, because we go every Friday out to the bar just until eleven o'clock at night, nothing major, and I'm like saying well, you know I don't think I deserve it yet...but even that, I mean yeah, it's going to be horrifically expensive...so I really have to deserve it to myself because it costs.

Though most participants were able to eat some food, denying they had ever reached the point of true hunger – even if it was not food they would normally choose to eat – two participants spoke about their or their family's experience of being hungry.

Alice:

There are mornings when I haven't eaten and I've gotten really tired...walking around on fumes. Just last night I began this program, a financial literacy program for women and they gave me \$15 to help with child care. And I thought okay, my partner's watching them [children] and I said, well why don't we use that to get some food. So but I wasn't able to get home [from class and then with groceries] until about nine thirty, so he kept my daughter awake so that we could eat because she hadn't eaten and then we have to go to bed extra late.

Judith:

[Interviewer asks So at this point to you have enough to eat?] No...I...I'm not eating [crying] so that they [children] can eat. I've lost weight in the past year...like 60 pounds...because I can't eat and I don't want to give up university because this is how we're going to get somewhere [crying].

Participants made other difficult decisions in order to eat. They delayed health needs, chose to feed their children before themselves, or fed themselves before their family pets.

Heather:

There was a lot of stuff that we had pushed off...eye exam, new contacts and reading glasses...a lot of that has to be spaced out as well in terms of being able to make the ends meet every month. I guess health things always kind of get pushed off.

Kevin:

For us it's the ability to feed our child and then us second.

Oliver:

We had a big bag of rice puffs or something we don't eat and just pour it in (the dog's food bowl).

Summary of findings, 'supply and demand.'

- Participants' main sources of income were monthly grants and scholarships, or lump sums from summer savings, student loans, and RESPs. Key to participants being successfully food secure each semester was having an adequate monthly or annual income as well as having the competence and confidence in budgeting that income for the entire school year.
- Bringing lunch to school, baking, adding more macaroni to stretch out meals were just some cost saving, food security measures participants put in place. They maintained food pantries, stockpiling foods they purchased at less expensive prices in order to have food to eat during the leaner months. Some participants planned visits to the food bank in order to ease their budgets.
- Participants put into place multiple shopping, budgeting and monetary support systems in order to make ends meet and stay fed.
- Participants actively managed their budgets for the year becoming even more vigilant as unanticipated expenses (such as another damage deposit when moving into a new dwelling), emergencies (such as medical expenses), or a partial loss in funding challenged their food security. These kinds of events forced participants to juggle their bills, time and shopping habits; sometimes sacrificing rent, or utility bills one month in order to have enough to eat. To cope with dire circumstances, increased debt and the resulting lack

of food, participants turned to whatever resources they could muster such as credit cards, lines of credit, emergency bursaries, family and friends.

- There were three pathways which lead to participants' use of the Students' Union Food Bank. These were the Shortfall Pathway, the Cumulative Pathway and the Catastrophic Pathway.
- Participants endured physical and emotional suffering as a result of their multiple systems unraveling. They were embarrassed to use the food bank. They worried and feared for their shelter, their health and their children. They experienced marital strain, hunger, and seemingly impossible dilemmas such as, feeding themselves or their children first, risking their marks by taking on a part time job, or leaving university to earn money and start again later.

The food bank connection.

In order to access the food bank, participants needed first to find out that this resource existed (e.g. through friends, website, leaflets, counsellors), then they had to deal with their ambivalent, often negative, self deprecating feelings and self remorse. Those who had accessed the food bank a few times the past, found those feelings to be less raw and became more philosophical about utilizing this resource. The analysis revealed that using the food bank was a gendered experience.

Knowledge and referral to the Students' Union Food Bank.

In Table 4.5 I describe how participants learned of the food bank's existence. It appeared from the interviews that the most important sources of information were from the Students' Union website and strategically distributed brochures and advertisements found in counselling offices, student welcome packages, and the student newspaper.

Feelings about food bank use.

Participants revealed a number of strong feelings and emotions about using the food bank, especially related to their first time use of the resource. Feelings ranged from awkwardness, embarrassment, and shame, to humiliation, desolation and failure. They were also concerned about: stigma, receiving from a ‘charity’ or ‘safety net’; what others might think of them; and, the erosion of their feelings of independence. As they had more experiences with the food bank, it seemed that they were able to separate their feelings from their immediate need. The anonymity of the food bank system and the fact that the food bank was a part of the Students’ Union, and not the main city food bank, made a positive difference in the comfort level of participants who accessed it.

Catherine:

It’s a little, it’s intimidating I guess, kind of humbling like you don’t want to go...On the outside we seem like a fairly functioning family like middle class and really we are living pay check to pay check and until I’m finished school and we have two incomes it’s kind of tough I guess you know, mostly humbling. But I mean I kind of look around to see if anyone’s watching to see if you’re getting it and if anyone notices that you’re getting it for a fear of being kind of do you know what is is, poor, or can’t, don’t have money. But I don’t feel as bad doing it at the school because there’s a poor student stigma out there already so it’s easier for me to come here than it would be to my church or parents or whatever.

Ellen:

At first it was pretty awkward but I think I’m used to it now. Like it doesn’t bother me, just because I think I wouldn’t use it if I didn’t need it so. I know some people would get really, like maybe you’re just embarrassed or you know and they might not want to go just because it’s the food bank, but I don’t have that problem now.

Greg:

Yeah, the first time I went...you feel like a bit...whether you’re being judged on merit...whether you are abusing the system or whether there are people that are more needy than you...you’re getting something which is kind of charity so do you deserve it, you know what I mean? But after four times I don’t feel like that

anymore. I do not feel that I am taking food away from someone else more needy.

Heather:

I don't really have that many emotional entanglements about it now. I don't know how much this is a personal thing but people where I am from are taught to be really independent. We're not used to a social net. That makes it hard.

Referrals based on relationships such as friends and counsellors appeared to reposition the concept of the food bank and addressed the stigma associated with accessing it.

Barb:

I didn't feel bad about it or lowly I should say. It's more like it's...the counsellor really helped and actually made the food bank seem you know it's not for those you know you don't have to think of yourself as a homeless, desolate poor person or feel bad for doing it because you do have a home. It's this food bank at the school is here for the students who do struggle and so I didn't feel bad about taking it away from like other people. Because the counsellor explained how this food bank and the city food bank are tied but they are also separated.

Oliver:

I've used it three times but my girlfriend gets food bank food too. We get the same stuff.

Participants over all spoke highly of their food bank experience and the positive contributions it made to students' lives. Ingrid sums up.

Ingrid:

The food bank supplies me with the basics...I fill in the gaps when my parents help me out. It's an available resource...why not utilize it...how I look at it you know, it's food being given to you and that's something that I should be grateful for you know. The reason I like it here is because it's closer and like more convenient whereas walking downtown a few blocks and then carrying all that stuff on the bus...

A gendered experience.

Data revealed that emotions associated with and barriers to using the food bank were somewhat gender driven. In asking questions of male participants, I asked “What is it like for you to use the food bank.” Women understood that I was asking about their emotional state; however, most men needed clarification of the question. I obliged and followed with “How did you feel about using the food bank?” Men’s responses were generally more pragmatic than women’s, though they did admit mild embarrassment.

Nathan:

It’s not a big deal. I realize that everybody needs help at some point so there’s no shame in going there...not a big deal at all. (Prior counselling helped him realize that...) all people sometimes need help.

Oliver:

I really felt nothing about it, I mean I needed the help so I had to.

Kevin:

It felt a little bit embarrassing to be honest but I know at this moment we absolutely needed a little bit of food so I got past that too. This was a necessity.

Some women had a different view. They spoke about their boyfriends and husbands and what they thought a man’s experience of the food bank might be. They felt that the stereotype of the proud and independent male who has difficulty asking for help would be closer to the truth. Some women wondered if the female stereotype of the caring, nurturing mother who would do anything for her children advantaged them at the food bank. Other women felt there ‘should’ be no difference.

Barb:

I didn’t feel any more needy as a woman than a man, maybe a man’s ego possibly but I mean if a guy’s hungry it means food, and they’d eat more than a girl.

Catherine:

I think women do what they can to help their family survive no matter really what the cost and I mean not saying that men don't, but I think men can be more proudfull and you know it would be harder for them to walk in and admit defeat then, well what they would see as defeat anyway. I think my husband would do anything other than admit or ask for help if he couldn't do it himself kind of thing.

Heather:

I mean I guess from that perspective it seems to me that they, the people working at the food bank maybe think of it differently because you're a mother and have to take care of your children...maybe that goes against traditional stereotypes of the man providing for the family...I don't know.

I did ask some male participants why I had difficulty recruiting men into the study. Both Kevin and Nathan offered theories.

Kevin :

It would be guys don't like talking about their problems. Now that I'm married, I'm better at sharing but before when I was single I would not have participated in this one [this research study] because I wouldn't have wanted to talk about it.

Nathan:

I'm guessing that men don't want to admit to being relying on others for help...but I don't really care.

Theme 2: Summary of Major Findings

- Participants became vulnerable to food insecurity through a mismatch of their monetary supply and their expenditures.
- Participants were vigilant with their budgets and purchases, planning for leaner times. They juggled their budgets, time and shopping in order to increase their food security.
- Eventually participants' 'balancing acts' failed them and they made the choice seek assistance from the campus food bank. Without enough money, participants did not have enough food to maintain their (and their family's), health.

Participants suffered both physically and emotionally because of their lack of money and lack of food.

- Participants' financial exhaustion which ultimately lead to food bank assistance, was explained through three main pathways. The shortfall pathway (chronic lack of funds each month/semester), the cumulative pathway (a string of unexpected expenses), and the catastrophic pathway (expected monies not arriving).
- Two participants experienced hunger (absolutely no available food for one or more meals), on a regular basis. The remainder resorted at times to eating foods with low nutritional value such as Kraft Dinner and Ichiban Noodles.
- Participants described feeling awkward, humbled, embarrassed, ashamed and desolate because they were in a position where they needed food bank assistance. They admitted to feeling like failures. However, as participants' food bank use increased, their feelings about using the food bank became much less severe.

Theme 3: Structural Issues Affecting Students

During the course of the 15 interviews, participants reported on a number of structural violence issues they encountered which related, directly or indirectly, to their food security. These were barriers over which they had no control, and were ultimately policy/business driven by an organization or government. Issues arose related to: housing (e.g. poor quality and livability of suites, rise in rent); costs associated with being a student at the university (e.g. books, technology, fundraising); urban planning/food deserts (e.g. the long distance from home to grocery store); quality, cost and accessibility of eating at the university; and, student funding (specifically scholarships and loans).

Housing.

Because of a lack of money to dedicate towards adequate housing and in order to make university affordable, some participants chose to live in accommodations with little storage and inadequate fridge/freezer space – six participants spoke about their lack of fridge/freezer storage. Participants carefully considered the pros and cons of renting. Nathan lived in a one room basement suite with inadequate kitchen facilities. This situation directly affected his food security by rendering him unable to store sale items, freeze cheaper bulk meat, and bake anything that would not fit in a toaster oven. He had lived there for three years. Greg described the effort he put into finding reliably affordable housing. Both Nathan and Greg chose to move to apartments with utilities included in the price to keep their expenditures stable.

Nathan:

I have a toaster oven, microwave, minifridge...what it's like you know it's a little like a motor home that has a little sink, a fridge and stove all in one unit. I pay \$325 a month...that's a good price in Lethbridge because that includes all my utilities and all that stuff. The other cheapest place I looked at was \$450-\$500 so this is cheaper by a lot. There is another room like this the landlord rents to another student.

Greg:

We spent a long time figuring out how much utilities would cost because you know they rent apartments with part utilities, full utilities and stuff and we were trying to factor in how much utilities would cost us. [Choosing to rent an apartment with utilities included] it's a lot more security when you don't have to worry about that.

Participants were affected by any minor rent increases or utility costs. Lynda spoke earlier of the impact of the cost of electricity because of her roommate's high usage. These costs encroached on Lynda's ability to purchase adequate food.

Heather faced a \$114 increase in campus housing costs. The only flexible section in a student participant's budget was their food budget – this is where the cut would be made.

Heather:

They've already raised it once last May, then they're raising it again. Any kind of change like that comes out of the food budget because that's all there is to maneuver with you know.

Costs and demands associated with classes and attending university.

Participants discovered 'hidden' costs that they did not anticipate or take into account when registering for classes. These expenditures ranged from printing, textbooks, laptop computers, to class field trips and club fees; some of which, they felt, might be avoided or reduced with more thought related to student costs.

Fiona had to purchase a \$450 laptop computer in order to keep up with her classes. As a parent she could not sacrifice the time to stay at the university to use the 'free' computers. Lynda's printing card was eating into her food budget. Nathan could save money on used textbooks, but was told he must get the newest edition. Greg was outraged at the cost of textbooks and the university book store's book buy-back program; he lost \$120 in that transaction. Dianna, was frustrated at cost of class field trips and the loss of a learning experience if she did not participate.

Fiona:

Like I really need a laptop for this class because we have to videotape ourselves and we have to go there and type it up, so I need this computer because I can't always sit there and access, be at the library because I have to be home with my children.

Lynda:

For a lot of my classes, I'm having to print off a lot more paper and pages and things like that, I just didn't really anticipate that. As far as photocopying goes, like I have to do that with a lot of my classes, like I feel like it's a necessity especially since its school related.

Nathan:

Pressure to spend on new university student textbooks...I mean the professor tells you that you need the newest textbook, you can't go with the one that has a few lines different because they're going to test you on those five lines that are different and not tell you that there's a difference. So I guess spending \$80 for that newer textbook versus like \$40 for the old one. And like even a lot of schools are going to one-line textbooks which are a lot cheaper so it seems like there is ways that could be, maybe cut down expenses there, but we're pressured here at the university to buy our hard copy, which I guess has changed this year because you can rent textbooks which is cheaper. And they're making more textbooks available on line.

Greg:

Well for me the big thing is books, it just kills me. I just cannot believe how much they charge. Last year I had to buy a book and it was a \$132 for a bloody book. I mean seriously, that's criminal. Seriously! You're talking about this resource...so this year when they're buying the books back, I went back with it and it hadn't even been touched and they gave me 12 bucks for it. That's what they give you! You know this big book buy back thing? Don't go there with any hope.

Dianna:

Class field trips cost \$50 to \$100 per student. If you want to do all that stuff and learn, you had to pay ...another \$50 here, a \$100 there and it's like I don't even have the money to buy food, how can I go? So yes I do feel pressure sometimes.

Food deserts and geography.

On campus.

Many participants identified that the university facilities were unfriendly to those students who brought their lunch, and that the campus eating establishments were costly, lacked variety and quality. Additionally those who had evening classes complained that only one establishment was available near their class; and, vending machines were filled

with junk food. They also complained that healthier food choices cost more than the least nutritional choice of potato chips and chocolate bars. Finally though they were grateful for the campus food bank, they also saw some room for improvement related to increasing the amount and quality of the food on campus.

Catherine:

The cost of healthy food on campus is atrocious. Like I almost refused to buy something one day when I was so hungry because I paid two dollars for one of those little things of yoghurt when I know that I can go to Safeway and buy a whole 12 of them for \$4.99. It's just you know where you can get the salad and they weigh it and it's like \$8.00 for a salad, and your kind of like, 'What'? So when you can get you know a burger for \$2 or \$4 or whatever, a bag of chips for a dollar or a chocolate bar for a dollar...I know at the beginning of this semester there was no microwave in UHall at all available to the student public...I complained to the Students' Union about that but I don't know if it's changed or not. So how are you supposed to, you know if you live off campus and you don't have the dorm here to run and make lunch, and if you don't bring a lunch then you have to buy food or go hungry. There's four coffee shops on campus, there's fast food everywhere, and you're not encouraged to bring your own lunches if you bring your own lunch and need to heat it up.

Jim:

It's shocking to spend like \$5 for half a sandwich down at one of the places on campus because I'm like how can you, do you know how many sandwiches you can make for the same amount of money? That the private sector has moved in and taken over is scandalous. Because you know you have the cafeteria with the cheap food because the university is running it you know. It might not be Tim Hortons or whatever they have down there, it might not be the variety or choice. I'm not sure if it is student driven. If you said 'right the food's going to be cheaper but there's no more Tim Horton and Starbucks coffee' that could be okay.

Lynda:

Coming at nine or ten (in the evening) and all (food venues) are closed pretty much at that time, that hinders definitely, and the fact that there isn't much competition in terms of vendors. We really don't have that many choices. I'd feel a lot more motivated to put \$10 away every month to buy food from my favourite fast food place, but I feel like with Subway and Juice Fare and Hiroba, it doesn't make me want to buy it as well as the price doesn't make me want to buy it.

Alice:

I see lots of vending machines filled with junk food.

Adding to the food desert issue at the University of Lethbridge is geographical distance to alternate choices off of campus, especially those stores that serve healthy foods.

Catherine:

Off campus? Well not a healthy meal because even if I did leave it's only fast food on one side of it, and the grocery store, so I'm not sure if Shopper's Drug Mart, I think they have some but you know...they might have fresh sandwiches or whatever but it's still processed for it to have a shelf life. It doesn't have a deli for food...yeah it's all fat (sic) food unless you go all the way to Safeway and that's not within walking distance or anything.

The availability of the Students' Union Food Bank was well appreciated by participants and for some became a regular part of their food security systems. However, they felt there was room to improve the quality and quantity of food, specifically cereals of low nutrition and expired goods (where they worried about food safety especially for their children). Participants also understood this was a charity so some of these issues were not within the control of the food bank.

Greg:

With regard to the food bank..maybe I'm being too judgmental on what's given out but it's kind of an odd assortment of stuff they give you, and I really don't think much thought goes into what's given. Some of this stuff you would never buy yourself but of course they can't cater to everyone's needs but you get lots of what I would consider to be treats are thrown in there and weird cereals like fifty thousand different colors and stuff which I wouldn't buy my kids, but of course you're not going to stop giving them. So it's kind of like, in a way what is good about it, is you get lots of soups and stuff like that and you might get a bag of rice and some kind of staple things...provides the basic staple things that you would buy anyway, so then you can use the money that you do have to supplement that with like fruit and vegetables and some things. So they give you this \$25 card which I'm assuming is to make up for that you know. So I mean ...it's kind of this adage that beggars can't be choosers. And it would be too patronizing if it would be like 'we're going to give you free food but we want you to be healthy' you know. So I guess there's a balance between like throwing in a packet of

wagon wheels and some coffee and some peanut butter and some frosty cereals, do you know what I mean?

Fiona:

I was given only 2 bags for eight of us. I went yesterday and most of it is already gone.

Alice:

A lot of it is expired. I get like you know a huge bag of food and I'm thinking you know good we got food and then I go through it and like sometimes up to half of it I have to toss out because it's really old. Like I've gotten a can of food that it said 2004 and that's ridiculous, I'm not going to feed my kids a can of food that was like old six years ago you know.

Off campus.

Participants identified that living on the Westside of Lethbridge was expensive, inconvenient, and time consuming and created a barrier to their food security. This related to the fact that the nearest grocery store (Safeway) was most costly, and the cost (time and money) of travel to the least expensive stores such as Walmart and Superstore. Additionally students noted that purchasing healthy foods in grocery stores was more expensive than the non-healthy ones. Lynda explicated the connection between distance to shopping and time. Ellen told me what it was like to live in a more accessible environment. Barb complained that when grocery shopping, healthy food was more expensive than unhealthy food. However, Heather did not entirely agree with this notion. In her experience, if you knew how to 'cook from scratch,' not purchase processed food, and understood unit pricing, then it was very cost effective to eat healthily.

Lynda:

In general I think what has been an issue for me overall is how far it is to get to the facilities that get you food so the Safeways and Superstores and the Walmarts of Lethbridge are a long proximity from where I live and a lot of people, a lot of students live in the area that I live in...you know, West Lethbridge. It's so

inconvenient. I have Safeway on the Westside but it is definitely not within walking distance. Time wasn't really an issue last semester just going to school. Then you can definitely you know find time in your day to go and do grocery shopping when you need to. But nowadays [with a new part-time job] I'm going to have to schedule it in a lot more.

Ellen:

I didn't have time this week to go to the grocery store..Yeah it would be a barrier to get to Superstore. Whereas I know in Calgary we lived right by the Superstore so it was kind of a hop, skip and jump, no big deal. But now we have to run up to Safeway. We'd probably actually save money if we just went to Superstore and did our grocery shops there.

Barb:

I don't want to be not healthy especially at this stage in my life so I try, it's just but like I said all the expensive food is the healthy food...it's sometime hard to go for the healthier option when I can't afford it or it's not in my budget this week.

Heather:

When people would say that oh, it's cheaper to buy junk food, I mean on the one hand yes, you could buy like a Salisbury steak meal for 79 cents but that wouldn't be very filling. I'd probably need to eat two of them and I don't consider myself to have an enormous appetite but I don't eat like a bird either, I'm a nursing mother so I eat quite a lot. So if you were feeding a family, I mean how many would you have to make to have a meal for everybody. I mean I'm thinking for our family, my husband probably needs three of them, I would need two of them and our son would have one, so that's six of them, that's \$4.80. I could definitely make a meal for a lot cheaper than that which is not processed food. So that's why if you look at unit price you might say you can buy junk food for a lot cheaper than doing it yourself but a 3 pound bag of apples was \$1.29 so that's a lot more food than a bag of chips for 99 cents you know. So that's why I disagree with the fact that it's cheaper to buy junk food.

Student loans, scholarships systems, and university environment

The participants reported on two specific student scholarship funding models: the Master's Advantage Award, and Aboriginal band scholarships. Both of these had unique issues related to their agency's funding regulations regarding eligibility and the number

of people the award was meant to sustain. Participants also reported on how the university policies themselves could contribute to encouraging debt among students.

Scholarship funding models.

Participants commented on two scholarship funding models. There were three different aboriginal funding sources, i.e. students from three jurisdictions, all stated the same issue. These participants reported there was a flat funding model regardless of need. This means that a single student and a student with several children would all receive the same amount of scholarship money each month they were in school. This resulted in a number of issues where: 1) participants stayed through school 12 months of the year, even through pregnancy, birth and breastfeeding, in order to keep the funding coming; 2) student participants could not financially manage the costs of shelter, transportation and food for themselves and their large families, resulting in hungry participants and their children; and, 3) if the participant required emergency help and went back to their funder (for example for rent), the emergency funds they received would be deducted from future monthly payments – causing the student to get ‘further in the hole.’ This proved to be very stressful for Aboriginal participants who were already juggling so many roles and responsibilities in addition to being a full time student. Earning extra money, according to the participants, was not an option or if it was, it was capped at a low amount. Participants were not able to access social assistance systems for help while at the same time receiving their scholarship. I have refrained from quoting participants here in order to maintain their anonymity.

The second scholarship model, designed for Master’s students to top up any grant or teaching assistant income so they have guaranteed \$1000/month income (but no more

than \$1000/month), worked well for single students but not for married students. A participant reported that if a married couple who were both Master's degree students applied, then one would be ineligible. And if one half of the couple chooses not to receive the scholarship, their spouse loses the opportunity because their household income would be too high for them to be eligible. A catch-22 problem. This participant had his masters advisors argue this point with the award adjudicators and an exception was made. I did, however, check this information with the graduate studies program and their current policy is that a married couple can both receive the scholarship as long as they apply independently of each other. Additionally, Advantage Award recipients were allowed to earn, but must report, extra income of up to 10 hours a week from outside work. Working more than 10 hours disqualified them from receiving the scholarship. However, according to the participants, their studies occupied the bulk of their time which made it difficult to take on additional work, and international students must be a student in good standing for six months before they are eligible to apply for an off campus work permit. Additionally, even if they chose to work the extra hours, there would be delays in the federal government processing their application, and likely that income would not be that meaningful because odds are they will be earning minimum wage in a service industry position. Again, I will not provide quotes in order to maintain the anonymity of the source.

I spoke to the International Liaison Officer with university, and she provided me with a copy of a student handout designed for International students, which explains what expenses they could anticipate when relocating to Canada. According to the handout, available in Appendix J, there appeared to be a large gap between the actual costs of

living and the Advantage Award's maximum of \$1000 per month, especially for a student with a family. Yearly cost of living for a single student (rent, utilities, food, personal expenses clothing/laundry, and recreation) was estimated at a minimum of \$12,000 per 12 month period. This figure did not include the cost of books or tuition, which for Advantage Award students are deducted from their award.

Student loans.

A participant reported that there was a lifetime cap on student loans and that in her experience, maximum loan amounts had not kept up with inflation. She was able to compare her student loan dollars from 10 years ago to her loan today.

Dianna:

This is what they explained to me and I think it's ridiculous and I'm angry at the government for it. But they have a \$50,000 lifetime limit, so even if you've gone to school and paid it all off, so I went to school and borrowed about \$20,000 of student loan money before and paid it all back. I finally paid it off and went back to school, and okay I'll get fifty thousand, but I only got \$30,000 because I used \$20,000 before so the government's lifetime limit is not how much you owe at one time, it is how much you've borrowed in a lifetime. Which is ridiculous because if you paid it off you should be allowed to borrow again.... You know I'm getting almost the same amount of money for student loans each year as I was back in 2000, but you look at the cost of living. When I lived in 2000 we were able to rent an entire four bedroom home, me and some girls for \$500 back in like 2000. I used to be able to spend a \$100 on groceries a month and I had leftovers like at the end of the semester and that all I spent is a \$100 a month. At the end of the year when I finally moved out of that place I was taking so much groceries with me. And now a \$100 doesn't buy much anymore. When I went to school before I got \$13,000 a year - roughly \$12,000 to \$13,000 - and yet you know I could live for eight months on \$800 of groceries. So the cost of living is way higher now.

Encouraging debt

Participants reported that the university environment itself encourages debt through: allowing credit card companies access to students, drawing them in with promises of free gifts; using a food card system where students do not receive practice

using ‘real money’ thus not helping to teach them to budget properly; and fund raising from students who can ill afford at this stage in their life to part with money. Catherine’s family had been paying off debt for years because of her love of the ‘free gift’.

Additionally she believes that fund raising from students puts the student in an awkward position of guilt and forces them into a personal dilemma.

Catherine:

The credit card companies actually would come and have booths around campus and here’s a free gift whatever, if you sign up for a credit card. Maybe things have changed but that’s exactly how it (current consumer debt) started us in trouble. I got two credit cards and I only signed up because I wanted...if there’s something free I’m there, haha. We’re really kicking ourselves now because there’s hundreds of dollars every month that we could be putting elsewhere that goes to payments that don’t even you know dent our debt kind of thing...Fund raising for things... like every club on campus fund-raises. I feel you know like it’s important...like I know they need the money and you know sometimes I probably give more than I should...mostly it’s to a good cause...if things like that aren’t funded then those opportunities aren’t available.

Heather observed that the food card system encourages student debt because students do not learn to have a real grasp of expenses.

Heather:

It’s sort of like fake money in a way that you end up spending money on things that you probably wouldn’t if it was cash coming out of your bank account.

Student suggestions for systems change.

Participants, as key informants, shared a variety of policy level suggestions that they believed could make a positive difference in the lives of students. These suggestions might ensure a better possibility of food security across the board by providing more money, saving on costs, providing more services, increasing skills, and better food access for students. Their suggestions were divided into four categories: funding and fees; budgeting skills; nutrition skills; and, access to food.

Funding and fees.

Participants felt it was important that policy and decision makers account for cost of living increases when established programs such as the student loan program. As previously mentioned, Dianna's experience with the Canada Student Loan Program showed her there was little change in the level of student loan funding over the past 10 years. She also suggested that a food stamp program, similar to that in the United States with an approximate value of \$200 per month, could work well as part of the loan programs, which would serve to fund students' necessary expenditures versus entertainment.

Dianna:

You may not get to go to movies, but at least you don't starve.

Participants felt that increased government support and funding through family living allowance, new federal resources for students in financial trouble, and living wages that accounted for inflation, would all assist students with attaining food security.

Three participants felt that decreasing or eliminating tuition would enable students to divert their monetary resources towards food purchases. However, as Greg acknowledged, this solution could be problematic – causing systems disruption or collapse of a structure built on fear.

Greg:

Free tuition, that's the bottom line. But then the system would collapse wouldn't it? Because people wouldn't be living in fear for the rest of their lives...the system's not going to work very well if people aren't living in fear for their income....in Canada we're starting to drop away our health care system and things like that which is, people have to put health before food security you know. So you're probably going further down the list you know...so it would be things not even connected to food to be honest.

Participants also mentioned: assisting International students with day care fees because of regulations that exclude them from daycare subsidy; placing a cap on student housing rents, especially for those student receiving the Advantage Award; and, providing services such as the Native American Student's Association (NASA) food cupboard for all students who were hungry, not just Aboriginal students.

Budgeting skills.

One participant, Alice, specifically disagreed that an increase in funding would resolve food security. However, she and other participants agreed that teaching students how to budget their money and time would begin make in-roads for students learning to manage on limited resources. Heather's experience, similar to other participants was that students did not come to university with budgeting skills. They must develop these skills on their own.

Alice:

I know an increase in funding would help but I don't for some reason think that it would really solve it. You get one lump sum at the beginning of the month or semester right, and it just kind of, everyone runs to the grocery store and pays their bills and everything. Maybe learning how to budget better, maybe training programs that offer to teach you your budgeting skills and learn how to manage your money better. Helpful tips on where to get cheaper healthy foods, or any community programs that offer that.

Heather:

Planning is the nature of being a student...we're all stereotyped to be poor and we get a certain amount of money...and part of the challenge is...making it last until the next money comes, you know. So you kind of learn to budget for yourself.

Participants believed that teaching students how to budget their time, in addition to money, would assist them to have time to shop and cook.

Barb:

As a student you have a lot of studying but you actually have your timelines, especially if you're full time. All your classes to go to and study for and you're supposed to typically study one hour for every three hours of class...budgeting that and then incorporated with that your free time, your time with friends, your time to shop for food, giving yourself enough time.

Nutrition skills.

Many participants believed that key to food security is to educate students to make better lifestyle choices related to: choosing healthier foods in restaurants; educating them on how junk food and fast food affects the body; learning how to grocery shop for healthy foods; and, teaching students to cook those healthier foods, keeping their food costs down. Participants provided specific suggestions such as inviting students to free lunches while teaching cooking classes and, working with students to compare costs of store bought, prepared food versus foods made from scratch.

Greg:

Teach students how to cook properly and have better lifestyle choices because even if there was a student with money, you know if they haven't got the technical know-how to be able to cook themselves a well balanced meal. If you just pour money on them they might just go to Pizza Hut every night.

Heather:

We really like humus and I mean if you buy dried beans or even canned beans they're not every expensive versus like if you buy a thing of humus for \$3.50, or something, you can make a whole blender full of that yourself for probably for a dollar. We could show them how much money they could save by doing it themselves. I don't know if you can teach that mentality about cooking for yourself to other students. My mom always said that that was going to be her retirement...to teach college students how to cook for themselves, haha. I'd recommend watching some sort of entertaining cooking program. We watch a lot of Jamie Oliver...that just expands your horizons.

Ellen:

I've spent on McDonalds or A&W, or KFC and candy and like when you add it all together, you could have went and did like a really good grocery shop and

actually gotten good food. I think they just need to be more educated on and how that affects your body too.

Janet:

Offer free lunches and after lunch tell them about food and stuff like that because if it's just like a seminar about learning about food only certain people are going to go to that kind of thing. Whereas if you have a free food seminar then we'll be like, 'hey it's free food' and we'll be able to learn about food too.

Mark, who attended Aboriginal transitions course at the university thought that this programming, already in place for one portion of the student population, could be expanded to all students and will teach them to 'live better.'

Mark:

They have those courses, like the transition course every Friday they taught us about money management, better living, they teach us about study habits, and every week they had something different. Just to teach the younger students how to do that. They teach you responsible drinking, study habits, how to manage their groceries, how to buy their groceries, eh?

Access to food.

Participants identified that better access to food would assist students to become food secure. This could involve improved and affordable transportation from the Westside to the least costly grocery stores, and better transportation services to the Westside for those students who worked late into the evening and had difficulty getting home. They also voiced that food security meant more and better access to locally grown foods and access to the city food banks for those students from out of province.

Theme 3: Summary of Major Findings

- Participants faced challenges with organizational policies and structures that impacted their available income for food.

- Securing affordable and appropriate housing was difficult with participants forced to compromise on the quality of their living environment. Participants' economic situations were sensitive to increases in rent and utilities causing the shortfall to be drawn from money set aside for food. Rent which included utilities afforded some stability in expenditure on housing.
- There were hidden costs to attending university which participants did not anticipate or did not consider how costly these could be. Some of these costs include: new expensive text books, field trips, computer printing, and computer equipment.
- Participants reported that eating on campus was overly expensive, and food choices lacked quality and variety. The most nutritious meals were the most costly as compared to less nutritious choices. Most of these eateries were inconvenient as they were not open later in the evening. The University of Lethbridge is surrounded by a food desert. Eating off campus caused issues for participants because of the geographical distances to alternative, healthy, and inexpensive stores.
- An on-campus food bank was appreciated by participants. Food quality (e.g. sugary cereals) and safety (outdated items) were identified issues; however, participants recognized resolving these issues may not be within control of the food bank.
- The University encouraged debt via allowing credit card companies on-campus access to students, and by using a food card system which does not encourage students to practice budgeting using 'real money.'

- Participants identified a number of policy level changes which they believed would make a positive difference in reducing food insecurity. These included: increasing student loans to reflect the cost of living; changing day care regulations to allow International students subsidized day care; revisiting monthly scholarships and awards, instituting a food stamps system to ensure they purchase healthier foods from grocery stores; teaching students budgeting and nutrition skills (through creative pedagogy) to assist students to have enough money to purchase and cook nutritional foods at an economical price; and, providing improved public transit from the Westside of Lethbridge with more routes, and later service.

Theme 4: Post Script – Reflections on Maturing and Persevering

Participants described their personal growth over their four years of university and how it changed their spending and study habits. Younger and single participants described their transition from the stereotypical party going, reckless spending student to a more mature and grounded person. Their spending and entertainment choices became more modest as they persevered to achieve their career goals. Older participants and participants who were parents describe their pre-existing maturity and why they believe their hardships and grief with food insecurity was worth their time and effort.

Maturing.

Self discipline and responsibility did not always come easily to participants. There appeared to be a ‘learning curve’ or journey of self discovery developing these skills, especially for younger and single participants. These participants described transitioning from an irresponsible or erratic spender (and studier), to a self-disciplined

and focused individual. Participants who had children felt forced into a higher level of maturity because of their added responsibility for young lives. Those over 30 years of age felt they had grown out of this stage of life.

Transitions.

When it came to their spending, studying and party habits, participants described a process of maturing over their university career. Many had started out spending irresponsibility on clothing, ‘junk things’ and frivolous items, but they began to pay the price through running out of money and food. Some had to go back to their parents to ask for additional assistance – which they found to be a humbling experience. Mark spent his money on ‘nothing’ and paid the price. Lynda (who received a small monthly allowance from her parents) spent on clothing and learned a hard lesson that month.

Mark:

When I first started university I just blew my money on nothing...just blew it and then all month it’s just like well, we’ll figure it out you know.

Lynda:

The first year you’re feeling kind of flighty and you want to be looking your best and stuff, so I was definitely spending a lot of money on personal things, junky things, clothes. One month in particular I totally remember, I like suffered for that, because I spent a lot of my monthly money on clothes and I didn’t have enough money for food. And I told my mom, and my mom was, “okay, that’s not *my* fault. I told you not to buy all those clothes.” So that month I remember like not literally starving but I was starving most of the time, like I’d like go to bed early so I wouldn’t have to be like hungry. It was a lesson learned for sure. Buying things you want versus things that you need...it’s a concept I now use.

Like Lynda, participants described learning from these mistakes and starting to assume responsibility for their time and money. They became more disciplined, making hard choices about their spending and studying habits (e.g. choosing to stay home and study rather than go out with friends), especially after the first two years of university

life. They became more focused on their university career, their futures, and not wasting time. For Ingrid, learning to hard work and become disciplined had increased her savings, her grades and her confidence.

Ingrid:

You know I was one of them [partiers] in the beginning too, I'm not going to lie. Some of my friends party every weekend. That's where their money is going and they don't have any money to buy groceries, whereas me, I buy all my groceries first, everything, all my bills paid first before I actually go and have fun. I used to do that when I first started university and I noticed my grades were dropping and then so I stopped, and then I noticed because I've stopped, my grades increased and not only that, I've had more money to spend throughout the next couple of weeks, like I'm not completely broke....And look at where I am now today. I did really good last semester. I do not party...nothing. And you know it's so hard like for example last weekend the fights were on [televised fighting match] and everybody is wanting me to go and watch the fight. And I said no, I got to stay home and study and I got a whole lot of homework done this weekend, and I feel really confident [with] my tests this week, because I've got three...The way I look at it now, you know, why waste my time as well as other people's time if I'm not going to do it right, you know. I'd rather do it right the first time and get it over with rather than having to repeat it and taking longer and stuff like...I just want to get a career.

Participants who were parents had a different view of maturing than single student participants. Having children forced participants to become responsible and prioritize their children. Participants who were older (in their 30's) also expressed their different focus on priorities and responsibilities. Heather's perspective had changed as a consequence of being a parent. Oliver was in his 30's and recently purchased a home. Greg felt too old to be spending too much money on alcohol.

Heather:

Once you have kids...you have to make wiser decisions.

Oliver:

When we have extra money I try to invest it in other things...into the house, insulation or something like that...reverse osmosis machine.

Greg:

We kind of grow out of it (getting drunk) I think. Maybe we (graduate students) spend a lot less on alcohol than undergrads, do you know?

Social pressure to spend.

Social pressures, by their peers, to spend money unproductively affected participants early in their educational career. Participants reported that they were now, at this stage, less affected by peer pressure, though before they reached this point participants tended not to discuss money issues with their peers, especially in the midst of fun activities. Barb ultimately ran low on funds and had to ask for a loan from her parents...she learned about being wise with her money the hard way.

Barb:

We had one room mate who had rich parents and she had money, and she affected our spending because we'd go to the Mall...she could never said no to anything she wanted, so that kinda made us spend. Now that we're looking back in hindsight, we spent a lot of money way back then that we never even thought about because she never talked about spending money, so we never did. So you know to have her being so carefree with her money, we were so carefree with ours and ended up with no money in the end. I learned [from that experience] after I had to ask my parents for 500 dollars. Now I can't. So I stay home and watch a movie.

Peer pressure to spend created some difficult choices for participants. Ellen's class mates asked her to go bowling. She felt that university was a place where she might make connections with others, connections which might be helpful to her in future employment opportunities. So she was reluctant to turn down the offer. Janet reached a point where she could comfortably say no to her friends.

Ellen:

Bowling ended up being like a \$50 night – so yeah there’s times that you can get pressured into spending money...you want to go because it’s fun...and making new connections helps.

Janet:

I’m better now because like before I was just like ‘okay, whatever.’ But now I’m able to stand up for myself more.

Litmus test.

Near the end of the interview, as part of the questionnaire, participants were asked what they might do if they were unexpectedly given \$50 before this upcoming weekend. This ‘litmus test’ of sorts, was designed to assess participants’ level of maturity as well as their level of need for food. Participants did not identify a single clear expenditure. They explained that they would strategically divide up the money according to their area of need/want. Table 4.8 shows how these participants would choose to spend the money. The data fell into five non-mutually exclusive categories.

Table 4.8

Litmus Test - \$50 For This Weekend

Expenditure	Frequency
Food	7
One of food, bills, or savings, plus a small treat (e.g. hamburger, ice cream, bottle of wine, nice cheese, nuts, or birthday gift for self)	7
Save (for children’s Christmas presents, for food when there is none, emergencies)	5
Pay Bills	4
Other (Costco Membership to save on bulk items)	1

Results of the ‘litmus test’ showed that though food, bills and savings were clearly important priorities, some participants felt a modest treat would be a ‘nice’

reward. The treats they listed were almost exclusively food items, or for a special occasion.

Alice:

Food! Ha Ha.

Ingrid:

Go buy more food...the first thing I think about is food.

Greg:

If you gave it to me and you said I'd *have to* spend it this weekend, I'd probably buy some wine which I would drink afterwards, yeah. Wine is so expensive...so it's like such a luxury item. Yeah it would be nice because it's Super Bowl weekend. But if I found it on the floor I wouldn't spend it this weekend, it would just go in my pocket or I'll give it to the wife, and then when we need money to spend it, it would be spent.

Persevering.

When asked “is it worth it” to be a student while living with food insecurity over a long period of time, most participants answered ‘yes’ because they would achieve a career that would provide for their long term financial security and health benefits, provide a better life for their children, and afford personal fulfillment.

Nathan:

I'll have a secure future, like job security for the next forty years or whatever you're working. So I guess it's for a long term job security and maybe personal fulfillment because I'm not sure I'd be happy working in a trade.

Mark:

I'll earn money and gain security earning it the right way – mainly being able to respect what I make.

Fiona:

Because I'm going to be somewhere some time, I'm going to get out of it you know. I'm down now but you know I'm going to have an education because I

know what it's like to work three low minimum wages jobs and have children. You know I think that I will be successful when I get my diploma

Janet:

Being a little bit hungry during university I think it's worth going to university. Studies have proven that a mother's education is positively correlated with their children's achievement in school the more schooling the mother has, the better their kids do. Knock on wood, if something happens to my husband and I have to go to work at least I'll have a degree under my belt.

Those enrolled in helping professions felt that they would be able to make a positive difference in other's lives as well as their own. And some participants felt that the experience of being a student helped them grow as a person.

Ellen:

I can help others who are stuck find their path to healing. It shows the drive that I'm really committed to this and I would rather work hard towards my degree than be concerned about my food security. It secures my future.

Barb:

I love to learn, I love being a student. I guess you just have to learn. I mean even still with having money, you still learn to use the money you do have so when I go out there on my own and start my own family it's not like I just moved from my parents house and got all this money and can't then support kids. I've learnt with school. I've learnt budgeting and I've learnt huge tricks of the trade for life so I think it's worth it. It helped me. I mean it's tough but that's why there is the government loans out there. You learn how to use the money and to live a better life.

There were participants who were less sure, however, they remained hopeful. On some days it was, and on some days it was not 'worth it'. They weighed the pros with the cons. These few described the 'hope' they held that their hardships would substitute a life of low paying manual labour with a 'better paying job.' Though, there was concern expressed about absorbing student debt during the achievement of their university degree.

Catherine:

I hope so. I'm just guessing that it is, that it's just toughing it out now and hopefully that when I graduate and I'm done that I'll be able to get a job, hopefully one I enjoy because we won't be able to manage on one income.

Lynda:

At times..I'll like say tomorrow you ask me that question, I might say now, then the next day I'd say yes. It just kind of depends. Right now, at this moment I would say that it's worth it because it kinda give me a push to find new ways to do things and it kinda makes me become more resourceful, but when I don't have enough money to buy food and I'm just hungry, I'll tell you it's the worst thing ever, you know. So it just kind of depends on your state of mind at the time. I will gain a good job, maturity which has been a slow process but you know it's been happening. And I can take on the life like a cultured person has...that you can tell an educated university grad has.

Greg:

Definitely a strategic decision about how I, a student, am going to be able to absorb this debt and it is going to be economically viable for me to do this in order to pay this money off in the future. It seems more like a financial investment going to school. In theory a university grad would eventually earn enough to pay back loans but in this climate now you kind of wonder. I supposed the argument is you can't get a job anywhere unless you have a degree so people just have to swallow their debt because it's the only way they feel they can have any chance in the world you know, so it's pretty harsh.

Theme 4: Summary of Major Findings

- Young participants learned through time and experience, to develop and maintain self discipline and responsibility, overcoming social pressures to spend their money. Participants who were older believed that they had outgrown their 'irresponsible' years, and participants who were parents felt compelled to take on the mantle of responsibility for their children.
- Ultimately, participants believed that their experiences with food insecurity were worthwhile as the gains (long term financial security, health benefits, better life for children, and personal fulfillment), were worth the hardships.

Conclusion to Chapter Four Results

University student participants trekked a long road towards their degree. They arrived at the university within a certain context which included their many roles and responsibilities as people not just as students. Participants knew they needed to keep expenses to a minimum in order to successfully financially navigate through to the end of their schooling. The participants interviewed who ended up at the food bank were vigilant budgeters and shoppers and they prepared for possible lean times. While at university, through a lack of money, participants became vulnerable to food insecurity, reaching the tipping point where they needed to make the emotional decision to access the food bank for assistance. Three pathways which lead to the food bank were identified: the shortfall pathway, cumulative pathway, and the catastrophic pathway. Participants matured and they persevered despite their trials, however, in the end the suffering and worry were worth the end result... a degree and a chance at a successful and fulfilling career, economic stability, and security.

While time, geography, transportation, and those they lived with played a role in shaking the food security of the students, ultimately for these participants financial shortfall is what 'did them in'. Participants recognized that their student colleagues have similar issues to them (some worse and some better), however, they are all "in it together." Through data analysis it became apparent that financial issues and certain structural issues, issues which participants had little to no control over, affected the way they needed to allocate their monies. Participants' dire circumstances and vulnerabilities were created through personal and structural issues. When asked, participants generated

some valuable insights into possible solutions to the issues which lead them down the pathway towards the food bank.

Chapter 5: Discussion

Food security is an important issue among vulnerable populations. Canadian experts contend that food insecurity is “rooted in the breakdown of Canada’s social safety net (Tarasuk, 2009, p. 205). Food security is a recognized public health issue. Post-secondary student food insecurity has been called “the skeleton in the university closet” (Hughes, 2011, p. 27). The findings of this study add to the limited body of knowledge on food insecurity within the post-secondary student population. Using qualitative methodology and person-centered interviewing to better understand this phenomenon, the research questions which guided the study were as follows:

- Question #1: What are the experiences of food insecurity among students at the University of Lethbridge?
- Question #2: What do University of Lethbridge (U of L) students perceive to be factors or barriers which contribute to food insecurity for themselves and for the postsecondary student population at the U of L?
- Question #3: What strategies are most commonly used by postsecondary students at the U of L to overcome barriers associated with food insecurity?
- Question #4: To what extent to the SDH and structural violence account for the factors which contribute to food insecurity in this sample?

I developed a semi-structured interview guide which, in addition to the literature on food insecurity, was informed by two frameworks: the social determinants of health (Raphael, 2009) and structural violence (Farmer, 1999; Galtung, 1990). Students who had accessed the University of Lethbridge Students’ Union (ULSU) Food Bank were invited to participate via invitation letters inserted into their food hampers. Between

October 2010 and April 2011, fifteen students (n=15), five men and ten women, who received food hampers from the ULSU Food Bank participated in approximately 60 minute interviews. One third of the student participants were Aboriginal. Two students were graduate students and the remainder were undergraduate students. Two students commuted to the university to attend classes from rural communities, two lived in campus family housing and the remainder (almost all of whom rented homes near the university – on the Westside of Lethbridge) lived in the city of Lethbridge. All 15 students lived with others which included roommates, spouses, boyfriend/girlfriends, and/or children. Seven participants had a partner and dependent children. One student was single parenting.

This chapter includes a discussion of the main research findings in light of the research questions, the two frameworks, and the current literature on post-secondary students, and food security as presented in Chapter 2. Additionally, in this chapter I will address the limitations of this study, suggest future research directions, and outline recommendations and implications for governments and organizations who work with and for postsecondary students. Finally I will discuss how this research study has impacted me as a person and as a teacher within the university structure.

Demographics and the General Population

Though we often think of students as ‘stereotypical’ 18 year old single students with few worries and cares except for study, the students who participated in this study did not fit this profile. The average age of participants was 26.8 years (median 24 years). Over half had dependent children, 11 of 15 were married, one was single parenting, and

the remaining three were single but lived with others or shared at least some expenses with others. Five of the 15 participants were Aboriginal students.

Students' union data showed that sixty (60) new U of L Lethbridge Campus student clients (0.8% of the campus population) utilized the food bank this past year (May 2010-Apr 2011) (Curtis, 2011). Comparatively, Food Banks Canada reported that in March of 2010, 2.6% of Canadians utilized food banks across Canada. There is research to show that the number of people accessing food banks far under-represents the population who are truly food insecure. Power reports that, "in the only national survey that bothered to ask, (conducted by Human Resources Development Canada, 2001), one in four hungry Canadians used food banks. Many would rather go hungry than accept charity. Or they choose to leave the food for those who, they tell themselves, 'really' need it" (Power, 2011; Rainville & Brink, 2001). There is no available published literature or data which explains what percentage of food insecure postsecondary students actually do utilize the food bank. Thus I can conclude that 0.8% of the Lethbridge campus population utilizing the food bank is likely a gross under-representation (by at least a magnitude of four – as only one in four hungry Canadians use food banks) of students who could truly benefit from campus food bank services.

The literature is clear that Canadian Aboriginal peoples, especially those who live off reserve, are at much higher risk for food insecurity than the general population (Health Canada, 2007a; McIntyre & Rondeau, 2009; Rainville & Brink, 2001; Raphael, 2007; Tarasuk, 2005). Though arguably not a representative sample, Aboriginal university students were overrepresented in this study as one third of my study population was of Aboriginal descent. Food Banks Canada reported the number of Aboriginal

(including First Nations, Métis and Inuit) people accessing food assistance in Canada grew by 26% in 2009 and 13% in 2010 (Food Banks Canada, 2010). The same document showed that young families with children, especially lone parents, increased the likelihood of being food insecure. Those who used food banks were considered more vulnerable to food insecurity. In this thesis study, of the 15 students who utilized the food bank, over half of them had young families.

The literature review revealed that data collected and analyzed by and from students' union food banks were woefully inconsistent or bare-boned. They generally were most interested in collecting the monthly and yearly number of students receiving a food hamper, the number of hamper recipients who were single, and the number of students who were also feeding dependents. Generally it appeared that student food banks did not delve into the context of the student and her/his life nor the factors which contributed to their current state of food insecurity such as ethnicity and young families. One might conclude that the purpose of collecting statistics was based more on tracking and anticipating the costs of providing food hampers rather than striving to gain an understanding of who is accessing the food bank and working to support and advocate for those student populations who were experiencing a disproportionate amount of food insecurity. An early recommendation from this study is that students' unions need to concern themselves with primary prevention, implications, and outcomes of food insecurity within their populations, especially because food insecurity is so strongly linked to poor health and academic performance.

Question #1: Experience of Food Insecurity

Students in this study were found to lead complex lives. Full time university students bore many additional responsibilities in their roles of learner, spouse, parent, child, and employee. They juggled finances, time, and energy in order to feed, clothe and maintain the health of their family, support their parents through personal and financial issues, support their life-partner, work part time, and maintain their grades. Although there was quantitative literature which described the characteristics of university students (Canadian University Survey Consortium, 2009; Christofides, et al., 2008; Finnie, Childs, & Wismer, 2010c; Finnie, et al., 2010e; Institutional Analysis, 2010b), I could find no literature which sought to contextualize students' experience with food security by understanding the complexity of university students and how they juggled their many roles, including feeding themselves and their families. There appears to be an opportunity for further study to learn more about the complex lives of university students, and how students cope with their finances and food security.

Students in this study valued their health and overall had a good working knowledge of healthy eating, although participants found they lacked the necessary finances to maintain an adequate nutritional intake. This led to a number of self-reported health issues including stress, exhaustion, sleep difficulties, weight loss, and headaches. A cursory review revealed studies which sought to understand stress in university students, linking stress to a variety of factors including university environment, lifestyle, program design, time management, academic supports, social and family supports, and employment-related stressors (Cotton, Dollard, & de Jonge, 2002; Macan, Shahani, Dipboye, & Phillips, 1990; Maroney, 2011; Reisberg, 2000; Stoeber, Childs, Hayward, &

Feast, 2011). To date the literature review did not reveal published studies which linked university student stress, or their health, to food insecurity.

Students in this study made a number of sacrifices and suffered emotionally and physically because of their issues with food security. There were a number of negative outcomes as a result. They were embarrassed to use the food bank – especially during their first visit. They worried and feared for their food, their shelter, their health and their children. They experienced marital strain, hunger, and seemingly impossible dilemmas such as: choosing to feed themselves or their children first; risking their marks by taking on a part time job; increasing their working hours; or, leaving university to earn money and start again later. They also experienced guilt and remorse for their inability to meet their own and their family's needs. This increased stress in food insecure households is also captured by the 1998-1999 National Population Health Survey (longitudinal, cross-sectional design), as reported by Vozaris and Tarasuk (2003), where those individuals living in food insecure households had significantly increased odds of reporting poor/fair health, suffering from major depression and distress, and having poor social support. Hamelin, Habicht and Beaudry (Hamelin, et al., 2002; Hamelin, Habicht, & Beaudry, 1999) in their qualitative study of food insecure Quebecers, explain core characteristics and feelings of food insecure households. Similar to the findings in this thesis study, the researchers found reactions to food insecurity included socio-familial perturbations (disrupted) household dynamics, hunger, physical impairment, and psychological suffering. Hamelin et al. also found feelings of alienation and a preoccupation with having access to enough food. They describe feelings of distress, powerlessness, guilt, embarrassment and shame, loss of dignity, inequity and frustration, and a fear of being

judged and labeled. Students voiced similar feelings in this thesis study. Wolfe et al. (2003), in their study of low-income elderly New Yorkers, described two main psychological components of food insecurity. Perceiving one's uncertain food situation led to feelings of uncertainty, worry, and anxiety, while knowledge of their lack of food choice and the need to compromise led to feelings of deprivation, anger, and embarrassment. Radimer identified and classified the psychological component of food insecurity at an individual level as, 'lack of choice and feelings of deprivation' and at a household level as 'food anxiety' (Radimer, as cited in Dietitians of Canada, 2005).

McCurdy, Gorman and Metallinos-Katsaras (2010) in an attempt to explain how poverty and its related economic stress affects parental resources and behaviours (leading to obesity in children) described how maternal depression (including pregnant women) was associated with food insecurity; however, they fell short of discussing the dilemmas food insecurity might cause for a parent. Depression is a disturbing finding as university students already have a number of issues within their lives. Depression-related food insecurity could become overwhelming for a student who already leads a complex life. Similar to students in this study, Friendly (2008), Stevens (2010) and the Dietitians of Canada (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008), confirmed that often food insecure parents struggle with difficult choices when it comes to stretching their dollar, such as paying their bills or providing food for their children (Friendly, 2008, p. 12).

Studies show that the children in food insecure households experience less food insecurity than their parents, and the youngest in food insecure households are protected from poor quality diets by their parents (Health Canada, 2007a; McIntyre, et al., 2002;

McIntyre et al., 2003; Power, 2005; Stevens, 2010). This finding was validated by participants; Alice, Fiona, and Kevin all prioritized food for their children before themselves. Although food security status was not measured using the 10-item *U.S. Adult Food Security Survey Module* (Appendix A), it was evident that two students had, numerous times, chosen not to eat meals in order to divert food to their children. In one case, a student's children had missed meals for lack of food in the home. Likely these students met the Health Canada Category Label of 'Food Insecure-Severe' (Health Canada, 2007a, p. 11). Health Canada studies of one parent households showed the highest rate of food insecurity, accounting for 16% of all food insecure households in Canada (Statistics Canada, 2010a). The lone parent in my study in fact was hungriest of all the study participants, reporting significant weight loss because of lack of food.

Disturbingly, there still “remains only limited understanding of the day-to-day reality of food insecurity and the nutritional and health consequences of this problem” (in individuals and families), which presents a clear opportunity for further research into the context and reality of food insecure students (Tarasuk, 2003, p. 709). Related to students and part time work, the literature did show that increasing part time work hours in order to increase income does reduce study time and may compromise academic achievement. Nathan, Barb and Lynda found this out the hard way (Canadian University Survey Consortium, 2009; Finnie, et al., 2010f; Hughes, et al., 2011).

Question #2: Factors and Barriers Contributing to Food Insecurity

It appears that just being a university student doubles the risk of being food insecure. In their quantitative studies both Pia Chaparro, et al. (2009) and Hughes, et al. (2011) were both able to measure the prevalence of food insecurity in two university

settings (University of Hawaii, and a university in Queensland, Australia, respectively). Hughes, et al. showed that food insecurity in the student population was more than double the national Australian rate, suggesting university students are at higher risk than the general population. If this prevalence data translates accurately to University of Lethbridge students, with 7.7% (2007-2008 data) of Canadian households food insecure (5.1% moderately food insecure and 2.7% severely food insecure), this means that up to 15.4% of U of L student households could be food insecure (Statistics Canada, 2010a). Potentially there is a significant prevalence of food insecurity on the U of L campus.

Inadequate finances and personal supports during the academic year were clearly linked to students' experiences of food insecurity and food bank use. There appeared to be two main cycles of food insecurity for students. Receiving inadequate monthly income precipitated monthly food security issues for students, however; relying on summer savings and student loans to last the year caused food insecurity issues at the beginning and end of semesters. Power (2005) states that "the research on food insecure Canadians demonstrates that, for the populations studied to date, the most important barrier to eating healthy is inadequate income" (p. S39). The findings of this study exposed three pathways (or financial scenarios) upon which the students progressed towards the food bank. The Shortfall Pathway was characterized by a chronic monthly financial shortfall owing to inadequate monthly income from such sources as scholarships. In the Cumulative Pathway, students started their academic year with an adequate supply of funding but incurred unexpected expenses such as damage and utilities deposit from a mid-year move, medical costs, and other unanticipated extra expenditures. Students on the Catastrophic Pathway experienced unexpected delays in

receiving funds (e.g. delayed student loan) or unforeseen shortfalls which dramatically decreased their funds for the year (e.g. parents' personal finances take a sudden downturn or student loan is less than expected). These pathways were not found to be mutually exclusive. For example, a student in the study experienced catastrophic financial issues, then seemed to recover, but was immediately faced with subsequent cumulative issues. I could find no literature describing the amalgam of factors which led to food bank use into three distinct pathways, although many of the factors which contributed to a lack of money are described extensively in documents which explain and describe poverty, food insecurity, or food bank use. Some factors from the literature, though not an exhaustive list, included: limited government income; unemployment/under employment; job loss; illness, injury, or poor health; poor dentition; disabilities; child care costs; family changes; single parenting; housing and utility costs; transportation costs; distance from grocery store; and, affordable food sources (Food Banks Canada, 2010; Marco, et al., 2009; McIntyre, 2003; Mikkonen & Raphael, 2010; Raphael, 2007, 2009b; Stevens, 2010; Tarasuk & Vogt, 2009; Wicks, et al., 2006).

Students were constant and consistent managers of their food budget. The Dieticians of Canada state that “for food-insecure families, putting food on the table is a constant struggle, forcing anxiety about food, food deprivation and managing household expenses to the forefront of daily living” (2005, p. 6). The relatively high cost of fresh vegetables and fruit (supported in the literature) frustrated students, creating barriers for quality nutritional intake (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008; McIntyre & Rondeau, 2009; Stevens, 2010; Wolfe, et al., 2003). Regardless of which pathway students' financial exhaustion led them towards the food

bank, the journey, and the necessity of accessing the food bank contributed to emotional and/or physical suffering. Students coped with the depletion resources in a variety of ways. They tightened their budget, borrowed or asked family and friends for money, chose on which bills to delay payment, and pawned belongings. They also limited their food intake, resorted to less expensive calorie high and nutrient low foods, and used credit to pay for food and gasoline. The literature showed that these are typical coping strategies used by households experiencing food insecurity (Dietitians of Canada, 2005). Rainville and Brink (2001) noted that coping strategies could be categorized into either management of income or management of food. Similar to the coping strategies of students in this study, these researchers noted management of income strategies included the use of bottles/coupons (57%), delaying bill payment (49%), borrowing money (40%), borrowing food (20%), selling possessions (14%), and buying food on credit (9%). Food management strategies in the Rainville and Brink research included receiving foods from charity (22%), eating cheaper foods (46%) and skipping or eating fewer meals (29%). These findings were confirmed by De Marco, et al. (2009) who found food stretching, use of alternate food sources (including food banks), creative bill paying, and drawing on social supports served as typical coping strategies.

In addition to lack of finances, students in this study identified four other core factors and barriers which contributed to their food security issues: costs of and/or a lack of transportation; geographical distances from less expensive grocery stores; lack of time; and, 'other people,' (meaning other people with whom the students lived) were additional factors which contributed to food security issues. These four factors were consistent with the literature describing typical household non-financial barriers to food security. Similar

to the published literature by Rainville and Brink (2001), Gorton et al. (2010), and Wolfe et al. (2003), transportation was a barrier to food acquisition. In contrast, Hughes et al. (2011) did not find a significant difference in ‘transport to shops’ between food secure and food insecure students. Students in this thesis research were constrained from shopping at the least expensive grocery stores (identified by students as Superstore, Walmart and Costco), by a lack of adequate and timely public transportation, and the high cost of gasoline. This affected their ability to procure food in three ways. First, it was difficult to purchase a reasonable amount of groceries to last from one to four weeks when using the bus. Second, they were often forced to shop at the more expensive, nearby grocery stores, leaving them less money each month for food. And finally, they were keenly aware of the cost of gasoline to drive the approximately 20 kilometers (round trip) to obtain groceries from their preferred stores.

Many students chose to live near the university to be closer to classes and study resources. Because of this, geographical distance to a less expensive grocery store was a major issue for these university students – especially those living in West Lethbridge and in rural communities. As previously described, the University of Lethbridge exists in a food desert (lack of nearby stores to purchase a variety of healthy foods at a reasonable price). This phenomenon impacts the amount of money students could save by buying the least expensive food products. If students had no vehicle or little storage in their cupboards or freezer, this also limited how much they could carry or purchase in bulk. This is consistent with food security literature which discussed the impact and barriers of distance to stores and food deserts on food insecure individuals (Gorton, et al., 2010; Lane, et al., 2008; Rainville & Brink, 2001).

Though not mentioned extensively in the qualitative literature on interviewing the food insecure, a lack of time to cook and/or shop is described as a barrier to food security by university students in this study. Drewnowski and Eichelsdoerfer (2009) confirm that “time poverty and economic poverty go hand in hand” (p. 2). This issue was also validated as a significant factor in three other studies of postsecondary food security (House, 2006; Meldrum and Willows, 2006; and, Hughes et al. 2011).

Sometimes it was difficult for students to control ‘others’ whose actions and decisions influenced their food and/or money. One student described how her roommate significantly increased her power bill through haphazard usage – and this same roommate took over fridge and cupboard space, leaving the student less able to purchase and store adequate amounts of food for the month. Another student described how her partner chronically cooked too much food which then went to waste – further shrinking future food opportunities. Though not described extensively in the food insecurity literature, Stevens (2010) described this same phenomenon. The boyfriends or family of young food insecure mothers would eat their monthly food allowance, leaving the mothers and their children at increased risk of food insecurity, especially at month end.

The above descriptions of the five main barriers to food security for students (lack of finances, lack of or cost of transportation, lack of time, geography and people) provides some insight into the juggling of resources that it takes for students to mitigate food insecurity. Gorton’s et al. (2010) systematic review of environmental influences (economic, physical, political and socio-cultural) on food security among inhabitants of high income countries (such as Canada), validated the findings from this thesis study. Already described previously, students were affected by:

- 1) Economic factors (inadequate/interrupted income, living expenses, housing costs, high cost of food); and,
- 2) Physical factors (health issues either resulting from food insecurity costs associated with an illness, inadequate cooking/kitchen facilities, transportation issues such as no available vehicle for shopping, poor public transport scheduling, or cost of fuel and running a vehicle, rural/urban living location, and Westside food desert i.e. a lack of nearby facilities on the Westside of Lethbridge to purchase healthy foods at a reasonable price).

The next section, which addresses research question #3, includes description of some the socioeconomic factors as described by Gorton. Political factors are addressed under question #4.

Question #3: Strategies Commonly Utilized to Overcome Barriers Associated with Food Insecurity.

Participants planned for leaner times, vigilantly managing their budgets, time and shopping to increase their food security. Students had elaborate, thrifty and time consuming systems in place to procure and select their food. These included setting nutritional priorities, meal planning (often up to one month at a time), strategic shopping at pre-chosen stores for the best ‘deals,’ and arranging transportation to shop.

Participants spent time and energy budgeting funds, procuring and storing foods in their freezer or pantry. They planned meals and shopping trips, kept to strict shopping lists and sought out the best stores with the best prices when shopping for food. They also prioritized purchasing the healthiest foods first before considering purchasing ‘junk’ foods.

Strategic shopping and budgeting is not a new concept, especially for any Canadian concerned with their money. Current grey literature confirmed that the students were acutely aware of best prices and best stores at which to purchase their groceries. A recent CTV network news report (prepared by Calgary home economist Sylvia Kong) revealed a 36 item grocery basket price comparison during August 2011. The 'best deal' was at Superstore, where the grocery basket cost \$143.66. These same items at Sobeys were \$166.52 and at Safeway, \$167.92 (CTV Calgary News, 2011). Local college and university websites teach students the finer points of budgeting their limited dollars (Lethbridge College, 2011; University of Lethbridge, 2011). Despite these websites, study participants clearly suggested that all students be given more education as to how to budget their money to last the academic year. Study participants also asked for help in finding the best food prices. The Conference Board of Canada suggested that higher levels of education, and increasing numbers of women with university degrees, have resulted in more aware and demanding consumers who, like the students in the study, valued eating healthily (Grant, Basset, Stewart, & Ades, 2011). Although Hamelin et al. (2002) and Wolfe et al. (2003) also suggested that the populations they studied (that is the wider population, not just university graduates) also valued and strived to consume balanced and regularly timed meals.

Kempson et al. (2003) listed an extensive variety of strategies commonly utilized by low income Americans used to overcome food insecurity barriers, many of which were remarkably similar to the U of L participants. These included: relocating to inexpensive housing to decrease expenses; and, purchasing food from low cost sources, including bulk foods, items covered by coupons, nearly expired foods, sale items, dented

and damaged packages, and expired food. Further to food management practice, Kempson et al. described making low costs dishes, rationing food supply, conserving food (taking left-overs home), freezing perishable / storing non-perishables and relying on emergency food supplies at the end of the month. Students relayed that sometimes their pantries became lean and they resorted to eating such foods as Kraft Dinner, adding macaroni or rice to extend meals, and/or limiting the amount of food they ate at each meal so they could ration until the next time they had the money, transportation or time to purchase groceries. Kempson also described what I considered more desperate measures - strategies which the students in my study did not admit to. These included removing slime/mold/insects from foods, locking up food, overeating when food is available, eating other people's leftovers, and finding and eating road-kill. However, one participant did admit that as undergraduate student he participated in 'dumpster diving' as part of his food security strategy.

In addition to summer earning, loans and scholarships, participants developed safety nets (financial, personal and food supports) throughout the school year to manage and maintain their food security. These supports came from family, spouses, boy/girl friends and other friends, and their church. In the literature, interaction with informal support systems such as family, friends, and trusting in God, were important to food insecure individuals. Students prepared for future times of food insecurity by taking advantage of food opportunities such as food giveaways, free meals at the university or within their support systems. Being offered a meal was significant help to students. Kempson's et al. (2003) participants, similar to the students, also obtained food opportunistically through free meals/samples.

Gorton's (2010) socioeconomic factors as applied to this study included: students' challenges related to their cooking and budgeting skills and knowledge; cultural/religious beliefs and obligations; household composition including children, spouses and roommates; social networks/supports that could assist them when food was scarce; and, embarrassment for their situation and for accessing the food bank. Asking for assistance from family and friends, though a common strategy for students to overcome barriers associated with food insecurity, became complicated for some participants who needed money. Because of their older age, their desire for independence, their relationship with their family and/or their parent's financial situation this strategy was only occasionally exercised. This finding was not present in the literature describing postsecondary student food insecurity and presents an opportunity for further research into the family dynamics surrounding students asking for additional financial assistance.

Question #4: To What Extent do the SDH and Structural Violence Account for Factors Which Contribute to Food Insecurity?

The questions from the semi-structured interview guide were informed by the literature on postsecondary student food insecurity and qualitative research studies of food insecurity populations, as well as the social determinants (SDH) of health and structural violence frameworks. The SDH provided a rich framework from which to ensure elements of the data collection were complete. Furthermore, as the SDH are designed to address social policies and agencies responsible for those determinants, they provided an excellent springboard into structural violence theory. Structural violence theory seeks to expose policies and organizations which intentionally (or unintentionally) victimize students, further risking their food security and ultimately their health and

education. In writing this next section, I more fully realized how well the two frameworks complement each other. The two frameworks together provided a much more in-depth understanding of the students' experiences with food insecurity. There are both organizational structures and social determinants which affect the ability of today's student to make ends meet and ultimately maintain a reliable, accessible and acceptable source of healthy foods. The next two sections reflect the main research findings related to the SDH and structural violence.

Selected social determinants of health.

Risks for food insecurity are substantial for postsecondary students, perhaps as much as double the national current rate of 7.7% (Hughes, et al., 2011; Statistics Canada, 2010a). Additionally, with only one in four who are hungry actually accessing the food bank, the situation could be more dire than the ULSU food bank realizes (Rainville & Brink, 2001). With food insecurity comes myriad health issues, both physical and mental (Dietitians of Canada, 2005; Hamelin, et al., 2002; Hamelin, et al., 1999; McCurdy, et al., 2010; Vozoris & Tarasuk, 2003; Wolfe, et al., 2003). Affordable housing is one of the major issues which accounts for lack of money to purchase food (Food Banks Canada, 2010; Mikkonen & Raphael, 2010). Some students compromised adequate housing in order to keep their housing costs at an affordable level and some moved apartments mid-semester to save money. Other students voiced worry regarding rent increases as they had no further room to maneuver their food budget for more rent.

Smylie (2009) states that “a repeatedly mentioned means for tackling poverty and associated low socio-economic status (of Aboriginal people) is through much greater investment in education, more particularly that of children and for building indigenous

leadership” (p. 285). One third of students in this study were of Aboriginal descent. Aboriginal students in the study understood that education would help them achieve a better socio-economic status, and were willing to make sacrifices to achieve this goal. It appears, however, that their risk for food insecurity and poverty as university students may be much higher than first indicated in the literature. Currently 33% of off-reserve Aboriginal households experience food security (McIntyre & Rondeau, 2009). Hughes found double the national rate of food insecurity within a university student population (Hughes, et al., 2011). These two studies may indicate that Aboriginal postsecondary students are at additional risk for food insecurity.

Students have limited income sources and times that they are able earn money in order to attend university. Additionally, income for students can be precarious as students in this study described summer layoffs, loan decreases and delays, and scholarship limitations as issued that lead to their food insecurity. Income-health studies have shown a positive associations between income and health, including self-reported health; however, there are studies which refute these results (Auger & Alix, 2009; Wilkins, Berthelot, & Ng, 2002). Therefore, this subject remains under some debate in Canada. There are a number of Canadian studies which show a negative relationship between poverty and health status in Canadian children, associating low birth weight, injury-related mortality and developmental problems with poverty. This relationship becomes stronger the longer the child is exposed to poverty. Data from Quebec death registries (2000-2004) reveal life expectancies in adults is highest among those in the highest income quintiles, and decreases (for both genders) as income decreases (Auger & Alix, 2009). There are no available studies specifically linking health issues and poverty

in the *university student population* and, as discussed in the literature review, there is no clear consensus in Canada on the definition of poverty. Nevertheless, university students (with an estimated annual income of \$13,056) are likely to be at increased risk for health issues and health related illnesses because of their chronically low income (Alberta Community/Public Health Nutritionist Food Security Subcommittee, 2008; Auger & Alix, 2009). This is a subject which warrants further research.

Social exclusion is a concern within the student population because researchers have determined feelings of alienation and marginalization in both food insecure individuals and first generation university students (Hamelin, et al., 2002; Stuber, 2011). Those students who feel marginalized and alienated, even in the midst of a dynamic environment such as a university, sustain higher health risks and lower health status. Galbuzi (2009) confirms that poverty is a key cause and product of social exclusion. Its impacts on health status are now well established” (p. 252).

Structural violence.

Paul Farmer (1999, 2004, 2005, 2006) links structural violence with suffering and health inequities. As discussed earlier, students endured emotional and physical suffering because of their issues with food insecurity. There were a number of political and organizational structures which students, as ‘underdogs’ in the educational system, had little to no control over issues which contributed to their suffering.

Tuition fees are a common concern among students and universities. Interesting data is gleaned when minimum wage rates are compared with student tuition fees. The current (September 2011) minimum wage in Alberta is \$9.40/hour and 20 years ago, in 1991, the minimum wage was \$4.50/hour (Government of Alberta, 2011). Considering

that most students' earnings come from minimum paying employment, in 1991 (based on a 40 hour work week) it would take an Albertan student 9.5 weeks of summer earnings to offset their tuition costs of \$1,706. Today, in 2011 it takes a University of Lethbridge student almost 15 weeks (14.9) to pay off \$5,138 tuition fees. This amounts to 36% more time than in 1991 to earn enough money to pay their tuition fees – more weeks than are available for students to work in the four months between university years. This same data is presented in Table 5.1

Table 5.1
Minimum Wage and Tuition Comparison (by Weeks Needed to Pay Tuition)

Year	Minimum wage/hr (Alberta)	Tuition Fees	Weeks needed to work to pay off tuition fees (based on a 40 hr work week)
1991	\$4.50	\$1,706*	9.5 weeks
2011	\$9.40	\$5,138 **	14.9 weeks

*Alberta Average Tuition Fees

**University of Lethbridge Tuition Fees

(Canadian Association of University Teachers, 2011; Government of Alberta, 2011; Registrar's Office and Student Services, 2011)

When this data is considered, including cost of living increases of 41% over the same 20 year period, there is no wonder that students fall short of money throughout their academic year and are implicated in national concerns regarding rising student debt.

These structural issues all need to be taken into consideration by governments and institutions when setting tuition fees, minimum wage, student loan rates and repayment policies, and student housing rents.

As mentioned previously, the University of Lethbridge is surrounded by a food desert. What once seemed like an advantageous idea to build the university on the 'other' side of the Oldman River, has resulted in geographical violence, and costs the students in transportation and access to affordable nutritious food. A second grocery store is now

being built on the Westside; however it is located in close proximity to the existing Safeway store and so this still poses issues for student transportation as this location is not within walking distance for many students. Walker et al. (2010) recently studied how food security impacts the residents of a food desert and a food oasis. The researchers highlighted access and transportation as important issues that need to be addressed. Food insecure residents living in the food desert tended to not own their own car, and those who had cars cited gas prices as an issue. Therefore, there is an opportunity for the university to lobby the City for both better public transportations to more cost friendly grocery stores, and lobby (or entice) one of these grocery stores to locate near to the university. A temporary measure could include a scheduled shuttle bus from campus to those lower priced grocery stores.

A secondary issue is that the U of L also exists within a 'food swamp'. A food swamp is a geographic area where there is an overabundance of high energy, high caloric food options, and liquor stores (foodday.org, 2011). Students in the study identified the issue of the high cost of nutritious, versus the lower cost of non-nutritious food on campus, as well as the lack of variety and quality of campus food. They also reported a lack of available places near campus to purchase healthy foods at a reasonable price. And, as noted in the literature review, there are eight fast food restaurants within a 1.7 kilometer radius of the university gates and three liquor stores almost as close. In the midst of a deteriorating social safety net, Canada currently has no coordinated plan to monitor food insecurity. The Dieticians of Canada link the decline in Canada's social programming with neoliberal ideology.

Neo-liberal political philosophy has dominated most political parties... espous(ing) free market s the most efficient and effective distributor of

foods and services and tax cuts...resulting in the privatization of public services, reduced expenditures on social services and the downsizing and downloading of social programs (Dietitians of Canada, 2007, p. 3).

The university is in a prime position to be a leader among institutions of higher learning and develop a healthy food policy which ensures a variety of healthy food choices, at affordable prices, to support its community of students.

Inadequate monthly scholarship funding for Aboriginal students is a primary concern because, as noted previously, they are at a very high risk for food insecurity. Participants struggled each month to make ends meet. Apparently there is little to no difference in scholarship monthly income between single students and those with children. The funding policies need to be reconsidered to ensure food security for Aboriginal students who are attempting to better their socioeconomic position.

Students identified policy level changes which would make a positive difference in reducing food insecurity: increasing student loans to reflect the cost of living; changing day care regulations to allow international students subsidized day care; revising monthly scholarship and awards processes and dollar amounts; and, teaching students budgeting and nutrition skills. Students noted hidden costs to classes such as requiring a laptop computer, increased printing costs, new editions of text books, and field trips – many of which were not explicit when they registered for a course. Though well intentioned, the course designers in their attempt to create a broad experience for students, seem to fail to take into account the limited funds students have to work with each semester.

Gorton and colleagues' (2010) systematic review indicate political factors which affect food security. Examples from this study include: structural violence issues related

to university food policies; city planning affecting location of university in relation to local affordable grocery stores; and, inadequate student loans and scholarships.

Recommendations and Implications

A number of recommendations and implications have already been addressed throughout this chapter.

- Aboriginal students, and their dependents, need to be financially well supported if they are to successfully pursue postsecondary education and remain food secure.
- Prevalence data for food insecurity in students attending Canadian postsecondary institutions is desperately needed to further understand the implications of this phenomenon.
- Governments and institutions need to work together and take into account the scope and interplay of issues surrounding minimum wage rates, tuition fees, student loan rates, loan repayment policies, and student housing rents to assist postsecondary students to become more food secure.
- Affordable housing dedicated to students, outside of the city's competitive markets, would help ensure food security for students.
- There is opportunity for postsecondary institutions to develop food policies to protect and promote the health of their students, and examine current policies which can contribute to food insecurity for students such as campus food policy, quality and pricing. "Community food security cannot be realized outside a policy context...food policies are the mechanisms by which food security action projects can be transformed into a framework to meet the goal of a food systems

that is economically and environmentally sustainable, promotes health, and supports food security for all” (Dietitians of Canada, 2007, p. 5).

- There is opportunity for the university to lobby the City for both better public transportation to more cost-friendly stores and lobby at least one of these grocery stores to locate near the university. Creation of a scheduled shuttle bus to take U of L students to more economical stores would also increase food security.
- There is an opportunity for universities to further explore their role in structural violence towards students. Using the lens of structural violence to view programs and services could serve to ease unintended financial burdens on students, thus increasing their chances of food security.
- Educators must design courses which are accessible to all students and are up front about technology expectations without penalizing students who cannot afford those technologies. Educators may consider the use of older texts for students with financial difficulties.
- Campus food banks have arisen because of an identified need. Students’ unions and those that distribute food to impoverished students should consider examining how and why they collect data on those same students. Maintaining a record of food bank use is superficial data in terms of the realities of students who access the university food bank. When students’ unions obtain better data to analyze, they can look at why food insecurity exists in their setting. The social determinants of health might work as a framework to inform the design of a data base. For example, data such as age, gender, student status (undergraduate, graduate), marital status, number of children, ethnicity and international students

potentially are vital data points. With this information, students' unions can then become pro-active in assisting students when they are able to anticipate who will be accessing their services. They will be better able to respond to changing trends in food bank utilization. This information will also assist organizations such as Canadian Federation of Students and the Canadian Association of Students Unions to better advocate for their members. Food security is a social justice and equity issue and should not be considered a social norm or a right of passage. Social justice and equity issues should be of concern to students' unions which are mandated to promote the well-being of their members.

- Public health advocates need to become more aware of food insecurity as the 'skeleton in the university closet' so that they can better advocate for this population and help reframe the normativity of the starving student. Those who are transitioning their socioeconomic status through higher education continue to need support until they are able to obtain a well paying position.
- Educators need to understand the need for students to manage work and classes, and examine their expectations that students should be able to focus only on their studies. Students are more than just students; they are the sum of their roles, responsibilities, and complex lives.

Limitations of the Study

There are several limitations to this study. The study was centred on one small Canadian university which may limit the transferability of the findings. Students who accessed the food bank self selected into the study so there may be some inherent bias present or undetected about the kind of student who chooses to enter these studies. The

\$30 gift card may have influenced the decision to participate in the study. Men were not represented as half of the study participants, although the food bank estimated 50% of their clientele are male. Part time students were not represented – which might have expanded insight into the financial situation of part time students and why they chose this route to complete their education. International students from developing countries were not represented at all in the study. According to Food Bank Canada, only one in four individuals who are food insecure access food banks for assistance. The study did not capture the experiences of those other three students. Finally, the data collection relied on self-reporting and re-call, both of which could influence the findings.

Recommendations for Further Study

There is opportunity for future researchers to explicate the three financial collapse pathways leading to food bank use. Further research to validate these pathways and better understand them could help universities, students' unions and policy makers better understand which pathways are subject to interventions. For example, in the catastrophic pathway, creating a mechanism for a fast-tracked money advance for students until their student loan arrives would alleviate stress and increase food security. More broadly considered, further research into these pathways may help poverty advocates to also target programs and interventions for those households in the unfortunate financial position of needing to utilize food banks.

There is a dire need to understand the prevalence and experience of food insecurity among students at Canadian post-secondary institutions. The gap in food security literature is indeed apparent with respect to understanding and intervening for Canadian postsecondary students. A larger, multi-centre quantitative study, utilizing the

U.S. Household or Adult Food Security Survey Module, may detect and expose the prevalence of food insecurity on Canadian university campuses. Of further concern is food insecurity for Aboriginal students, which warrants closer scrutiny.

Further research into the family dynamics surrounding students asking for additional finance from their family member might help students, families and funders understand how difficult a financial and social situation in which students can be placed. Researchers may also explore a prospective design such as interviewing students on arrival to university, and each year afterwards. This may bring a stronger study design because students would not be relying as much on long term recall. Their experiences could be recorded regularly, and a deeper understanding of the student experience as it unfolded would result.

Utility of Applied Frameworks.

The two frameworks, SDH and structural violence, provided conceptual guidance for the qualitative study. Both were very useful in designing the interview guide because they had similar philosophical underpinnings – the critique of policies which affect health. The SDH are an established means of viewing the wider social foundations and dynamics of health inequalities and provided a broad, evidence based, context for the study. There were some findings, however, that did not fit easily into the twelve SDH categories. For example, students spoke about their growth as individuals, students and consumers. Some admitted to poor spending and study habits in their first years of university; however, with experience, time, and for some students parenthood, they found themselves making wiser decisions about their time and money. Another example is the difficulty students have in asking parents for extra money throughout the school year.

Examining this issue with a social support or social exclusion lens does not take into account the intricacies of family dynamics. Support could be there for the student; however, family boundaries play a large role in decisions around money.

Structural violence theory proved to be an important lens from which to view the data as well as the frustrations expressed by students over circumstances which they felt they had little to no control. It also provided a context from which to understand students' suffering and health concerns. Structural violence theory provided a means to categorize and provide recommendations to those organizations that interact with or provide services to students.

The synergy between the SDH and structural violence theory made both frameworks helpful for data analysis and discussion. Where one was limited the other was able to describe or explicate findings. Structural violence theory invited an 'examination of the unexamined' system that the SDH did not. Not all the SDH were linked to violence; however, without the lens of structural violence, systematic issues that were taken for granted (such as location of the university in relation to sources of food, or scholarship funding designed to assist students), might then remain concealed.

When collectively examining the structural violence issues revealed in this thesis study, one begins to understand the forces under which students live and how violence is perpetrated towards them. When then combined with the SDH, a much deeper understanding of the challenges which impair students' health and well-being is gained. Not examining the status quo may explain why we, as a society, allow this public health issue regarding food security within postsecondary student populations to exist. Using the two frameworks, along with qualitative methodology, provided a disturbing story of

the students and revealed issues that had not been ‘seen’ in this population to date, such as the pathways to the food bank.

There are other frameworks that could possibly explicate postsecondary student food insecurity. One lens that could be useful to examine the findings is through life course perspective. This perspective takes into account the temporal nature of life experience as well as how the SDH operate at every level of development, while combining biological and social elements which interact with each other over time (Blane, 2006). This theory has been utilized by epidemiologists to explain how childhood disease or childhood exposure can influence adult diseases. It is also utilized by social scientists to explain how ‘socially patterned’ exposures accumulating over time, or at key times, can influence health outcomes and create advantages or disadvantages (Blane, 2006; Smith, 2003). Using the same example of the difficulty some students have in asking parents for extra money through the school year, the motivation of his/her parent may be a conscious decision to influence life-course as a form of social support for his/her child. By not giving their child extra money they are hoping to teach their child to become more responsible and spend money more wisely, thus next time they will independently be food secure. Life-course may also help explain the 3 pathways to the food bank. According to Blane (2006),

The life-course perspective identifies a further limitation on the traditional ‘safety net’ approach. Adversity is not randomly distributed; instead it tends to cluster and to accumulate present on top of past disadvantage. Consequently, any single misfortune tends to identify the most vulnerable individuals who have accumulated the greatest number of previous handicaps (p. 232).

Blane goes on to explain that what is needed is a ‘springboard’ to repair past damage.

In other words, a generous ‘hand-up.’ These examples illustrate an opportunity for future

researchers to utilize life-course as an analysis framework for postsecondary student food insecurity.

Another lens to examine postsecondary student food insecurity comes from Elaine Power's work on the determinants of health eating among low-income Canadians (Power, 2004). As part of her work, she developed a working conceptual model of the determinants of healthy eating (Appendix K). There are many similar factors that can be applied to this thesis research including some of the individual, environmental, and sociopolitical factors. However, the model goes beyond the scope of this research as its outcomes are 'eating practices' implying a choice in food, rather than the actual availability of food to be able to eat. Power used Pierre Bourdeau's theoretical model which postulates the purchase and eating of food is derived from an individual's social position and the individual's capital or resources. There is an opportunity for future researchers to explore how social mobility, influenced by education, may explain why the 'starving student' phenomenon is accepted as a social norm. Finally, there may be an economic model which explains the three pathways to the food bank model, which again would be an opportunity for subsequent researchers to explore.

Advice, Reflection and Reflexivity

Advice for future researchers.

The person-centered interviewing method was effective in collecting information about the student 'informant' i.e., the personal experiences of each participant. When examined as a whole, the data became an overall story of the student experience of food insecurity. However, as respondents, students were hesitant to offer other perspectives on the collective student experience. Respondents were respectful of other students'

contexts and as such, they were reluctant to generalize about their peers. This reluctance lead to ‘thin’ descriptions of external context.

Respondents did report student stereotypes of reckless spenders and haphazard learners as truthful, but also not for all students and not consistently throughout all four years. There is a need to recognize that researchers cannot stereotype all students based “on the ones we see at the bars and malls.” Participants pointed out that many students who do not fit the stereotype are often unseen. Students who studiously and diligently work toward achieving their postsecondary education may not frequent ‘malls’ and ‘bars’. Thus, as observers we may only be seeing the visible tip of the iceberg.

It took a full seven months to recruit 15 students (10 women and five men) into this study. Future researchers should anticipate that students will not readily divulge their story, even with a small incentive such as a gift card. This is likely tied to their embarrassment and other feelings associated with food bank use. This challenge was confirmed to me by a master’s colleague who a few years ago attempted a quantitative study on food insecurity at another Canadian university. She abandoned the study for lack of participants. Male students in this study believed that it would be more difficult to recruit men into the study than women. From the perspective of these male participants, men may be reluctant to talk about their feelings or compromise their sense of masculinity.

Researchers should anticipate difficulty in obtaining data and receiving consistent and useful data from students’ unions, especially if the social determinants of health are utilized as a framework for research. Working with the students’ union to help build a simple data collection method could help gather appropriate data for research and

simultaneously build the capacity of students unions to collect more efficient and meaningful statistical data for analysis.

Care must be taken when communicating the concepts of food security and food insecurity to potential participants. Originally, my draft versions of the invitation letter and consent form used the phrase ‘food insecurity’ throughout, because the focus of the thesis research was food ‘insecurity.’ When piloting the interview guide, students’ feedback was to change the word ‘insecure’ to ‘secure’ because students do not want to be labelled as ‘insecure,’ and doing so could impede recruitment. As a result of this feedback, I re-drafted the forms utilizing food security as a frame to discuss the issue and recruit participants.

Reflexivity and reflection.

It is important that researchers keep in touch with evoked thoughts and emotional changes throughout the course of their research. As a university teacher and a full time graduate student, I was privileged to be able to look into the world of university students for a short time. Students in my classes, anticipating that my research would potentially assist their peers, willingly and generously opened up their lives to give me insight into the ‘starving student’ phenomenon. This was an important stepping stone into my research as it grounded me in my own privilege as a wage earner, while assisting me to explore the lives of students.

I became highly concerned about participants who were obviously traumatized by their food insecurity and quickly realized and endeavoured not to re-victimize them by telling their story. One student was in tears throughout much of the interview. Though I

referred them to counselling, in the end I was not sure counselling was accessed; I continue to be concerned for this and other participants' welfare.

As a teacher I have become more understanding of the multiple roles many of my students manage in their lives. As I teach community nursing, I am better able, after listening to the stories of so many food insecure students, to teach my own students about the social determinants of health and able to generate examples which are meaningful to the lives of students.

I now realize that there is more depth to students than I originally thought. I see them with new eyes. They say they have no time for 'life' and I thought this life was about parties, shopping, and having fun. Students wear multiple hats and have many responsibilities. I no longer make assumptions about their lives, or that they are 'only' students.

Finally, I remain distressed about the normalized view of the 'starving student' as a rite of passage. I hear this language in day to day conversations at the university. It distresses me that the 'system' continues to accept this as the status quo.

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Appendix A
U.S. ADULT FOOD SECURITY SURVEY MODULE:
THREE-STAGE DESIGN, WITH SCREENERS
Economic Research Service, USDA
July 2008

Revision Notes: The food security questions in the U.S. Adult Food Security Survey Module are essentially unchanged from those in the original module first implemented in 1995.

July 2008:

- Wording of resource constraint in AD2 was corrected to, "...because there wasn't enough money for food" to be consistent with the intention of the September 2006 revision.

September 2006:

- Minor changes were introduced to standardize wording of the resource constraint in most questions to read, "...because there wasn't enough money for food."
- Question numbers were changed to be consistent with those in the revised Household Food Security Survey Module.
- User notes following the questionnaire were revised to be consistent with current practice and with new labels for ranges of food security and food insecurity introduced by USDA in 2006.

Overview: The U.S. Adult Food Security Survey Module is the same set of questions that is administered as the U.S. Household Food Security Survey Module to households with no child present. For many measurement purposes, the adult module can be used both for households with and without children present.

The U.S. Adult Food Security Survey Module is the same set of questions that is administered as the U.S. Household Food Security Survey Module to households with no child present. For many measurement purposes, the adult module can be used both for households with and without children present.

- Advantages (compared with the 18-item household module):
 - Less respondent burden.
 - Improves comparability of food security statistics between households with and without children and among households with children in different age ranges.
 - Avoids asking questions about children's food security, which can be sensitive in some survey contexts.
- Limitations:
 - Does not provide specific information on food security of children.

Transition Into Module (administered to all households):

These next questions are about the food eaten in your household in the last 12 months, since (current month) of last year and whether you were able to afford the food you need.

Optional USDA Food Sufficiency Question/Screeners: Question HH1 (This question is optional. It is not used to calculate the Adult Food Security Scale. It may be used in conjunction with income as a preliminary screener to reduce respondent burden for high income households).

HH1. [IF ONE PERSON IN HOUSEHOLD, USE "I" IN PARENTHEICALS, OTHERWISE, USE "WE."]

Which of these statements best describes the food eaten in your household in the last 12 months: —enough of the kinds of food (I/we) want to eat; —enough, but not always the kinds of food (I/we) want; —sometimes not enough to eat; or, —often not enough to eat?

- [1] Enough of the kinds of food we want to eat
- [2] Enough but not always the kinds of food we want
- [3] Sometimes not enough to eat
- [4] Often not enough to eat
- [] DK or Refused

Household Stage 1: Questions HH2-HH4 (asked of all households; begin scale items).

[IF SINGLE ADULT IN HOUSEHOLD, USE "I," "MY," AND "YOU" IN PARENTHEICALS; OTHERWISE, USE "WE," "OUR," AND "YOUR HOUSEHOLD."]

HH2. Now I'm going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true, sometimes true, or never true for (you/your household) in the last 12 months—that is, since last (name of current month).

The first statement is "(I/We) worried whether (my/our) food would run out before (I/we) got money to buy more." Was that often true, sometimes true, or never true for (you/your household) in the last 12 months?

- [] Often true
- [] Sometimes true
- [] Never true
- [] DK or Refused

HH3. "The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- [] Often true

- Sometimes true
- Never true
- DK or Refused

HH4. “(I/we) couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or Refused

Screener for Stage 2 Adult-Referenced Questions: If affirmative response (i.e., "often true" or "sometimes true") to one or more of Questions HH2-HH4, OR, response [3] or [4] to question HH1 (if administered), then continue to *Adult Stage 2*; otherwise skip to *End of Adult Food Security Module*.

NOTE: In a sample similar to that of the general U.S. population, about 20 percent of households (45 percent of households with incomes less than 185 percent of poverty line) will pass this screen and continue to Adult Stage 2.

Adult Stage 2: Questions AD1-AD4 (asked of households passing the screener for Stage 2 adult-referenced questions).

AD1. In the last 12 months, since last (name of current month), did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?

- Yes
- No (Skip AD1a)
- DK (Skip AD1a)

AD1a. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- DK

AD2. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?

- Yes
- No
- DK

AD3. In the last 12 months, were you every hungry but didn't eat because there wasn't enough money for food?

- Yes
- No
- DK

AD4. In the last 12 months, did you lose weight because there wasn't enough money for food?

Yes

No

DK

Screener for Stage 3 Adult-Referenced Questions: If affirmative response to one or more of questions AD1 through AD4, then continue to *Adult Stage 3*; otherwise, skip to *End of Adult Food Security Module*.

NOTE: In a sample similar to that of the general U.S. population, about 8 percent of households (20 percent of households with incomes less than 185 percent of poverty line) will pass this screen and continue to Adult Stage 3.

Adult Stage 3: Questions AD5-AD5a (asked of households passing screener for Stage 3 adult-referenced questions).

AD5. In the last 12 months, did (you/you or other adults in your household) ever not eat for a whole day because there wasn't enough money for food?

- Yes
- No (Skip 12a)
- DK (Skip 12a)

AD5a. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- DK

END OF ADULT FOOD SECURITY MODULE

User Notes

(1) Coding Responses and Assessing Household Adult Food Security Status:

Following is a brief overview of how to code responses and assess household food security status based on the Adult Food Security Scale. For detailed information on these procedures, refer to the *Guide to Measuring Household Food Security, Revised 2000*, available through the ERS Food Security in the United States Briefing Room.

Responses of “yes,” “often,” “sometimes,” “almost every month,” and “some months but not every month” are coded as affirmative. The sum of affirmative responses to the 10 questions in the Adult Food Security Scale is the household’s raw score on the scale.

Food security status is assigned as follows:

- Raw score zero—High food security among adults
- Raw score 1-2—Marginal food security among adults
- Raw score 3-5—Low food security among adults
- Raw score 6-10—Very low food security among adults

For some reporting purposes, the food security status of the first two categories in combination is described as food secure and the latter two as food insecure.

(2) Response Options: For interviewer-administered surveys, DK (“don’t know”) and “Refused” are blind responses—that is, they are not presented as response options but marked if volunteered. For self-administered surveys, “don’t know” is presented as a response option.

(3) Screening: The two levels of screening for adult-referenced questions are provided for surveys in which it is considered important to reduce respondent burden. In pilot surveys intended to validate the module in a new cultural, linguistic, or survey context, screening should be avoided if possible and all questions should be administered to all respondents.

To further reduce burden for higher income respondents, a preliminary screener may be constructed using question HH1 along with a household income measure. Households with income above twice the poverty threshold AND who respond <1> to question HH1 may be skipped to the end of the module and classified as food secure. Using this preliminary screener reduces total burden in a survey with many higher income households, and the cost, in terms of accuracy in identifying food-insecure households, is not great. However, research has shown that a small proportion of the higher income households screened out by this procedure will register food insecurity if administered

the full module. If question HH1 is not needed for research purposes, a preferred strategy is to omit HH1 and administer Adult Stage 1 of the module to all households.

(4) 30-Day Reference Period: The questionnaire items may be modified to a 30-day reference period by changing the “last 12-month” references to “last 30 days.” In this case, items AD1a and AD5a must be changed to read as follows:

AD1a/AD5a. [IF YES ABOVE, ASK] In the last 30 days, how many days did this happen?

_____ days

DK

Appendix B

Letter to Students' Union Manager

Date: September 21, 2010

Mary Nugent, RN, BScN
Lethbridge, Alberta,

Cheri Pokarney, Manager
University of Lethbridge Students' Union
University of Lethbridge
4401 University Drive
Lethbridge, Alberta, T1K 3M4

Dear Ms. Pokarney:

I am writing to request written permission to access adult students from the University of Lethbridge who utilize the Students' Union Food Bank, to participate in my thesis research project entitled, "Exploring the Experiences of Student Food Insecurity Among Postsecondary Students." My research proposal has been reviewed by the Human Subject Research Committee, University of Lethbridge. A copy of the Ethical Review certificate is attached.

The purpose of this study is to explore the experience of food insecurity from the perspective of the postsecondary student. I would like to interview approximately 20 full time adult students who access the U of L Students' Union food bank. The interviews will be audio recorded and will take approximately 60 minutes each. The interviewees will also be required to complete a short socio-demographic questionnaire. A small sample of students may be asked to participate in a follow-up 20-30 minute interview to validate preliminary findings. Interviews will take place on the U of L campus, in a booked private meeting room.

Participation is strictly voluntary. Interviewees will be assured that all information will be kept confidential. Anonymity and confidentiality will be maintained through assigning a pseudonym to interview transcripts and questionnaires. The interviewees will be free to discontinue their participation at any stage of the research project without negative consequences. Each interviewee will be offered a \$30 gift card to the Safeway grocery store to compensate them for their time. If the student chooses to withdraw from the study, the gift card is still the student's to keep. Informed consent will be sought from each student prior to the interview process. Students will be made aware that although I am an employee of the University of Lethbridge, this will have no impact on their receiving services or funding. (Because I am a nursing instructor here at the U of L, students who are in the U of L nursing program are excluded from this study.)

Inclusion criteria is as follows:

- U of L students who receive food hampers from the ULSU Food Bank

- Full time student status
- Student is over the age of consent (18 yrs or older)
- Student is in receipt at least one food hamper from the campus food bank within the current or immediately preceding semester or who have been referred by a ULSU staff member.
- Students who have not received food hampers or assistance from elsewhere (referred by ULSU staff)
- Student's ability to read and speak English, and current student status at the U of L is presumed as this is a requirement in order to attend the university and receive a food basket.

I have attached a copy of the letter of invitation (recruitment letter) for your perusal. The intent is that your staff will enclose a copy in each food hamper that is disbursed from the ULSU food bank. A secondary recruitment strategy is referrals to the study by the ULSU staff – that is, students who may not access the food bank but that you know are at risk for food insecurity.

I welcome the opportunity to discuss this with you. If desired, a copy of the study results can be presented to ULSU students and yourself following the completion of my thesis. If you have any further questions, you may contact me at xxx-xxx-xxxx (office) or xxx-xxx-xxxx (cell), or my Thesis Committee Chairperson, Dr. David Gregory, Faculty of Health Sciences, xxx-xxx-xxxx.

Thank you for your consideration. I look forward to your response.

Sincerely,

Mary Nugent, RN, BScN
Academic Instructor - Nursing
Masters of Health Sciences Student
University of Lethbridge
Work: xxx-xxx-xxxx Cell: xxx-xxx-xxxx Home: xxx-xxx-xxxx

Encl: Letter of Invitation – Postsecondary Student Food Insecurity Study; Ethical Approval Certificate

Appendix C
Letter of Invitation to Postsecondary Student

October 12, 2010 (revised)

Dear University of Lethbridge Student:

Thank you for considering this invitation to participate in a study on **Postsecondary Student Food Security**.

My name is Mary Nugent. I am a master's student with the Faculty of Health Sciences. My master's thesis topic is postsecondary student food security. I am writing you today to invite you to participate in an approximately 1 hour interview regarding food security.

Compensation For Your Time

I realize that your time is valuable, and participation is completely voluntary, so as a thank you for participating you will receive a \$30 Safeway grocery store gift card for your time and trouble.

What is Food Security?

"Food security exists when all people at all times have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preference for an active and healthy life" (Food and Agriculture Organization, 1996). In other words, food security means "getting all the healthy food you need and to enjoy it with friends and family" (Food Security Projects of the Nova Scotia Nutrition Council, 2005).

A lack of food security is called food insecurity. This happens when people do not have reliable resources to always have enough food.

The purpose of this study is to understand your experiences of food security.

Who Can Participate?

I have asked the U of L Students' Union Food Bank to hand out these invitations to students who use their food bank. I would like to interview 20 **full time, adult** (18 yrs and older) **students** who have accessed the food bank, and ask them about their experience with food security.

(Nursing students are excluded from the study for privacy and confidentiality reasons, as I am also a nursing instructor at the U of L.)

What is Involved?

The study will take about 1 hour and will consist of:

- 1) Collecting demographic information (I will email you a demographic form to be completed before the interview),
- 2) An approximately 1 hour interview with myself,
- 3) A possible subsequent 20-30 minute follow-up interview in about 6-8 months time to review preliminary results.

As food security is considered one of 12 of Canada's 'social determinants of health' you can expect to be asked additional questions about your housing, income sources, social safety net, employment/unemployment, gender, and

Aboriginal status – as the published literature shows that these can be associated with food insecurity.

Where?

I will book a meeting room on the U of L campus. (It is important, for confidentiality and privacy purposes, that the setting is private so that we will not be disturbed.)

When?

We can set up an interview time after we have a chance to speak to each other.

- Phone me on my personal cell **phone at xxx-xxx-xxxx**. (If I do not answer, please leave a message on with how to best contact you.) You can also **text me** at the same number (**xxx-xxx-xxxx**) and I will call you back, or you can **email me at (e-mail address)** with your contact information.
- When we talk, I will ask you a few questions to determine your eligibility to take part in the study.

How?

The sessions will be audio recorded in order to be able to accurately record your valued input.

Prior to beginning the interview or survey I will explain the study to you then ask you to sign a consent form acknowledging you have been informed of the study process and how your confidentiality and anonymity will be protected.

Protecting You and Your Information:

I am not affiliated or associated with the food bank and anything you say to me individually will not be shared with the food bank, neither will it affect your ability to access the food bank, any other services or funding in any way.

You are free to withdraw from the study at any point and without negative consequence.

I am a master's student here at the U of L, and I am also an instructor with U of L's Health Sciences nursing program, therefore an employee of the University. This, in no way will affect your confidentiality and anonymity; I will not share your personal information with anyone except the transcriptionist (who will sign an oath of confidentiality), who will have access to the audio tape, and my faculty advisor who will see the anonymous, raw data.

What Now?

Please read over this letter and consider my request to participate.

With thanks for your consideration,



Mary Nugent, RN, BScN, Master's Student, University of Lethbridge
Cell: xxx-xxx-xxxx Office: xxx-xxx-xxxx E-mail Address

Appendix D
Demographics Questionnaire – Post-Secondary Food Insecurity Study

Please fill in all the white blank areas. Please do not fill in the grayed areas.

Research Number:		Pseudonym: _____
Age:	_____ yrs old	
Are you an undergraduate student?	No _____ Yes _____	If yes, I am in year _____
Are you a graduate student?	No _____ Yes _____	If yes, I am in year _____
How many years have you attended the U of L?	Years attended _____	
Gender (check one)	Male _____ Female _____	
I am a North American Aboriginal student (check one)	No _____ Yes _____	
I am an International student. (check one)	No _____ Yes _____	
What are your income sources during the semester? (check all that apply)	_____ student loan _____ employment.....> _____ Other (please list) _____ _____ _____	Employed: full-time / part-time (circle one)

Exploring Food Insecurity Among Postsecondary Students

During Semester: Residency and living arrangements		
I have a reliable place to stay/sleep while attending university.	No _____ Yes _____	If no, explain _____ _____
During the university year, I live ON the U of L campus.	No _____ Yes _____ (I live on campus)	
During the university year I live OFF the U of L campus.	No _____ Yes _____ (I live off-campus)	1) If Yes, Please check one: ____ Urban Lethbridge ____ Rural (outside of Lethbridge) 2) Where do you obtain your groceries from? _____ _____ _____ 3) I own and live in my own home: No ___ Yes ___ (If no, do you rent? _____) Or, what other living arrangements do you have? _____ _____
I purchase / participate in the U of L Food Services Meal Plan	No _____ Yes _____	If yes, what kind of U of L meal plan? ____ Value Plan (full plan, \$3074/yr) ____ Commuter Plan

Exploring Food Insecurity Among Postsecondary Students

		<p>(modified full plan, \$2557/yr)</p> <p>_____ Aperture Park Plan (listed as mandatory minimum plan for Kainai Residents, \$1836/yr)</p>
<p>During the university year, I live with others (check one)</p>	<p>No _____</p> <p>Yes _____</p>	<p>If yes, you do live with others...</p> <p>1) How old are they? Ages: _____ _____ _____ _____ _____</p> <p>2) What relation are they to you? _____ _____ _____ _____ _____</p>
<p>How many other adults do you live with? (adult = 18 or older)</p>	<p>_____ adults</p>	<p>If you do live with adults:</p> <p>1) Are some of these adults also students? _____ no _____ yes</p>

Exploring Food Insecurity Among Postsecondary Students

		2) If yes some of the adults are also students, a. how many are full-time students? ____ b. how many are part-time students? ____
Are you responsible for dependent children?	No ____ Yes ____	If yes, how many? ____ Ages? _____
Do you share monthly costs of living such as rent, utilities, food, with other adults? (check one)	No ____ Yes ____	If yes, how is this divided? Explain (please provide breakdown) : _____ _____ _____ _____ _____ _____
I have pets.	No ____ Yes ____	If Yes, Number of pets ____ Type of pets _____ _____
During Semester: Cooking, Meals and Transportation		
I have a reliable, fully functional kitchen where I can store, cook my food and it meets all my cooking and storage needs.	Yes ____ No ____	If no, explain _____ _____ _____ _____
I have adequate	Yes ____	

Exploring Food Insecurity Among Postsecondary Students

<p>knowledge about how to shop and prepare nutritious and balanced meals.</p>	<p>No _____ Don't Know _____</p>	<p>If No or Don't Know, explain: _____ _____ _____ _____</p>
<p>I own or have use of my own vehicle so that I can go to the grocery store <u>ANYTIME</u> I need to.</p>	<p>Yes _____ No _____</p>	<p>If no, explain how you manage to go to the grocery store when you need to? Is there any difference between how you transport small shopping and large / bulk loads of shopping? _____ _____ _____ _____</p>
<p>Money and Budgeting</p>		
<p>During the university year, I prioritize my spending like this:</p>	<p>Please rank order from 1 to 10 in order of priority to spend (i.e. #1 is first priority, and so on...some may be of equal importance – if so rank them the same)</p> <p>____ Tuition ____ Books ____ Food (meals at home, or cooked by you) ____ Food (eating out at restaurants) ____ Transportation ____ Rent/Mortgage ____ Electricity/Gas/Water ____ Phone ____ Internet</p>	

Exploring Food Insecurity Among Postsecondary Students

	<input type="checkbox"/> Clothes <input type="checkbox"/> Personal Supplies (shampoo, toothpaste, etc.) <input type="checkbox"/> Entertainment (movies, going out with friends, etc) <input type="checkbox"/> Other _____ <input type="checkbox"/> Other _____ <input type="checkbox"/> Other _____ <input type="checkbox"/> Other _____	
I have a savings/reserve of money that I can rely on in case of emergencies.	Yes _____ No _____	If no: explain where you would obtain money in case of emergencies: _____ _____ _____
I own a personal credit card and am able to pay off the balance each and every month.	Yes _____ No _____	
I am confident in my skills and abilities to create and maintain a spending budget for the university year.	Yes _____ No _____	If no, explain: _____ _____ _____
Costs of Living		
My housing (rent/mortgage and utilities like gas/electricity) costs me \$_____ per month.		
Transportation costs me \$_____per month. (includes gas, maintenance, insurance, bus, taxi, etc.)		
Books cost me \$_____ per semester.		
Tuition costs me \$_____ per semester.		

Exploring Food Insecurity Among Postsecondary Students

<p>Total food costs me \$ _____ per month.</p> <p>(please provide breakdown: Food I purchase to make/have at home \$ _____; Food I purchase from restaurants \$ _____)</p>
<p>Other costs \$ _____ per month.</p> <p>List other costs: _____</p> <p>_____</p> <p>_____</p> <p>_____</p>
Income
<p>My total income each month is \$ _____.</p> <p>(Or if you prefer, My total income each semester is \$ _____.</p> <p>I estimate my total income per year is \$ _____.</p>
<p>My sources of income are:</p> <p>____ Student loans (\$ _____ /year).</p> <p>____ Other loans (\$ _____ / year)</p> <p>____ Credit Cards (\$ _____ / year)</p> <p>____ Employment (\$ _____ /month during school year x 8 months = \$ _____ /school year) \$ _____ /summer break).</p> <p>____ Parent/Family (\$ _____ / year)</p> <p>____ Other sources Specify: _____</p> <p>(Approx \$ _____ /Month x 8 months = _____ /year.)</p>

Why did you choose to come to university?

Exploring Food Insecurity Among Postsecondary Students

What does your family think about you going to university? How do they support you?

Are there others in your family who have attended university? (e.g. parents, siblings).
Who are they?

Appendix E

Semi-Structured Interview Guide

- 1) What do you think this interview will be about?
- 2) How would you define the concept of food security?
- 3) Would you please tell me how you came to access the food bank?
- 4) How did you know the Students' Union had a food bank?
- 5) What would happen, or what would you do, if there was no food bank on campus?
- 6) What is it like for you to use a food bank?
- 7) When I use the term "having enough food" what does that mean to you as a student?
Probes:
 - Do you have enough food to eat? Is it the kind of food you want to eat?
 - What about your family (husband/partner; children)? Do they have enough food? Is it the kind of food they want (or you want them to) eat?
- 8) Tell me about your ability to have enough food in your home the entire month.
Probes:
 - How often do you feel that you not able to do this?
 - Are there certain times of the month, semester or year where this is more difficult?
 - Do you experience not having enough food periodically (cyclically) or most of the time (chronically).
 - Can you tell me about a time when you didn't have enough to eat?
 - How do you feel when you don't have enough to eat? What is it like for you to not have enough to eat, emotionally/physically?)
 - Why do you think this happened?
- 9) What strategies do you use to make sure that you have sufficient food in the house?
- 10) What strategies have you used to increase your food budget, or buying power or stretch use your existing food?
 - Coupons (save.ca; redflagcoupons.com)
 - 10% Tuesdays
 - Using cooking websites such as allrecipes.com – plug in what ingredients you have in the house and it gives recipe suggestions
 - Meal planning; sharing meals
 - Taking part in studies such as this to receive money
 - Eating at relative's home

- Taking part in free meals at the U of L or churches
- Good Food Club

11) Where do you obtain food from when you **have** money?

12) Where do you obtain food from when you **do not have** money?

13) (*Review demographic sheet*) Would you tell me a bit more about the Costs of Living portion you filled in on demographic questionnaire?

Probes:

- Can you tell me if this is enough money to make it through the semester?
- Why or why not?
- Is it enough money to make it through the school year? Why or why not?
- How do you make ends meet if this is not enough money?

14) (*Review demographic sheet*) Can you explain a bit more about your living arrangements and the others you live with?

Probes:

- Do you cook for yourself? Do you cook for your family?
- Do you share meals/cooking/food responsibilities with someone? Can you tell me how that works? Are there other or alternate cooking arrangements?
- How well does this work out for you? Why?

15) What are the barriers you have experienced in having enough food for yourself each month?

Probes:

- What gets in the way of you having enough food?
- Money? Time? Transportation? Knowledge? People?
 - Are these barriers the same each month or semester, or do they vary?
 - Are these barriers typical for postsecondary students?

16) What might prevent you from having food even if you had the money to purchase food?

Probes:

- knowledge in how to cook/purchase foods?
- transportation?
- Geography – living on west side no supermarkets nearby

17) Are there things about the University of Lethbridge that might contribute to your food insecurity?

Probes:

- geographic locale of the university ?
- university food venues hours of operation?
- type and quality of food offered at the University's eating establishments?

18) As an Aboriginal student / grad Student / International student, what are some of the challenges or issues that other students don't have with regard to food insecurity?

Probes:

- 10 hr / wk limit working (Grad student)
- Culturally appropriate foods (International students)

19) As a woman / man, do you think accessing a food bank for your gender is different than the opposite gender? Why/Why not?

20) How does the university's food/meal plan work for you? (For those student on food plan)

Probes:

- Tell me about the easiness or challenges of the food plan?

21) Not everyone eats the traditional three meals per day. I am wondering what a 'meal' looks like to you? What are your eating patterns in a day?

• Probes:

- What would be a snack? Do you eat similarly to how you were eating when you were not a university student, (living at home with parents / not concerned about money)?

22) Has food insecurity affected your health?

• Probes

- Weight gain, weight loss, blood pressure, blood sugar, skin problems?
- Ability to concentrate on studies?
- Change in sleep patterns?
- Medical conditions (e.g. diabetes)

23) If money wasn't an issue, how would you ensure you eat balanced nutritious meals each day? Do students generally know how to prepare nutritious balanced meals?

24) What do students typically do to make ends meet so they have enough money for food each month?

25) What do you typically do to make ends meet so you have enough money for food each month?

Probes:

- Can you tell me about the last time you did not have enough food. What did you do? What did you do to get more food?
- If you knew that you would not have enough money for food this month, who would you seek help from? (social support)
- Could you tell me about a time or situation when you asked for help?

- 26) In the long term, what do you think you need in order to prevent this lack of food?
- 27) In the long term, what do you feel postsecondary students need generally to prevent lack of food?
- Locally?
 - Policy or government?
- 28) If you had \$50 to spend this weekend, how would you spend that money?
- Probes:
- Would your answer be any different at the beginning of the month or semester as opposed to the end of the month or semester?
- 29) I have heard some people say that university students are poor money budgeters and waste money on things such as parties, clothing, restaurants, coffee drinks and beer. Why would people say this about students?
- Probes:
- Could there be any truth to this statement?
 - Could there be any truth to this statement in your own life?
 - Do students learn to do spend their money differently from year to year?
- 30) As a university student I am wondering if there are times you feel the need to spend money or are pressured to spend money even when you cannot afford to...perhaps in social situations or other situations? Can you tell me about this?
- 31) Who is your support system while you are a student? Financially? Personally?
Regarding food?
- 32) Is it worth it, to not have enough food / have difficulty obtaining enough food, and be a university student?
- Probe:
- Why do you persevere without enough food or the food you want to have?
- 33) Is there anything else you want to share regarding your food situation that I haven't asked you about?

Appendix F
Member Check – Preliminary Findings

October 9, 2011

Dear Student:

If you recall, you took part in an interview as part of a study of post-secondary food student security issues which took place between October 2010 and April 2011. In total, 15 students were interviewed.

As part of ensuring the data I collected and analyzed is accurate, I am asking 4 students who took part in the study to review a brief draft version of the findings. (the analysis is almost 100 pages long, so to make it readable for you, I am presenting you with only a brief version of the major findings). Please read the findings below. **If you feel there are inaccuracies, I would encourage you to please email or phone me in the 7 days to discuss how I can make the findings more accurate. If you agree with the findings, please drop me a line before October 17th, so that I know that I am on the right track.**

With thanks for your time. Mary Nugent office: xxx-xxx-xxxx, email: xxxxxx@xxxxxx

A brief paper on the findings of the postsecondary student food security study.

There were 4 research questions that I have attempted to answer. I present the findings in light of these research questions:

Question #1: What are the experiences of food insecurity among students at the University of Lethbridge?

- Though we often think of students as ‘stereotypical’ 18 year olds single students with few worries and cares except for study, the students who participated in this study did not fit this profile. The average age of participants was 26.8 years. Over half had dependent children, and 11 of 15 were married, one was single parenting and the remaining 3 were single but lived with others or shared at least some expenses with others. Five of the 15 participants were Aboriginal students. Most participants lived on the Westside of Lethbridge – two students commuted from rural communities.
- Students in the study were found to lead complex lives. As individuals, full time university students bore many additional responsibilities in their roles of learner, spouse, parent, child and employee. They juggled finances, time, and energy in order to feed, clothe and maintain the health of their family, support their parents through personal and financial issues, be a supportive life-partner, work part time, and maintain their grades.
- Although they valued their health and overall had a good working knowledge of healthy eating, participants found that they lacked the necessary finances to maintain an adequate nutritional intake. This led to a number of health issues including stress, exhaustion, sleep issues, weight loss and headaches.

- Participants valued being self-supporting students as much as they were able.
- Students made a number of sacrifices and suffered emotionally and physically because of their issues with food security. They were embarrassed to use the food bank – especially at their first visit. They worried and feared for their shelter, their health and their children. They experienced marital strain, hunger and seemingly impossible dilemmas such as feeding themselves or their children first, risking their marks by taking on a part time job or increasing their working hours, or leaving university to earn money and start again later.

Question #2: What do University of Lethbridge students perceive to be factors or barriers which contribute to food insecurity for themselves and for postsecondary student population at the University of Lethbridge?

- There are five main reasons that students identify as factors which contributed to their food security issues and the reason for their journey to the food bank: lack of finances, lack of or cost of transportation, lack of time, distance to a reasonably priced grocery store, and the habits of others who they were linked with financially. These factors sabotaged participants' ability to shop and to eat healthily.
 - Finances:
 - Lack of sufficient finances, despite budgeting and planning, to purchase healthy foods while maintaining other essential expenses such as tuition, books, rent, utilities, transportation, childcare, medical care.
 - Geography:
 - Living far away from grocery store, especially the least expensive grocery store impacted the amount of money students could save by buying the least expensive products. And, if they had no car or little storage in cupboards or freezer, this limited how much they could carry or purchase in bulk
 - Transportation:
 - Lack of adequate, timely public transportation, or cost of gasoline to shop the least expensive grocery stores – identified by students as Superstore, Walmart, Costco – all located in the south end of Lethbridge.
 - Students financial exhaustion, which ultimately lead to food bank assistance, was explained through three main pathways.
 - Shortfall Pathway: chronic lack of funds each month/semester
 - Cumulative Pathway: a string of unexpected expenses
 - Catastrophic Pathway: expected money/financing not arriving
- Asking for assistance from families became complicated for some participants because of their older age, their desire for independence, their relationship with family and/or their parent's financial situation.

Question #3: What strategies are most commonly utilized by postsecondary students at the U of L to overcome barriers associated with food insecurity?

- Participants were vigilant with their budgets and purchases, planning for leaner times. They juggled their budgets, time and shopping in order to increase their food security.
- Students had elaborate, thrifty and time consuming systems in place to procure and select their food. These included setting nutritional priorities, meal planning often up to one month at a time, strategic shopping at pre-chosen stores for the best ‘deals’ and arranging transportation to shop.
- Participants spent time and energy budgeting funds, procuring, and storing foods. They planned meals and shopping trips, kept to a strict shopping list, and sought out the best stores with the best prices when shopping for food. They also prioritized purchasing the healthiest foods first before considering purchasing ‘junk’ foods.
- In addition to summer earnings, loans, and scholarships, participants developed safety nets (financial, personal and food supports) in order to, throughout the school year, manage and maintain their food security. These supports came from family, spouses, boy/girl friends and other friends. Being offered a meal was significant help to students.
- Students prepared for future times of food insecurity by taking advantage of food opportunities such as food giveaways, free meals at the university or with their support systems.
- Students also prepared for future times by developing a pantry to store their sale food items and bulk purchases.
- Sometimes the pantry became lean and students resorted to eating such foods as Kraft dinner, adding macaroni or rice to extend meals, and /or limiting the amount of food they ate at each meal so they could ration until the next time they had the money, transportation, or time to purchase groceries.

Question #4: To what extent to the SDH and structural violence account for the factors which contribute to food insecurity in this sample?

- The U of L is surrounded by a ‘food desert.’ (Food Desert = lack of nearby facilities to purchase a variety of healthy foods at reasonable prices.)
- Participants faced challenges with organizational policies and structures which impacted their available income for food.
- Securing affordable and appropriate housing was difficult for some participants who were forced to compromise on quality of their living environment in order to make ends meet.
- There were hidden costs to attending university which participants did not anticipate or realize how costly they could be. These included new expensive text books, field trips, computer printing, computer equipment.
- Participants reported that eating on campus was overly expensive, and food choices lacked quality and variety. The most nutritious meals were the most costly as compared to less nutritious choices.
- The on campus food bank was appreciated by participants. Food quality (e.g. sugary cereals), and safety (outdated items) were identified issues; however,

participants recognized resolving these issues may not be within control of the food bank.

- Policy level changes participants identified which would make a positive difference in reducing food insecurity included: increasing student loans to reflect the cost of living, changing day care regulations to allow international students subsidized day care, revisiting monthly scholarship and awards processes and dollar amounts, teaching students budgeting and nutrition skills, and providing improved public transit from the Westside of Lethbridge with more routes, and later service.
- Aboriginal students (especially those supporting children) despite careful planning and although supported by a monthly scholarship system, were chronically short on finances, putting them and their families at high risk each month for food insecurity. Funders may need to consider increasing monthly scholarships to alleviate this issue.

Appendix G

Consent Form

September 21, 2010

Dear University of Lethbridge Student:

You are being invited to participate in a research study on food security. In particular, I am interested in understanding the U of L student experience of food security.

“Food security exists when all people at all times have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preference for an active and healthy life” (United Nations, 1996). In other words, food security means “getting all the healthy food you need and to enjoy it with friends and family” (Food Security Projects of the Nova Scotia Nutrition Council, 2005). A lack of food security is called: food insecurity. This happens when people do not always have reliable resources to have enough food.

This research will require an initial approximately 60 minute interview (and a possible 20-30 minute follow-up interview in-person, or if that is not possible, by phone). During this time you will be asked to complete a short demographic questionnaire and an in-depth interview about your experiences with food security.

There may be a discomfort in talking about your own experience with food security during this research. I will give you the name and phone number of a student counselor, if you wish this information. Please remember that if you feel uncomfortable with any part of this study at any time, you have the right to stop the interview and/or not answer particular interview questions. You can also leave the study, at any time, without any negative consequence.

It is important that you know I am NOT affiliated or associated with the food bank and anything you say to me individually will not be shared with the food bank. Talking with me will not, in any way, affect your ability to access the food bank, any other services or funding in any way.

I need to disclose to you that I am not only a master’s student here at the U of L; I am also an instructor with the University of Lethbridge’s Health Sciences nursing program, thus I am an employee of the University. This, in no way will affect your confidentiality as outlined in this letter of consent.

By participating in this research you may benefit other students by helping people such as government agencies, universities and student bodies (such as students’ unions) better understand what it is like to have issues with food security as a university student.

Several steps will be taken to protect your anonymity and identity. While the interview will be audio recorded, those recordings will be destroyed (as confidential waste) once the research is completed. The interviews will be typed up by a professional transcriptionist who will sign an oath of confidentiality to protect your identify and information. Identifying information will NOT mention your name but will use a pseudonym; any identifying information from the interview will be removed. The typed interviews and demographic data will be kept in a locked filing cabinet and only the main researcher and the researcher's U of L advisor will have access to the interviews. All information will be destroyed as confidential waste after 5 years.

Your participation in this research is completely voluntary. If you decide to participate, you will receive \$30 gift card from Safeway grocery store for your time and trouble. However, you may withdraw from the study at any time for any reason. If you do this, all information from you will be destroyed, and you will be allowed to keep your \$30 gift card.

The results from this study will be presented in writing in journals read by health professionals, postsecondary secondary institutions and government agencies, to help them better understand the experience of postsecondary student food security and food insecurity. The results may also be presented in person to groups of health professionals, those affiliated with postsecondary institutions and government agencies. At no time, however, will your name be used or any identifying information revealed. If you wish to receive a copy of the results from this study, you may contact the researcher at the telephone number given below, or leave your contact information on the appropriate signatory portion at the end of this document.

If you require any information about this study, or would like to speak to one of the researchers, please call the researcher Mary Nugent at xxx-xxx-xxxx (cell), or my thesis committee chair, Dr. david Gregory at xxx-xxx-xxxx. If you have any other questions regarding your rights as a participant in this research, you may also contact the Office of Research Services at the University of Lethbridge at 403-329-2747 or research.services@uleth.ca.

I have read (or have been read) the above information regarding this research study on the experience of food security in the postsecondary student population, and voluntarily consent to participate in this study.

_____ (Printed Name)

_____ (Signature)

_____ (Date)

I agree that the Executive Summary of the final study findings will emailed to me by the investigator.

____ No

____ Yes (please fill in email address below)

_____ (Email Address)

Appendix H
Telephone Recruitment Script
Postsecondary Student Food Insecurity Research Study

Student calls me and identifies him/herself as a person interested in the study.

Mary: “Hello (student’s name: _____). Thank you for calling me about the study on Postsecondary Student Food Insecurity. May I ask how you heard about the study?”

Student: (Answer - approximately)...

Primary recruitment strategy – convenience sampling:

1) “From a letter I received in my food bank hamper;” or

Secondary recruitment strategy – snowballing:

2) “from the ULSU staff who referred me to the study.”

If student found out about study another way:

Mary: “Can you tell me more about how you found out about this study?”

Student replies

Mary: “May I ask you why you are interested in participating in this study?”

Student replies: _____

Mary: “Thank you. Would you mind if I ask you a few questions to see if you fit the criteria to participate in this study? There certain parameters for participation in this study.”

Student: “Yes”

Mary: (begins screening questions)

IF Student: “No - I do not want to be screened”

Mary: (STOP Recruitment activities with this student.) “Unfortunately we can’t proceed further at this time. I sincerely thank you for taking the time to call me. All the best to you.”

Screening Questions (based on inclusion criteria):

Are you 18 years old or over?	_____ Yes (_____ No = excluded)
Are you a full time U of L Student?	_____ Yes (_____ No = excluded)
How did you find out about the study?	_____ Invite in food hamper basket _____ Invite from ULSU staff _____ Other source (?excluded)
Did you receive a food hamper from the ULSU Food Bank?	_____ Yes _____ did you receive it during this or last semester? _____ No (invite from ULSU staff)
Do you live alone?	_____ yes _____ no
(if live with others) Are any of those you live with also students?	_____ yes _____ no
Are you a U of L Nursing Student?	_____ yes (excluded) _____ no

Based on the questions, if student meets study criteria:

Mary: “I’d like to book approximately 60 minutes of your time so that we can go over the study, have you read over and sign a consent form, review a demographic questionnaire and then participate in an audio-taped interview – which will all take about 1 hour and 20 minutes. Is this okay with you?”

Student: “Yes.” Mary: What time and date would be convenient for you?

OR

Student: “No.” Mary: “Okay, thank you for your phone call. I appreciate your time. Good luck to you in your studies.”

Mary: “Before you come to meet me, I would like to have you complete a demographic questionnaire which asks for some information you likely won’t know off the top of your head about income, expenses your living arrangements and a few other topics. The information is important for me to understand how students’ own finances work and how they are able to make ends meet. All the information will remain confidential. If you

could complete it and bring it with you to the interview that would be wonderful. I will send it to you through your U of L email. Is this okay with you?"

Student: "Yes – I will complete it and bring it to our interview.

Mary: "Thank you – and please don't email me the completed questionnaire ahead of our interview as I need to you review and sign a consent form before I can collect information from you."

OR

Student: "No." Mary: "Is there any particular reason why? Can I clarify anything for you? Would you like to know more about how this information is important to the overall study?"

Student: "No – I don't want to fill in the form." Mary: "I am very sorry, the information is vital to the study so I will thank you very much for your time – and good luck in your studies."

OR

Student: "Yes. My email address is: _____@uleth.ca"

Mary: Thank you. I need to book a meeting room space here on campus and then get back to you with the location. What is the best way to get hold of you?

Student: You can get hold of me at _____.

Mary: Thanks, I will book a room as quickly as possible and get back to you.

ONCE MEETING ROOM IS BOOKED – I re-contact the student as per above:

Mary: See you at (location _____) and (time _____). If you can't come or need to change the time/place, please give me a quick call on my cell phone. If you don't mind, I would like to send you an email reminder 1 day before we meet."

Student: replies yes or no.

Mary: okay...see you at (location) and (time).

END OF CONTACT WITH STUDENT

If student does not meet the study criteria:

Mary: I am sorry that you do not meet the criteria for the study and so I am unable to interview you as a participant. I wish you well in your studies and thank you for your interest.

If student is a nursing student therefore not meeting the study criteria:

Mary: I am sorry that I cannot include you in the study because I may be teaching you at some point in your nursing student career. I would not want to place you in an awkward position as a nursing student therefore the ethics committee has agreed that no nursing students take part in this study. Please know that this conversation will be kept between you and me and no one will know that you have called to participate in the study. Good luck with your studies.

(Gray areas signify refusal/negative responses or not meeting study criteria)

University of
Lethbridge



Faculty of Health Sciences

4401 University Drive
Lethbridge, Alberta, Canada
T1K 3M4

Phone 403.329.2699
Fax 403.329.2668

<http://www.uleth.ca/hlsc>

Appendix I

Confidentiality Agreement Transcription Services

I, _____, transcriptionist, agree to maintain full confidentiality in regard to any and all audio/digital tapes/recordings and documentation received from Mary Nugent related to her masters study on Postsecondary Student Food Insecurity. Furthermore, I agree:

1. To hold in strictest confidence the identification of any individual that may be inadvertently revealed during the transcription of audio/digital recorded interviews, or in any associated documents;
2. To not make copies of any audio/digital tapes/recordings or computerized files of the transcribed interview texts, unless specifically requested to do so by Mary Nugent;
3. To store all study-related audio/digital tapes/recordings and materials in a safe, secure location as long as they are in my possession;
4. To return all audiotapes and study-related documents to Mary Nugent in a complete and timely manner.
5. To delete all electronic files and recordings containing study-related documents from my computer hard drive and any backup devices.

I am aware that I can be held legally liable for any breach of this confidentiality agreement, and for any harm incurred by individuals if I disclose identifiable information contained in the audiotapes/digital recordings and/or files to which I will have access.

Transcriber's name (printed) _____

Transcriber's signature _____

Date _____

Appendix J

Costs of Living Estimates for International students - from U of L International Centre for Students

(Collected Sept 12, 2011; Used with permission by U of L, International Centre for Students, Charlene Janes)

Cost of Living

It is important to be realistic on how much your cost of living will be each month. If you are single and plan to share your accommodations you need to plan to spend a minimum of \$1,000 a month on living costs. If you choose to live alone or are bringing your family, your costs will be higher. It is important to ensure you have adequate funds to cover your academic and living costs for the year without depending on work from outside sources.

If you are depending upon meeting some of your financial requirements through money you will receive in Canada, you need to find out if the money will be available upon your arrival in Lethbridge.

Keep in mind that your first month's expenses can be high given the cost of setting up a new residence, such as paying an extra month's rent as a security deposit, buying furniture and household items, purchasing warm clothing, etc.

Typically, graduate students choose to live off campus (not in residence). The cost of living off campus varies depending on the type of accommodations you choose (e.g. living alone, living with roommates), and other lifestyle choices. The figures below provide an estimate of the range in cost of living off campus (lower range for single students in shared accommodation; higher range for families and those preferring not to share accommodation). **These estimates represent minimum living expenses only; estimates do not include your tuition costs!**

EXPENSE	ESTIMATED COST (12 month study period)
Rent and utilities	\$6,600 - \$12,000
Food (purchased at stores)	\$3,000 - \$6,000
Telephone & Utilities (not including long distance)	\$372 - \$720
Personal Expenses (e.g. hygiene products)	\$400 - \$680
Clothing/Laundry	\$600 - \$2,400
Recreation	\$600 - \$2,400
Local Transportation	Full access to Lethbridge Transit included in Student Fees
Return trip home	variable
Alberta Health Insurance	No cost for insurance
TOTAL	\$11,572 - \$24,200

Bringing family—should you?

Your decision to bring your family with you when you come to Canada will depend on your financial situation and the ease of obtaining immigration documents for your family members.

Appendix K
 Conceptual Model of Determinants of Healthy Eating (Power, 2004)
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