

**The
Food Insecurity-Obesity
Paradox as a Vicious Cycle
for Women:
A Qualitative Study**

**By Andrea S. Papan and Barbara Clow
Atlantic Centre of Excellence for Women's Health
Halifax, NS, Canada
October 2012**

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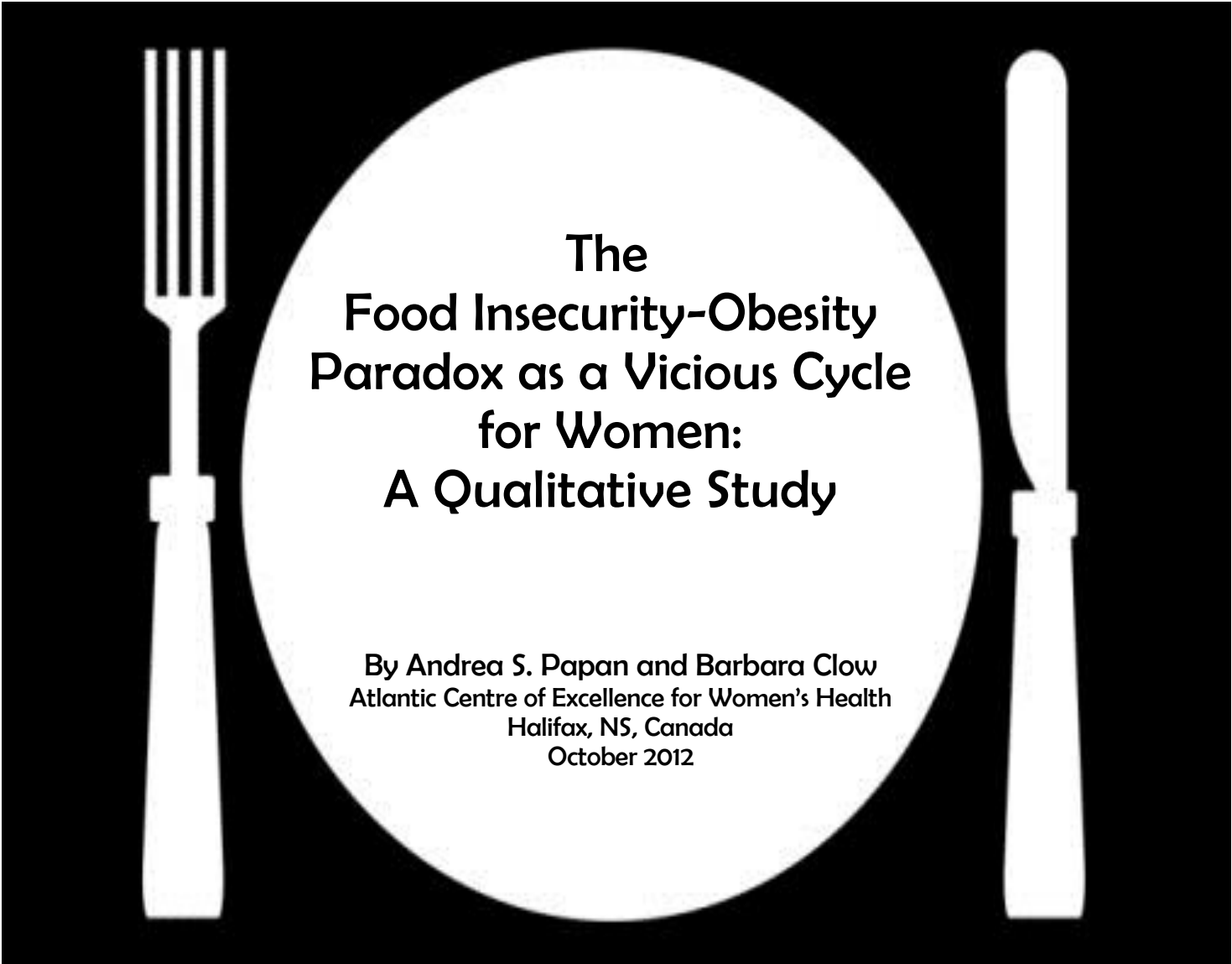
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EXECUTIVE SUMMARY

This paper reports on the findings from the *Full Plate Project on Women, Obesity and Food Security*. The aim of this project was to investigate the 'food insecurity-obesity paradox' – the contradictory association between food insecurity, resulting from inadequate economic resources to purchase food, and obesity, as a consequence of overconsumption (Dinour, Bergen & Yeh, 2007:1952). We were intrigued with the question of moderate food insecurity being linked to overweight rather than low body weight, and that this was the case only for women. In particular, we wanted to know several things: What were women's weight challenges – had they experienced weight issues from childhood or as a direct response to food insecurity? Was this strictly about access to poor quality food options? What food choices were available to the women? What were the gender dynamics in the household – how was food shared, who got the best food, and who ate the most food? How did their weight affect other aspects of their health, especially around chronic diseases? What coping strategies did they use to deal with food insecurity? What changes did they see as important in order to make the situation better? By focusing on qualitative analysis, this research offers first-hand accounts of the complex realities facing overweight and obese women who are food insecure in Atlantic Canada, and in doing so it provides valued-added evidence to the food insecurity-obesity discourse.

Key findings include:

For participants the food insecurity-obesity paradox was experienced as a vicious cycle. The vicious cycle described by participants included experiences of poverty, often in childhood and as adults; food insecurity and nutritional deprivation caused by an inability to purchase healthy foods; weight gain in the context of food insecurity eventually becoming obesity; ongoing and increasing stress due to a myriad of factors including lone parenting and social isolation; reduction in well-being, and experiences of chronic illness.

Even though almost every participant self-reported as being in the obese range and self-identified as experiencing some form of chronic disease – the women spoke about their health obstacles in terms of poverty. Our evidence showed that rather than an absence of knowledge around how to live in healthy ways, there was an absence of choice to do so.

Participants talked extensively about their obstacles vis-à-vis access to and the availability of healthy food, including food staples. They talked about living in “food deserts”, the difficulty of getting to grocery stores, and how this was exacerbated by mobility issues.

Many participants outlined intricate strategies for survival. They talked about the exact use of their money and how to get the best bargains at multiple stores including buying out-of-date foods, coordinating purchases with neighbours and friends, participating in community gardens, skipping meals, and sharing meals. In addition, some participants outlined strategies of resilience including returning to school, joining walking groups and nutritional training programs, and engaging in community activities.

Participants spoke about lifelong challenges with weight, they remembered childhood experiences of feast and famine, and reflected on the impact this had on their relationship to food as adults. The experience of food insecurity as a child and then as a parent and trying to protect their children from the same experience was also discussed.

Women talked about their choices as mothers, and in particular eating less and last, so their children would be less affected.

Participants regularly talked about feeling socially isolated, stigmatized, and vulnerable. They spoke about this in the context of being poor, of being lone mothers, of being unattached women living alone, of going to food banks, of being overweight and obese, of being disabled or immobile, of dealing with chronic diseases, of coping with mental health issues, and when dealing with bureaucratic hoops related to government assistance programs, amongst other things.

Moreover, participants regularly referred to experiences of feeling “depressed,” going through “dark times”, and feeling “lonely”. They discussed treatment and care for sleeplessness and mental health issues, and how these experiences in turn contributed to further weight gain.

Participants discussed the right to food in Canada, and questioned the stark contrast between a country with such an abundance of food production and people not having enough healthy food to eat.

When we asked what participants would ask their Premier to change if given the chance, the recommendations essentially came down to two key elements: 1) they should be receiving more money on a monthly basis, i.e. through social assistance or other programs, and 2) there should be a better understanding of what it is like to be food insecure in Atlantic Canada. Every group said that the Premier *‘should live in our shoes and see first-hand what it is like to live like this’*.

Based on our findings, gaining further insights into the food insecurity-obesity paradox, both qualitatively as well as quantitatively, is imperative. The vicious cycles associated with this paradox are dynamic and encompass a myriad of challenges for women in Atlantic Canada that need to be further understood and addressed.

RÉSUMÉ

Cet article livre les conclusions du projet « L'assiette pleine » portant sur les femmes, l'obésité et l'insécurité alimentaire. L'objectif de ce projet se proposait d'étudier le « paradoxe entre l'insécurité alimentaire et l'obésité », c'est-à-dire l'association contradictoire entre l'insécurité alimentaire, qui se caractérise par l'insuffisance de ressources économiques pour acheter de la nourriture, et l'obésité, qui est le résultat d'une surconsommation (Dinour, Bergen et Yeh, 2007:1952). Nous étions intrigués par le fait que l'insécurité alimentaire modérée est liée à la surcharge pondérale, plutôt qu'à une faible masse corporelle et que cette constatation ne s'applique qu'aux femmes. Plus précisément, nous souhaitions répondre à plusieurs questions : quels défis les femmes devaient-elles relever concernant leur poids? Avaient-elles connu des problèmes de poids depuis l'enfance ou leur problème de poids était-il lié directement à l'insécurité alimentaire? N'était-il question que de l'accès à des options qui n'offraient que des aliments de mauvaise qualité? Quelles options alimentaires leur étaient accessibles? Quelles étaient les dynamiques entre les sexes au sein du ménage — comment la nourriture est-elle partagée, qui mange mieux et qui mange le plus? Comment leur poids affecte-t-il d'autres aspects de leur santé, plus particulièrement si elles souffrent de maladies chroniques? Quelles stratégies ont-elles mises en place pour gérer l'insécurité alimentaire? Quels changements importants ont-elles identifiés pour améliorer leur situation? En mettant l'accent sur une analyse qualitative, cette recherche propose des témoignages directs sur les réalités complexes des femmes en situation de surcharge pondérale et d'obésité qui souffrent d'insécurité alimentaire au Canada atlantique. Ce faisant, l'étude ajoute au discours sur l'insécurité alimentaire et l'obésité des données probantes à valeur ajoutée.

Voici les résultats principaux de cette étude :

Les participantes vivaient le paradoxe insécurité alimentaire/obésité comme un cercle vicieux. L'expérience de la pauvreté, souvent vécue à l'étape de l'enfance et aussi à l'âge adulte, l'insécurité alimentaire et la privation nutritionnelle causées par une incapacité à acheter des

aliments nutritifs par manque d'argent, un gain de poids dans un contexte d'insécurité alimentaire qui se transforme éventuellement en obésité, un stress continu et croissant causé par un éventail de facteurs, y compris la monoparentalité et l'isolement social, la diminution du sentiment de bien-être et l'expérience de la maladie chronique figurent parmi les manifestations de ce cercle vicieux.

Même si près de la totalité des participantes se sont identifiées comme obèses et ont dit souffrir d'une forme de maladie chronique, les femmes ont parlé de leurs obstacles à la santé en termes de pauvreté. Les résultats de notre étude démontrent que l'obstacle pour mener une vie saine n'est pas une question de connaissances, mais un manque de choix.

Les participantes ont beaucoup parlé des obstacles auxquels elles faisaient face concernant l'accès à des aliments sains, y compris les denrées de base. Elles disaient vivre dans des « déserts alimentaires », qu'elles éprouvaient des difficultés à se rendre à des épiceries et que la situation était aggravée par des problèmes de mobilité.

De nombreuses participantes ont recours à des stratégies de survies complexes. Elles ont mentionné la gestion précise de leur budget et des techniques pour obtenir les meilleurs rabais à différent magasin, en achetant, par exemple, des produits périmés, en coordonnant leurs achats avec des voisins ou des amis, en participant aux jardins communautaires, en sautant et en partageant des repas. En outre, certaines participantes ont indiqué des stratégies de résilience, comme retourner à l'école, participer à des groupes de marche et des programmes d'information nutritionnelle et s'impliquer au sein de leur collectivité.

Les participantes ont parlé de leur poids comme d'un problème à vie, se sont souvenues de périodes d'abondance et de disette au cours de leur enfance et ont réfléchi à l'impact que ces périodes ont eu sur leur relation à la nourriture à l'âge adulte. Elles ont également parlé de l'expérience de l'insécurité alimentaire à l'étape de l'enfance et aussi de leur vécu en tant que parent qui tente de protéger ses enfants d'une telle expérience.

Les femmes ont également discuté de leur choix en tant que mère, et plus particulièrement de leur choix de manger moins et en dernier, pour que leurs enfants soient moins touchés par la faim.

Les participantes ont régulièrement mentionné le fait de se sentir isolées socialement, stigmatisées et vulnérables. Elles ont mentionné ces sentiments en parlant entre autres de leur pauvreté, de leur statut de chef d'une famille monoparentale, de femme célibataire vivant seule, de leur dépendance à la banque alimentaire, de leur surcharge pondérale ou de leur obésité, de leur handicap ou de leur manque de mobilité, de leur maladie chronique, de leur problèmes de santé mentale ou encore des obstacles bureaucratiques liés aux programmes d'assistance gouvernementaux.

Par ailleurs, les participantes ont régulièrement dit se sentir « déprimées », traverser un « moment difficile », se sentir « seules ». Elles ont discuté des traitements contre l'insomnie et des problèmes de santé mentale, lesquels entraînaient, en raison du cercle vicieux, des prises de poids.

Les participantes ont discuté du droit à l'alimentation au Canada et se sont interrogé le contraste frappant entre l'abondance de la production alimentaire du pays et le fait que la population n'a pas suffisamment accès à une alimentation saine.

Lorsque nous avons demandé ce que les participantes demanderaient au premier ministre de changer si l'occasion leur était donnée, leurs recommandations peuvent être regroupées pour l'essentiel en deux points importants : premièrement, le montant de l'aide financière qui leur est accordée mensuellement devrait être plus élevé, soit par la voie de l'aide sociale, soit par la voie d'autres programmes d'assistance; et deuxièmement, il faudrait comprendre davantage ce qu'est le vécu d'une personne aux prises avec l'insécurité alimentaire au Canada atlantique. Chaque groupe a déclaré que le premier ministre devrait « se mettre à notre place, ne serait-ce que pour une journée, pour comprendre ce que c'est de vivre comme ça ».

D'après nos constatations, il est impératif d'obtenir de nouvelles données aussi bien qualitatives que quantitatives pour cerner le paradoxe insécurité alimentaire/obésité. Les cercles vicieux associés à ce paradoxe sont dynamiques et englobent une myriade de défis pour les femmes au Canada atlantique qui doivent être mieux compris et pris en compte.

INTRODUCTION

This paper reports on the findings from the *Full Plate Project on Women, Obesity and Food Security*. The aim of this project was to investigate the 'food insecurity-obesity paradox' – the contradictory association between food insecurity, resulting from inadequate economic resources to purchase food, and obesity, as a consequence of overconsumption (Dinour, Bergen & Yeh, 2007:1952). We were intrigued with the question of moderate food insecurity being linked to overweight rather than low body weight, and that this was the case only for women. In particular, we wanted to know several things: What were women's weight challenges – had they experienced weight issues from childhood or as a direct response to food insecurity? Was this strictly about access to poor quality food options? What food choices were available to the women? What were the gender dynamics in the household – how was food shared, who got the best food, and who ate the most food? How did their weight affect other aspects of their health, especially around chronic diseases? What coping strategies did they use to deal with food insecurity? What changes did they see as important in order to make the situation better?

We learned from participants that there is a vicious cycle surrounding the food insecurity-obesity paradox. The cycle's core elements included experiences of poverty, food insecurity and nutritional deprivation, weight gain leading to obesity, stress, and experiences of chronic illness. One participant explained it this way:

But the way it is right now, you don't have enough money for food, and that's the reason why a majority of the people have a lot of health problems? They're sick, they're stressed. They're worrying is because when you don't have adequate food, and healthy and balanced food on the table for your family, then the stress, the illness sets in. And yes, the weight is up and down. It fluctuates. Because if you don't have the proper food, then you're going to plan a meal that, as long as a child or yourself has something to eat and is going to fill your stomach but [it] is not always the best meal, so then you gain all this weight and you start having all kinds of health problems. And then before, back to

what this lady's saying, you can't sleep at night because it's all different issues that take place, and it goes back again to how you are eating. If you're eating healthy food, that's not saying you're not going to have health problems because you're going to have health problems, but if you have healthy food, it will help you have less health problems than what you're having right now. And because we don't eat healthy, we end up with all these health problems. And before you know it, people are chronic sick? And then before you know it, your body is just deteriorating because you haven't had the proper food from the beginning. And we're not saying that you have to have a lot of money, but you need enough money that's going to be standard with the cost of living, so that you can go to the grocery store and you can buy groceries. You can come home and you can plan a healthy meal.

Participants spoke about lifelong challenges with weight; they remembered childhood experiences of feast and famine and reflected on the impact this had on their relationship to food as adults. They talked about making food choices based not on a lack of understanding, but rather based on strategic choices that reflected the limitations of their income, and especially as relating to their choices as lone mothers¹. They also talked about feeling isolated, stigmatized and vulnerable, which left them feeling highly stressed and often depressed, which in turn contributed to further weight gain. They talked about their experiences of chronic diseases and the effect food insecurity had on managing illness. Participants framed their choices in terms of a 'rock and a hard place', whereby the balance between options would leave them pitting one need, such as rent or medication, against another and leaving food very low on the list of priorities. Our evidence showed that rather than an absence of knowledge around how to live in healthy ways, there was an absence of choice to do so. One participant summarized it this way: *"You have no control. You have to buy what is close to what you think is nutritional or do without. That's the truth."*

¹ The Statistics Canada Census definition of a lone-parent family is: "a mother or a father, with no spouse or common law partner present, living in a dwelling with one or more children. This includes children living with one parent following a parental breakup, single parents of adopted children, a grandparent or other family member who is responsible for the day-to-day care of the children, and widows or widowers (19% of lone-parents in 2006 were widows)."

By gathering the stories of women who have experienced weight gain in the context of food insecurity, this project offers insights into the nuances of the food insecurity-obesity paradox and how, for these women, it affects their daily lives, what challenges they face as well as what coping strategies they use. Drawn from focus group discussions, participants' comments are woven throughout this report. These qualitative data verify previously unsubstantiated hypotheses forwarded by quantitative research and provide valued-added evidence to the food insecurity-obesity discourse.

This report is broken down into four sections. The Background section will review the recent literature on the food insecurity-obesity paradox as well as linkages to chronic diseases. The Research Design section includes social demographic information on participants and descriptive statistics from a food security questionnaire. It will provide specifics about research methods and outlines the use of quotations based on feminist, Indigenous and participatory methodologies (Denzin, Lincoln & Smith, 2008; Sandelowski, 2004; Clow, Pederson, Haworth-Brockman & Bernier, 2009; Marx, 2001; Chambers, 1998; Wilkinson, 1998). The Findings and Analysis section, framed by guiding questions, uses quotations from participants to provide in-depth insights into five areas of their experiences: 1) poverty; 2) gaining access to sufficient, nutritious, socially acceptable food; 3) linkages to food insecurity, obesity and chronic diseases; 4) gendered constructs of maternal deprivation, that is, eating less and last; and, 5) experiences of social isolation, vulnerability, stress as well as experiences they identified as "dark times" and depression. The Conclusions section will provide brief recommendations premised on the research findings, including direct feedback from participants, and a discussion on food security and the right to food in Canada.

BACKGROUND: LINKAGES BETWEEN FOOD INSECURITY, OBESITY AND CHRONIC DISEASE

This study focussed on women who self-identified as food insecure and who had elevated BMIs, and investigated their experiences and understandings of the association between obesity, food insecurity and chronic disease. Food insecurity in a “developed nation context has been described as ‘the inability to obtain sufficient nutritious, personally acceptable food through normal food channels or the uncertainty that one will be able to do so’” (McIntyre et al, 2002:411). The World Health Organization (WHO) asserts: “Issues such as whether households get enough food, how it is distributed within the household and whether that food fulfils the nutrition needs of all members of the household show that food security is clearly linked to health” (WHO, 2011).

Researchers, relying almost exclusively on quantitative studies, have posited a number of hypotheses to explain the association of moderate food insecurity and overweight/obesity among women. In the early 1990s, Blaylock & Blisard explored the relationship between food security and women’s self-evaluated health status. In their conclusions they write: “Our effort is a modest first attempt to examine the relationship between food security and health. We found that food security has statistically significant influence on a women’s self-evaluated health status. However, the manifestations of this effect are difficult to quantify, they may be psychological or physiological” (1991:966). Blaylock & Blisard’s work focussed primarily on the longer term effects of hunger and extended nutritional deprivation. Dietz was the first to identify the ‘food security–obesity paradox’ claiming that “because obesity connotes excessive energy intake, and hunger reflects an inadequate food supply, the increased prevalence of obesity and hunger in the same population seems paradoxical” (1995:766). In 2007, Dinour, Bergen & Yeh conducted a literature review looking at fourteen quantitative studies on the food insecurity-obesity paradox published from 1999 to 2006. In 2011, Franklin et al built on Dinour et al’s work, publishing a review of more recent literature. They reviewed nineteen

quantitative studies conducted between 2005 and 2011 and “confirmed that food insecurity and obesity continue to be strongly and positively associated in women” (2011:1). No significant association has been demonstrated for men.

Many explanations for the food insecurity–obesity paradox have been suggested. Food insecurity is associated with economic constraints on a household, most commonly arising from chronic poverty, but, in some cases, can be the result of episodic deprivation brought about by ill health, disability, sudden job loss or high living expenses (Burns, 2007; Sarlio-Lähteenkorvaz & Lahelma, 2001, Hampl & Hall, 2002). Economic constraints lead to less purchasing power and, according to Drewnowski and Eichelsdoerfer, “inevitability leads to diets that are energy dense yet nutrient poor” (2010:734-736). Drewnowski and Specter’s (2004) earlier work suggests that the connection between poverty and obesity may be in part related to the low-cost of energy dense foods, namely an inverse relation between energy density (MJ/kg) and energy cost (\$/MJ), as well as the palatability of sweets and fats. They argue that: “More and more Americans are becoming overweight and obese while consuming more added sugars and fats and spending a lower percentage of their disposable income on food” (2004:6). Furthermore, food insecure households may be more dependent on food sources, such as food banks, that often rely on high-sodium, processed, and energy-dense foods (CFSJ, 2010) that contribute to weight gain.

Similarly, because women are more likely than men to live in poverty, they may be more prone to developing disordered eating patterns, such as bingeing and fasting, as a result of the cyclical distribution of social assistance, which shapes spending power and food choices (Dinour, Bergen & Yeh, 2007; Sarlio-Lähteenkorvaz & Lahelma, 2001). People living in poverty, many of whom are women, are also more likely to live in so-called “food deserts”. These are socially-distressed urban neighbourhoods with low household income that do not have nearby grocery stores, or remote areas where fresh food is not easily accessible or affordable. As a result, residents may be forced to rely more often on the food available at convenience stores, which tends to be packaged, processed, sodium-rich, and energy- dense, or to visit fast-food rather

than full service restaurants (Schafft, Jensen & Hinrichs, 2009; Larsen & Gilliland, 2008; Morland, Wing & Poole, 2002; Drewnowski & Eichelsdoerfer, 2010; Treuhaft & Karpyn, 2010). This problem can be further exacerbated by the absence of affordable, reliable transportation.

At the same time, women are also more likely than men to be lone parents and research suggests that they may deprive themselves of food or eat cheaper, less nutritious food in order to be able to feed their children as well as possible (McIntyre et al, 2003; Dinour, Bergen & Yeh, 2007; Olson, 2005; Hanson, Sobal & Frongillo, 2007; Hanson, 2011). Equally, a sexual division of labour within the household, which reinforces both women's traditional relationships to food production, purchasing and preparation, and the gendered role of "nurturing" family members, may increase caregiving burdens. As such, women in relationships may also eat less food or less nutritious food in favour of meeting the nutritional needs of their partners (Hanson, Sobal & Frongillo, 2007; Lyons, Park & Nelson, 2008). Similarly, some researchers have suggested that the social responsibilities women have for food provision, preparation and quality control may lead to greater levels of food anxiety, which can also contribute to disordered eating and weight gain (Sarlio-Lähteenkorva & Lahelma, 2001).

Hence, it is not surprising that "the risk of obesity is 20% to 40% higher among individuals who are food insecure. This is true for women only and [...] is observed consistently across US, Europe and in Australia" (Burns, 2004:4). The associations between overweight and obesity and health conditions, including chronic diseases are well-documented (PHAC & CIHI, 2011; Guh et al, 2009) and in group discussions most participants in the study revealed living with some type of chronic disease². The linkage between food insecurity, obesity and chronic diseases is detailed by Seligman, Laraia & Kushel:

Common household responses to inadequate food supplies include food budget adjustments, reduced food intake, and alterations in types of food served. Dietary

² "Obesity is associated with a number of health conditions or morbidities. A recent systematic review of the clinical literature found associations between obesity and the incidence of type 2 diabetes, asthma, gallbladder disease, osteoarthritis, chronic back pain, several types of cancers (colorectal, kidney, breast, endometrial, ovarian and pancreatic cancers) and major types of cardiovascular disease (hypertension, stroke, congestive heart failure and coronary artery disease)" (PHAC, 2011). See also Evans & Clow's (2012a:49-74) critical analysis of these associations in *Women and Healthy Living in Canada*.

variety decreases and consumption of energy-dense food increases. These energy-dense foods, including refined grains, added sugars, and added saturated/trans fats, tend to be of poor nutritional quality and less expensive calorie-for-calorie than alternatives. U.S. adults living in food-insecure households consume fewer weekly servings of fruits, vegetables, and dairy and lower levels of micro-nutrients, including the B complex vitamins, magnesium, iron, zinc, and calcium. These dietary patterns are linked to the development of chronic disease, including hypertension, hyperlipidemia, and diabetes (2010:304).

Consequently, as “dietary regulation and meal planning play a fundamental role in disease management, adults who are food insecure may be especially susceptible to developing these chronic conditions... [and equally] food security is an issue of greater concern for individuals with chronic conditions who must maintain certain diets to manage health” (Terrell, Drew & Vargas, 2009:S3-3).

Given the impact of food insecurity on health, gaining insights into the relationship between obesity, food insecurity and chronic diseases is imperative. By focusing on qualitative analysis, this research offers first-hand accounts of the vicious cycle that surrounds the food insecurity-obesity paradox for women in Atlantic Canada. The next sections will elaborate on the Full Plate project’s research design, findings, and analysis.

RESEARCH DESIGN

This qualitative study included six focus groups conducted between November 2011 and February 2012 in the four Atlantic provinces (New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island), and included Aboriginal women, bilingual Francophone women, and those living in urban, rural and/or remote locales. This research project was supported by an Advisory Committee comprised of representatives from all four provinces, and included provincial food security networks, government departments of health, community-based organizations, researchers, and poverty and social justice organizations. Prior to conducting the study, ethical approval was received from the Dalhousie University Health Sciences Research Ethics Board. The Advisory Committee provided input and feedback on the research design and members were, together with associated community-based partners, the local contacts for logistical coordination and participant recruitment. A monetary honorarium and reimbursements for transportation and/or childcare were offered to all participants.

Recruitment

It was challenging to find eligible participants for a variety of reasons. Principally, we found issues relating to food insecurity, poverty, overweight are sensitive topics and admitting experience with or knowledge of these issues can cause discomfort. This may be especially the case in a focus group setting occurring within one's local community, which due to its very 'group' nature cannot guarantee confidentiality or anonymity of participants. In addition, organizing focus groups during the winter season was not optimal. Inclement and unpredictable weather resulted in mobility and transportation difficulties, which caused concern and/or created obstacles for participants. Similarly, inconsistent or unexpected changes to childcare or other obligations resulted in some confirmed participants withdrawing unexpectedly from the focus groups and therefore the study. Moreover, some women experiencing food security who wanted to participate in the study were screened out because their weight challenges were related to low body weight rather than overweight or obesity. (Such participants have indicated interest in participating if a future study looks at food

insecurity and underweight.) To respond to potential challenges, during the initial screening process participants were asked if they had any questions or concerns, and were strongly encouraged to contact the Project Coordinator as needed.

While participants self-identified as experiencing food insecurity and weight challenges, local organizations played a key role in recruitment. We found that participants who were already part of a community-based program were more likely to become involved in the project because they trusted the host organization, which could address any apprehensions by introducing the researchers, explaining more about the focus groups, and bridging the process for us. In fact, in places where we relied mainly on public notices (i.e. posters, websites, listservs, social media bulletin boards etc.) to recruit participants, we were not able to garner sufficient interest and had to cancel two focus groups. However, when local partners introduced the project and directly shared the posters with potential participants we found that interest would build quickly, and after one person contacted us frequently there was a snowball effect. Participants had to satisfy four criteria to be screened into the project. Each prospective participant had to: self-identify as a woman, be at least 18 years old, have self-reported weight and height that resulted in a Body Mass Index (BMI) over 25, indicating overweight or obesity³, and identify as being food insecure based on a positive response to either one of two food security screening questions.

³ A good summary of the debates around the use of BMI as a measurement for overweight and obesity are outlined in ACEWH Report, *The Impact of Overweight and Obesity on Maternal and Newborn Health: A critical review of the literature*. Petite and Clow argue: "There is no clear agreement on how best to measure overweight and obesity. Some researchers argue percentage of body fat is the best measure of healthy weight, while others maintain that waist circumference is better able to identify individuals at heightened risk of weight-related health conditions. The easiest and most economical measure – and therefore the one most commonly used – is Body Mass Index (BMI). BMI is calculated from the height and weight of an individual where the weight in kilograms or pounds is divided by the square of height in meters or inches[...]. [O]verweight is categorized as a BMI between 25 and 30 and obesity is defined as a BMI of 30 or greater. While BMI is widely used, there is a general recognition that as a measure of healthy and unhealthy weight it is far from perfect. For one thing, BMI is often calculated using self-reported measurements of height and weight, which are often inaccurate, leading to miscalculations in as many as many as 30% of cases. For another thing, BMI fails to differentiate between fat and musculoskeletal as sources of weight. Some studies have also highlighted the limitations of BMI across diverse populations. Because this measure was developing with individuals of European descent, it may not be accurate or appropriate for other ethnic populations. For example, the gap in rates of obesity between white and African-American women is cut in half when percent of body fat rather than BMI is used to measure of healthy weight [...]. These limitations have led some researchers to argue for the development of population-specific BMI or the design and use of alternative measures of healthy body weight. Despite its many drawbacks, BMI is still the most commonly used measure in existing research on overweight and obesity and systematically used in the food security and obesity literature. But research using BMI should be viewed with caution" (2010: 7-9).

Focus Groups

Each focus group lasted between 2.5 and 3 hours, and included time to explain the project and obtain written consent from the participants as well as their completion of two questionnaires, and the holding of a group discussion. Demographic data were collected through a standard questionnaire that provided descriptive statistics about the participant population for the study. Participants also completed a food security questionnaire, which utilized questions from the Canadian Community Health Survey (CCHS) (Cycle 2.2, Nutrition, 2004 and Cycle 3.1, 2005) and the First Nations Regional Longitudinal Health Survey (RHS) (Adult Questionnaire, 2008), to gauge the degree of food insecurity they had experienced in the preceding 12 months. The questionnaires were distributed to focus group participants individually, and reading support was available to participants as needed.

Focus group discussions used an open-ended, semi-structured discussion format and guiding questions (see Appendix A). The focus groups were transcribed verbatim. The transcripts, as well as any field notes, were read over by the Project Coordinator, who had facilitated all the focus groups. The research team then worked collaboratively to identify themes or emerging patterns within the women's comments and code them according to their prevalence and personal impact on the women (as identified by the women themselves). NVivo 7™ was used to organize the transcripts as well as for coding and thematic analysis.

Methodologies

Our study focussed heavily on the opportunity to hear from and document what food insecure women living with weight challenges had to say. Premised on feminist, Indigenous and participatory methodological frameworks, this paper uses multiple quotations from focus groups to give space to a diversity of women's narratives. Whereby, the aim was to not only gather many women's comments through the data collection process, but whenever possible to directly reference an assortment of viewpoints and exchanges in the analysis. Wilkinson notes that "focus group data is most commonly presented as if it were one-to-one interview data, with interactions between group participants rarely reported, let alone analysed" (1998:112).

This paper will highlight the ‘interactional features’ of focus groups stemming in part from the “social nature of talk” (Wilkinson, 1998:113,121, author’s emphasis).

Feminist researchers have noted the value of focus groups to offer a space for marginalized women to validate their experience, speak for themselves, enhance communication amongst women, promote a sense of solidarity and connectedness, and help to raise consciousness (Kintanar, 1997:82-84). Wilkinson argues that: “Focus groups can address ethical concerns about the power of the researcher in the data collection process; can yield high quality, interactive data; and, can offer a route to studying the person in the context of the social world” (1998:123). Focus groups offer a valuable contribution to qualitative health research by providing space for voices of participants. “Voicing is a process that challenges claims of hegemonic knowledge and empowers individuals by allowing them to define their own experiences. It is based on the assumption that ‘realities are socially constructed, local, and specific, dependent for their form and content on the persons who hold them’” (Marx, 2001:133). Furthermore, “group interviews are especially effective if the cohesion inside the group supports individuals in a way that allows them to express anxiety-provoking and socially unpopular ideas freely in spontaneous flow of discussion” (Carbert, 2006: 29). By sharing experiences within a group space, what was deemed a personal problem can potentially be understood to be a more common concern and women may “develop a clearer sense of the social and political processes through which their experiences are constructed – and perhaps also a desire to organise against them” (Wilkinson, 1998:115). In her seminal work *Towards a Methodology for Feminist Research*, Mies explains the potential of focus groups for transformative thinking, “this collectivization of women’s experience is not only a means of getting more and more diversified information but it also helps women to overcome their structural isolation in their families to understand that their individual sufferings have social causes” (1983:128). The transformative power of stories is discussed by Sandelowski, who has written extensively on qualitative health research:

In qualitative research literature, understanding is not merely a prelude to or basis for action (understanding → action) but, rather, is itself action, or a consequence of action

(understanding = action, or action → understanding). Whenever users see something for the first time or see it differently, they change the world [...]. As worlds are created with words, and words are the primary currency of qualitative research to reword something is to remake the world. Indeed, a primary agenda in critical inquiry with marginalized individualized and groups is to empower them to rename the world (2004:1373).

Sandelowski's discussion on narrative utility aligns with our research design. She defines it "as the readability, writability, and evocativeness of, and also the meaningfulness and transformative possibilities in, stories. Because human beings characteristically use stories (i.e., read, write, tell, and listen to them), stories must be useful"(2004:1373).

Analysis of the focus group findings was guided by grounded theory methodology, which allows theory/theories to emerge from the data that is collected. "Grounded theory research follows a systematic yet flexible process to collect data, code the data, make connections and see what theory/theories are generated or are built from the data" (Wadham, 2009). Our use of grounded theory was informed by an Indigenous feminist approach and the work of Denzin, Lincoln & Smith (2008). Key elements of this approach include: calling into question the more generic, utilitarian, biomedical Western model of ethical inquiry; calling for a collaborative social science research model; stressing personal accountability, caring, the value of individual expressiveness; implementing collaborative, participatory performative inquiry; and forcefully aligning the ethics of research with a politics of the oppressed, with a politics of resistance, hope, and freedom (Denzin, Lincoln & Smith 2008:15). As Madison claims: "The researcher's analysis serves to *clarify and honor the significance* of the 'telling and the told' (2008:394, author's emphasis). Acknowledging the heterogeneity of women's experiences, and in particular the experiences of the women living in the same community and often with other associations, is an important part of our strategy to engage fully with sex- and gender-based analysis. As Chambers articulates this in *The Myth of Community: Gender issues in Participatory Development*, "local contexts are complex, diverse and dynamic. The reductionist of collective nouns misleads: 'community' hides many divisions and differences, with gender often hugely significant; 'women' as a focus distracts attention from gender relations [...] and also conceals

the many differences between females [...]” (; 1998: xviii, author’s emphasis). In *Rising to the Challenge: Sex- and Gender-Based Analysis for Health Planning, Policy and Research in Canada*, sex- and gender-based analysis (SGBA) is:

“framed by a recognition that sex, gender, diversity and equity matter at every stage of health research, policy development, planning and practice. These four concepts together act as a lens or filter for evaluating descriptions evidence, analyses, and the management of health concerns. Use of the filter enables us to anticipate and/or identify biases that contribute to health disparities and, in doing so, to create the possibility of both avoiding discrimination and redressing inequity” (Clow, Pederson, Haworth-Brockman & Bernier, 2009:20).

SGBA reminds us to ask questions about similarities and differences between men and women, recognizes that there is a great deal of variation among women and men, and emphasizes the intersection of multiple aspects of individual identity and experience (Ibid, 2009:1)⁴. Founded on these methodologies, multiple stories and interactive data from women participants in the focus groups are quoted routinely in this paper to support and illustrate major findings.

Participants

We used a questionnaire to provide a demographic profile of participants. The final sample consisted of 27 participants. The Demographic Questionnaire had a 100% response rate and a breakdown of results is highlighted below. The average year of birth for the participants was 1960, making the average age approximately 51 or 52 years in early 2012. For all but two of the participants who were lower, each woman’s BMI was measured⁵ at 30 or above (classifying in the obese range) based on self-reported height and weight information. Participants were asked if they identified with any racial and/or ethnic group. Twelve participants did not identify with any specific group, and of the fifteen remaining, five participants self-identified as “African Canadian” or “Black”, two as “White”, three participants identified as “English”, two as “Canadian”, one as “French”, one as “French and First Nations”, and one participant identified

⁴ See also: SGBA E-Learning Resource at www.sgba-resource.ca

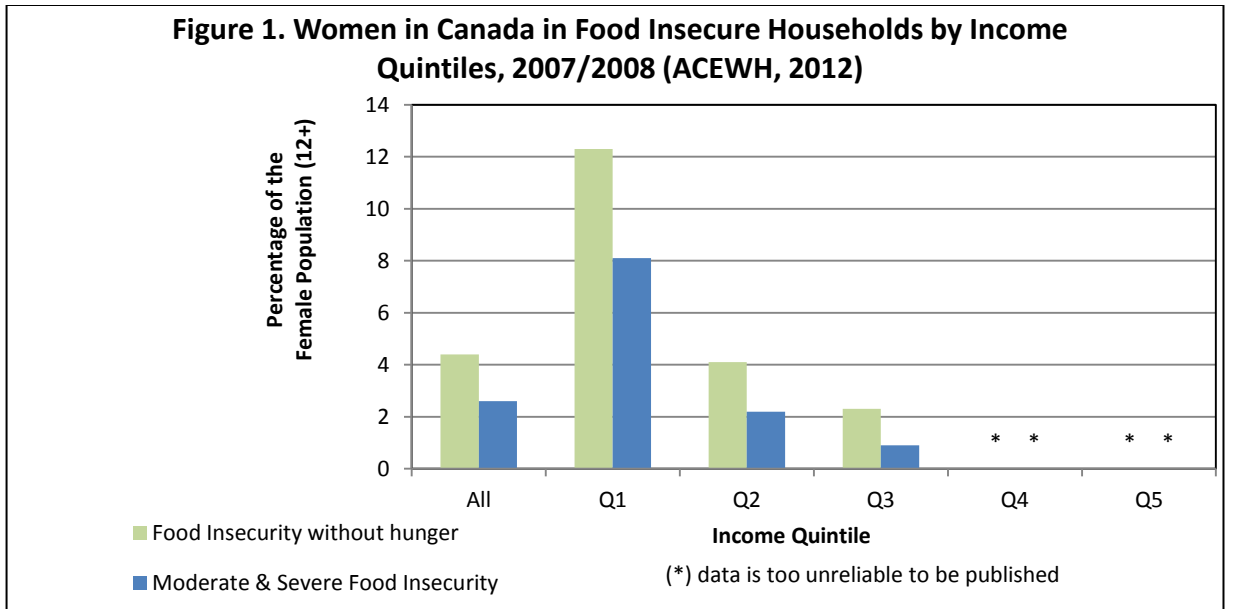
⁵ Using the Dietitians of Canada “Assess your BMI” online tool, see <http://www.dietitians.ca/Your-Health/Assess-Yourself/Assess-Your-BMI/BMI-Adult.aspx>

as being “With them all”. English was the language spoken at home for 93% of participants, with 3.5% speaking French, and 3.5% both languages. One participant who indicated English as her home language also noted some use of Swiss German.

Household living arrangements varied between participants, 41% were unattached and 22% lived with a partner, and 41% lived with a child or children (with or without a partner). On average, 41% of those surveyed lived in a household of 1 person, 37% lived in a household of 2 persons, and 22% lived in a household of 3 or more. Eighty-one percent surveyed had children. One third of the women were presently living with one or more child, and the majority of the children were under 12 years old. One third of the women were the only adult living in the household with a child or children.

The highest level of formal education for 41% of the participants was high school. Fifteen percent had less than high school. Thirty-seven percent had some post-secondary, some vocational or some trade school, and 22% surveyed had some graduate or post-graduate training. Most participants reported low incomes⁶, with two-thirds reporting an annual household income of less than \$15,000 and the balance of the participants reporting an income ranging from \$15,000 to \$24,999. Sex-disaggregated data from the CCHS (2007/2008) provide valuable comparative information between the participants’ descriptive statistics noted above and food insecure households nationally. Associated graphs featured throughout this section are adapted from *Women and Healthy Living in Canada*, see Evans & Clow (2012b:75-102).

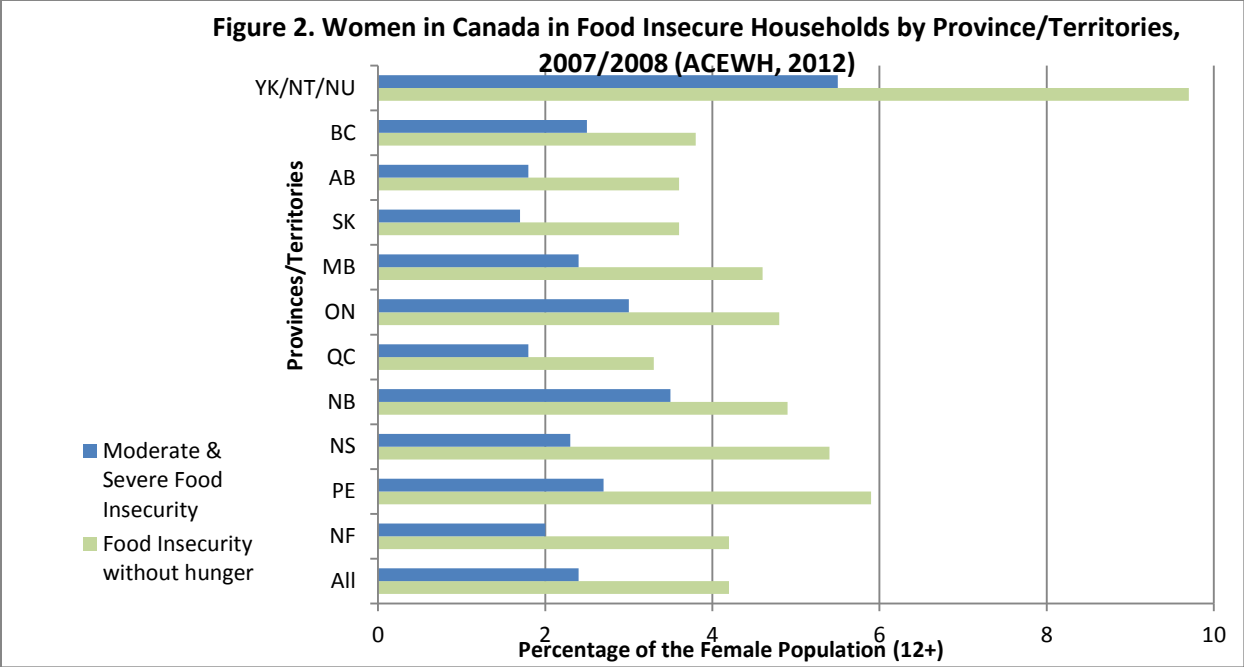
⁶ See Statistics Canada (2011) “Low income cut-offs before and after tax by community and family size, 2009 constant dollars”, <http://www.statcan.gc.ca/search-recherche/bb/info/low-faible-eng.htm>.



Data Source: Statistics Canada, Canadian Community Health Survey (CCHS), 2007-2008

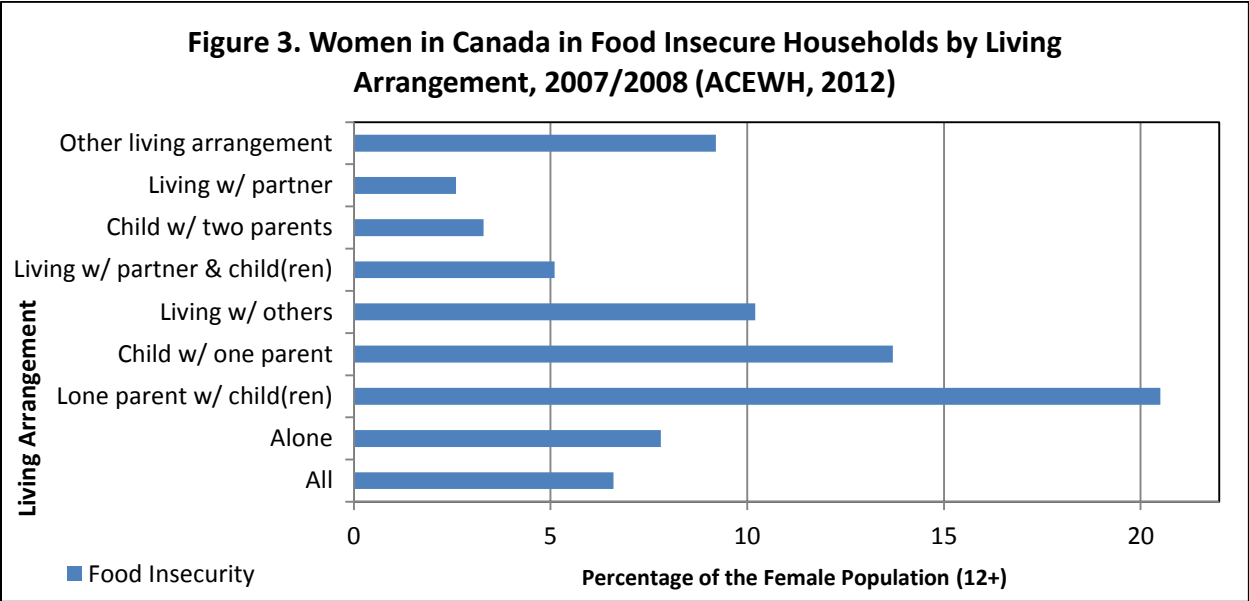
The majority of women we spoke with were living in the lowest income quintile, which corresponds with the CCHS data indicating clear linkages between poverty levels and risk of food insecurity (see Figure 1). Income sources varied amongst participants. A majority (55%) relied on income support through social assistance. In addition, those surveyed noted income from pension (22%), child tax benefit (22%), disability (15%), Employment Insurance (11%), Old Age Security (4%) as well as savings (4%), friends (7%) and room rental (7%). Fifteen percent of those surveyed worked part-time and indicated income from wages or salary. Eighty-five percent of those surveyed did not do paid work.

⁷ “The income distribution reflects a distribution of respondents in deciles based on the adjusted ratio of their total household income to the low income cut-off corresponding to their household and community size. It provides, for each respondent, a relative measure of their household income to the household incomes of all other respondents. This income distribution is divided into ten equal parts so that each part represents 1/10 of the sample or population. These equal parts are referred to as Decile 1, Decile 2, etc. Decile 1 and 2 were combined to become Quintile 1, Decile 3 and 4 were combined to become Quintile 2, etc” (Health Canada, 2010).



Data Source: Statistics Canada, Canadian Community Health Survey (CCHS), 2007-2008

Figure 2 indicates that women in food insecure households in the Atlantic Provinces – New Brunswick, Newfoundland and Labrador, Nova Scotia and Prince Edward Island – have some of the highest rates of food insecurity in Canada. Regional disparities are also discussed in the section on the use of food banks and other charitable food programs.



Data Source: Statistics Canada, Canadian Community Health Survey (CCHS), 2007-2008

Figure 3 indicates that some of the highest rates of food insecurity for females are experienced by those living as a lone parent with a child or children, or living alone. Thirty-three percent and forty-one percent of participants respectively identified as lone mothers or as unattached/living alone in our study. Franklin et al., in their review of nineteen studies on the food insecurity-obesity paradox, confirmed that “low-income, ethnic minority, and female-headed households exhibit the greatest risk for food insecurity, which often results in higher prevalence of diet-related disease” (2011:1; see also Hanson, 2011). In a report by the Canadian Centre for Policy Alternatives, entitled *Women’s Poverty and the Recession*, Townson asserts that “[w]omen in Canada still have unacceptably high rates of poverty — especially if they are on their own as lone-parent heads of families or as older women living alone” (2009:10). Moreover CCHS 2007/2008 data indicate that: “The prevalence of food insecurity among households led by female lone parents (25%) was two times greater than among households led by male lone parents (11.2%) and four times that of households led by couples (6.3%)” (Health Canada, 2010). Based on the evidence we can conclude that the women we spoke with were from vulnerable and marginalized populations in Canada.

Food Security Questionnaire

Food security surveys are most often income-based, and measure worry about having enough money to buy food or the actual inability of a household to afford sufficient, nutritious and socially acceptable food. As Burns suggests,

“There is a continuum of experience involving food insecurity with or without hunger according to the severity and consequences of the food scarcity situation. Food insecurity consists mainly of anxiety about having enough food to eat or running out of food and having no money to purchase more. Adults who believe they are food insecure may try to avoid hunger by cutting the size of meals, skipping meals, or even going without food for one or more days. However, when food is extremely limited, the means to avoid hunger are ineffective and cause severe personal hunger and hunger that spreads to the family and children” (2004:6).

There is a limited amount of qualitative research in this area and the literature on the food insecurity-obesity paradox is based almost exclusively on quantitative analysis. As a result, this study included an adapted food security questionnaire as a way to bridge quantitative and qualitative dimensions of these issues.

In the CCHS Household Food Security Survey Module (HFSSM), household food insecurity status and severity are determined from responses to a set of 18 questions. “Each question specifies a lack of money or the ability to afford food as the reason for the condition or behaviour [...] the food security status of child and adult members of the household is determined by the number of food-insecure conditions reported; that is, by the number of questions in the HFSSM that the respondent answered affirmatively on behalf of the household” (CCHS, 2004:7-11). Our study utilized seven of these 18 questions: 4 adult food security scale questions and 3 child food security scale questions. Thresholds for defining food security categories (i.e. moderate, severe) were not ascertained.

The Food Security Questionnaire had a 100% response rate. The questionnaire began with a ‘food sufficiency question’ that asked: “which best describes the food eaten in your household in the past 12 months?” Sixty-seven per cent of participants responded that they had enough, but not always the kinds of food they wanted to eat; 15% answered that sometimes they did not have enough to eat, and 15% answered that they often did not have enough to eat. Only one participant indicated that she always had enough of the kinds of food she wanted to eat, but added a hand written note on the questionnaire form explaining that she “worr[ied] about the future and the continuous increase in cost of healthy food.”

When asked if “you or other household members worried that food would run out before you got money to buy more”, 37% responded that this was often true and 48% responded that this was sometimes true; 11% said it was never true; and, one respondent chose not to answer. In response to the statement: “The food we bought just didn’t last, or there wasn’t any money to get more”, 30% responded this was often true and 48% responded it was sometimes true.

Fifteen percent indicated it was never true and two respondents either did not know or chose not to respond. A combined ninety-three percent indicated that they often (52%) or sometimes (41%) “could not afford to eat balanced meals”; for one respondent this was never true, and one respondent did not know. As noted, participants with children living in their household were asked to fill out three additional survey questions. Fifty-nine percent of the respondents answered the child food security questions⁸ and of those, 26% indicated that they often “had to rely on a few kinds of low-cost foods (e.g. macaroni, rice) to feed their children because they were running out of money to buy food”; 22% indicated this was sometimes true; 11% indicated this was never true. In this same sub-group, 11% indicated it was often true and 33% indicated it was sometimes true that they “were unable to feed the children a balanced meal because they could not afford it”. Seven percent indicated this was never true and 7% chose not to answer. Seventy percent of those surveyed indicated that, yes, they “had personally lost or gained weight because they were unable to eat enough health food”, with 11% indicating no change, and 19% did not know.

⁸ This percentage differs from the number of participants who identified living with a child or children in their household in the demographic questionnaire, and for example may relate to flexibility in feeding arrangements of children associated with the household in other ways, or may demonstrate survey response error.

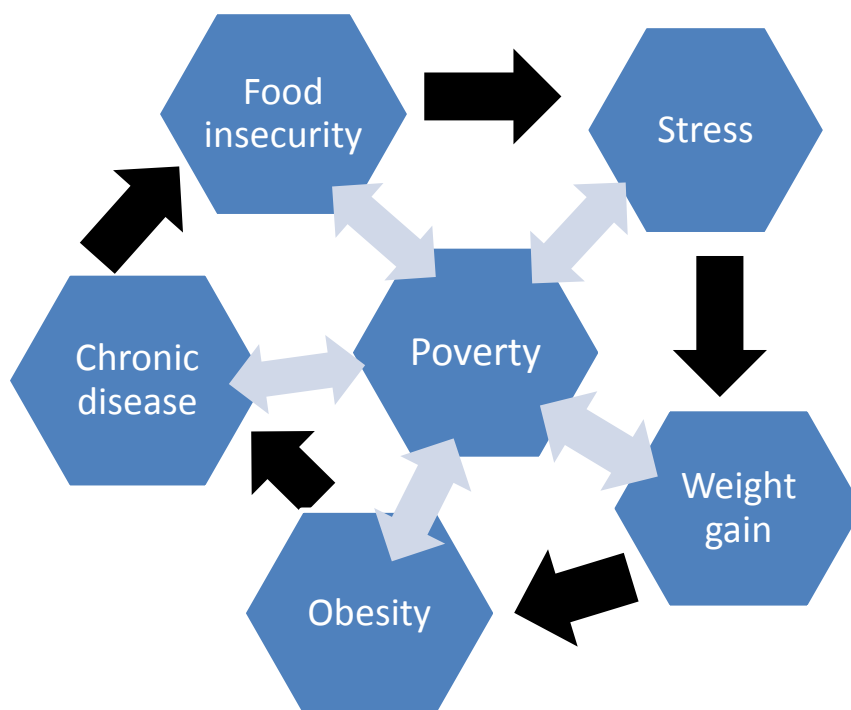
FINDINGS AND ANALYSIS

The focus group discussions were extremely rich. The women who participated were open, willing to discuss all the questions asked, and had very thorough knowledge of and ability to express what food insecurity meant to them and how it had affected their weight and health. The direct feedback from participants to us and to our partners was excellent and many noted “relief”, being “thankful for having the chance to talk about these issues”, and even “a sense of release” in having a chance to discuss their obstacles and coping strategies in detail. During the focus groups, participants responded to the questions asked and also moved on to other topics. At times they asked each other questions, and extra time was given for further comments. Wilkinson writes that: “Whether or not focus group participants know each other in advance of the group, they often assist the researcher by asking questions of each other; by contradicting and disagreeing with each other; and by pointing to apparent contradictions in each others’ accounts” (1998:118). As part of the interactive technique noted in the earlier discussion on methodologies, this section will highlight the back and forth nature and multiple narrative style of focus group discussion.

The participants framed their comments, experiences and potential solutions within the context of living in poverty (i.e. an increased income would make things better). When participants began to assess their experiences with a health lens, in particular by observing their experiences with food insecurity as something that had negatively affected their health, this opened up the discussion and allowed for new discourses to be included; in turn, peeling back layers and revealing some valuable insights. Even for us as researchers the overlaps between obesity, poverty and food insecurity were at times blurred; discussions with participants moved readily between discourses framed around health to those framed around poverty to those again framed by other dimensions. It became clear very quickly during the project that the concepts we were looking at were extremely fluid and required flexibility in data collection and data analysis.

For participants there was a vicious cycle associated with the food insecurity-obesity paradox, as outlined in Figure 4. The diagram is purposely off-centre and asymmetrical to highlight the varying experiences of participants; yet, throughout the interviews the core elements remained the same. These included experiences of poverty, often in childhood and as adults; food insecurity and nutritional deprivation caused by an inability to purchase healthy foods; weight gain in the context of food insecurity eventually becoming obesity; ongoing and increasing stress due to a myriad of factors including lone parenting and social isolation; reduction in well-being, and experiences of chronic illness.

Figure 4: Food Insecurity-Obesity Paradox as a Vicious Cycle for Women



Five key themes emerged from the focus group discussions. This section details the women's narratives relating to 1) poverty; 2) gaining access to sufficient, nutritious, socially acceptable food; 3) linkages to food insecurity, obesity and chronic diseases; 4) gendered constructs of maternal deprivation: eating less and last; and, 5) experiences of social isolation, vulnerability, stress, dark times, and depression.

Poverty

For participants in our study, the choices they were making were frequently embedded in poverty. When asked about the connection between food insecurity and their weight challenges, one participant stated succinctly: *“We don’t have enough money to buy healthy food.”* Another participant agreed, stating: *“When I go to the grocery store, I only have ‘x’ amount to spend. Now, when that’s spent, there’s no more money to spend.”* When asked what key changes they would prioritize to address these issues, a respondent answered firmly: *“Cost of food. Well that would be number the one factor.”* Another respondent quickly added on behalf of the rest of the group members: *“That would be the number one factor from the whole group.”*

According to the Nova Scotia Participatory Food Costing Project “having an adequate income to purchase a healthy diet is the most important factor in determining food security” (Williams, 2009:9). In Nova Scotia, using the National Nutritious Food Basket (NNFB)⁹ as a standardized food costing tool, “a basic nutritious diet for a female led lone parent household with three children between the ages of 7 and 12 years costs, on average, \$606.59/month in 2008.... [T]he household relying on provincial Income Assistance would have a deficit of at least \$393.49 each month, assuming the family is receiving full transportation and childcare allowances” (Williams, 2009:12). What is important to understand about the NNFB and the deficit mentioned above is that “in this household there would be no money to spare for out of pocket healthcare expenses, food purchased outside the home, costs associated with physical activities and recreation, education expenses, emergencies or savings for unexpected expenses” (Williams, 2009:12). A similar food costing project completed by the Common Front for Social Justice in New Brunswick revealed that for a “lone mother with one child on social assistance, one third of her financial resources (34.5%) are required to cover her food cost plus that of her child” (2010a:18). Participants talked about the challenge of deciding where food costs should come in a long list of household expenses. One participant explained:

⁹ “The NNFB was developed by Health Canada. It is a list of 66 foods that can be used to calculate the cost of a basic nutritious diet for 23 different age and gender groups. The food items in the NNFB are foods that are minimally processed, that are widely available in grocery stores, and that are commonly eaten by most Canadians in amounts that would provide a nutritionally adequate, balanced diet for various age and gender groups” (Williams, 2009:3).

I go into my bank every month, first of the month, rent comes out, electric comes out, phone comes out, all my bills are paid. Great! I've got money left over to buy food, or bus pass, or whatever I've got. But I've got to make sure I've got to a place to lay my head at night. Food comes last.

One participant broke down her spending, and laid out how she prioritized and calculated her food choices:

So I know that when I only had the two [hundred and] eighty-five and I paid two [hundred and] sixty for rent, and I only had twenty-five dollars to buy food and whatever else I needed, well, guess what came first? Toilet paper, shampoo. Forget the food. I didn't have any money for food. I did go, sometimes I had a few bucks left to go and buy Mr. Noodles at the Dollar Store, because then there was like, six for a buck. Okay? So if you had five bucks, that's thirty. At least one meal a day.

A great many participants talked about the cost of medication and their inability to pay for their prescriptions costs and how this in turn affected their health. One participant put it succinctly: "So it's like, people make choices. Medicines or food." This discussion came up in every focus group and was seen as a particularly frustrating dilemma to manage. Several participants framed their choices in terms of a 'rock and a hard place', whereby the balance between two options was determined according to which was less likely to do immediate harm. In one instance a lone mother in an educational program talked about how she had to balance her food expenses against other fixed needs, and how those needs (such as gas to ensure she got to school) directly threatened her other benefits.

When I look at my budget, so many things are fixed. And the one thing that isn't fixed is my food, right? Like, you have to pay so much for rent, you have to pay so much for this and so much for that, right? And the food is kind of, it's just there. With whatever money you have left from paying everything, that's what I eat with. And that's, you know, and even my gas for my car, if I don't have the gas for my car I can't get to school. And if I miss too much school, they're going to take my E.I. away from me....

The back and forth engagement between participants during these discussions was frequently supported with visible head nodding, agreeing tones, and empathetic language and comments. One such interaction included this conversation in which one participant stated: *“Because what we really need is the cost of living lined up with the amount of the cost that we’re living with today. And if they done that then people would have enough money for their food, and for their medical, and for transportation,”* and another woman strongly agreed: *“Wouldn’t that be a miracle!”* [Interviewer’s Note: Many in the group nodding in agreement]. These findings and those of the next sections support Tarasuk, McIntyre & Li’s argument that: *“The declines in intake in women experiencing moderate or severe food insecurity suggests that they live tenuously in need of their next income infusion. Anything that threatens those funds, or the use of those funds for food purchases, must threaten their nutritional health”* (2007: 1986).

Gaining Access to Sufficient, Nutritious, Socially Acceptable Food

Participants were asked what they ate and where they got their food. Their feedback clustered into at least three themes: firstly, participants’ limited ability to buy food staples, and some of the strategies they used to try to purchase them; secondly, the accessibility of food, especially relating to food deserts, transportation and mobility; and, thirdly, their experience with food banks and other charitable food programs.

Firstly, participants talked repeatedly about the increasing food costs and price hikes in food staples, such as bread, milk, and meat. For example: Participant 1: *[...] a loaf of bread used to be \$1.29.* Participant 2: *[It’s now] four dollars!* Participant 1: *Like, that is insane!* This resulted in limitations in other food choices, and frequently eliminating the purchase of fruits and vegetables. One participant explained the impasse she faces when selecting food:

With the rising cost of food, fruits. They say eat fruits and vegetables – have you seen the price of them? Unless you have a garden and you grow it, it’s virtually impossible to do. Virtually impossible to do. So you’re eating all of the unhealthy things just to stay alive, and the healthy things go, well, that’s just a luxury that, that’s for someone else. But you just can’t do it.

Several participants mentioned offsetting the cost of healthy food staples by using a variety of food buying strategies, including buying less nutritious items or products close to or past their expiry date. One person described some of her strategies.

But I buy a lot of stuff that's reduced for clearance or on half-price. I don't buy fresh fruit because it's just too expensive, so I'll buy like the canned fruit, and again, the heavy syrups and all that, but I can divide that up and make it last a little longer. As with like, she was saying about the fries and things, it's like I don't have the money for the bags anymore, so if I can get potatoes and I'll cut them up and make fries that way or, or whatever. But lots of rice, lots of macaroni, ground beef is the biggest staple. If I have a piece of chicken, it's like a big celebration at my house. So if I have a chicken breast, going in with rice or whatever, I dice it up so small just so you get a little bit. And same if I make a stew, the beef is so small you can barely see it, but at least that way I know there's something's going in it, but.

The concern for healthy food staples sat heavily on minds of the participants with regard to the food choices they were making for their children as well.

Participant 1: *Milk is very expensive.*

Participant 2: *It is.*

Participant 3: *But it's something your children need.*

Participant 1: *I'm thinking like, [my baby] was just drinking just formula and now, looking at the prices of formula, I breast-fed for seven months so I was, enough of that, seven months. And now that's gone and I'm like, oh my gosh, it's really expensive. And it's so hard. Then you're like, well okay, if I switch her to carton milk, carton milk is what? Four or five bottles? Then after that I got to buy another carton, and, it's expensive.*

Participant 2: *Milk is very expensive.*

A second issue discussed was accessibility and availability of food. In particular, participants talked about a lack of proximity to healthy food and/or grocery stores. Going back to earlier descriptions of 'food deserts', focus group participants' identified such characteristics in their own neighbourhoods. One woman, during a focus group, realized she lived in a 'food desert':

Yeah, come to think of it, we don't have any healthy food places really. Everything is fast food, fast grease. In walking distance, we don't have a Subway, we don't have any kind of healthy food.

A second woman talked about her viewpoint as someone who works at a local convenience store:

What I've noticed. I work part-time at the convenience store. Not saying' anybody in this room, but what I've noticed is a lot of people in the community who are not well-off, do buy a lot of things at this [store]. And you know something? At the store, it's much more expensive than it is at the supermarket, but they don't have any way to get to the supermarket. So they're buying stuff at the store, which is more money and it's more junky food. You can't find much nutritional food out there. There's practically nothing. Right? So I see a lot of the same people coming in and out, you know what I mean?

Gaining access to food was further exacerbated by poor availability of reliable and affordable transportation. In this discussion, participants detailed the process of getting to the nearest grocery store.

Interviewer: *Okay. Do other people have transportation?*

Multiple Participants: *No. Just [the] bus.*

Interviewer: *So how do you go to [major grocery store]? Do you walk?*

Participant 2: *Bus.*

Interviewer: *And how do you get home?*

Participant 2: *Cab.*

Interviewer: *Okay. How much does it cost to get home?*

Participant 2: *Eleven dollars..?*

Participant 1: *Well, it all depends on the traffic, and the time you go.*

Participant 2: *And the cabs just went up a few weeks ago.*

Interviewer: *So, do you go with more people or by yourself?*

Participant 2: *Usually myself and my sister.*

Interviewer: *And is that the closest grocery –*

Participant 2: *That's the closest for me. Yeah, and her...and all of us, right?*

Multiple Participants: *Yeah.*

Participant 3: *There used to be [another store nearby] but then they closed that one.*

Another obstacle for participants was mobility. One participant discussed the impact of her mobility challenges with regard to obtaining food:

Costs ten bucks to get there, ten bucks to go home, that's twenty bucks that I can't spend on groceries because I've got to spend it on a cab because I can't walk that distance. Because of my weight, because of my mobility issues, I just can't do it. Now, there's a grocery store [that] used to be close to where I live, but I still couldn't walk because it was five blocks away. That's too far. I can't walk two blocks. You know, I can't walk for more than five minutes in any direction before I have to turn around and come back home. So for me, even to get out and get exercise, to try to be healthy, there's the 'not wanting to' because of the depression, and there's 'not being able to' because of mobility.

A third issue participants talked about was their experience with food banks or other charitable food programs. In 2010, Food Banks Canada reported that “[o]ver the last two years, food bank use in Canada has risen by 28% - an unprecedented rate of growth” (2010:2). *The Hunger Count 2010* survey reports hunger and food bank use during the month of March 2010 as compared to a year earlier. It reported that “those who accessed food banks increased ‘across the spectrum’ and included 38% children or youth under 18; 51% of assisted households [were] families with children, and nearly half of these were two-parent families. A large percentage of those needing support (40%) [were] single-person households, many of them counting social assistance as their primary source of income” (2010:1). In New Brunswick food bank use increased by 4% in March 2010, this followed a 14% increase between 2008 and 2009. In Nova Scotia, there was an 11% increase. In Newfoundland and Labrador there was a 3% increase. Prince Edward Island experienced a 13% increase in the number of people turning to food banks for help (Food Banks Canada, 2010: 32-39).

Focus group participants’ experiences of charitable food programs were mixed. While certainly appreciative of the added food resources and the chance to socialize with others in the instance of soup kitchens, some participants highlighted distinct and significant concerns. These

included: poor food quality and freshness (i.e. withered or mouldy produce), types of food available often including foods high in carbohydrates and/or sodium, and inconsistent distribution of vegetables, fruits and proteins, especially to unattached individuals (i.e. users without children). Participants also talked about feeling a sense of stigma or embarrassment associated with going to food banks. A lone mother of three told us how she explains going to the food bank to her kids:

Yeah. And I mean, I don't mind as much when I go in by myself. That would be alright, but there are days I can't...I don't have childcare or I have to take them with me. I mean, I couldn't be more embarrassed and humiliated because it's like, alright – I can't get food for myself. That's not so bad. But then when it's like, alright, well I can't feed my children, you know, it just makes me feel terrible having to walk in there. And you know, I mean I totally appreciate it because I don't, you know, sometimes you just need that extra help. But just walking in there and, you know, just...and I tell my kids I pay for the food anyway. Because I don't have the heart to tell them it's a Food Bank.... And I tell them that we order ahead of time and then they just give to us. You know what I mean, because I don't have the heart to tell them, no, like, we're coming here basically to beg for food because I can't afford to feed you. You know, I don't have the heart to have to explain it. And, they shouldn't have to deal with big people's issues, you know what I mean.

In addition, some participants noted that food bank staff behaved in inappropriate ways, including favouring some clients over others (such as families versus lone users), keeping better food for themselves, family members and/or friends, not asking about or listening to users' needs, and treating users in ways that felt demeaning and embarrassing. As a result, participants indicated that food bank staff could benefit from appropriate training. One participant said:

Yeah. It's a very degrading experience...when you go in and it's like, they want your entire life story, they want all these papers, you have to sign basically your life away. And you could put on there that you don't eat tuna, or you do have this, or you don't have that, they give you the box and away out the door and you look down and it's like,

okay, there's three cans of tuna. I don't eat tuna, so either I'm going to donate it back or I'm going to try to trade it with a friend.

In a report on food bank and soup kitchen use in New Brunswick, entitled *Food Banks and Soup Kitchens: An Overview Report*, the Common Front for Social Justice contextualized the issue of gaining access to sufficient, nutritious, socially acceptable food this way:

In 1981, the first food bank was introduced [in Canada] as a short term measure to help people during an economic crisis. It was thought that the situation would disappear within two to three years. Twenty-nine years later, food banks have become part of our landscape. Instead of being seen as an abnormality, they have become a socially accepted reality in Canada as well as in New Brunswick. How can we say we are among the best countries in the world when we see increases in the number of people using food banks? [...] Food banks and soup kitchens are a signal of the collapse of our social security net. They are also an indication that our federal and provincial governments as well as some private corporations are not interested in making real changes in the redistribution of wealth. The result is that more citizens live in poverty, therefore more of them are dependent on food banks (CFSJ, 2010:2-3).

Comments from many participants detailed their frustrations with having to depend on charitable food programs, especially in the context of living in a wealthy nation like Canada.

One participant voiced her concerns:

And the stigma – going to the Food Bank is an awful stigma in itself. Standing out there in a line and having somebody determine when you're poor, if you need to have, in a country like Canada there should be no Food Banks. There should be enough food for everybody. This is ridiculous. Me and my friend go to university, we've discussed this a hundred times. There should not be, in a country like Canada, Food Banks. There should be enough food for everybody.

Linkages to Food Insecurity, Obesity and Chronic Diseases

What is particularly interesting for our research is that the discourse around the food insecurity-obesity paradox is largely grounded in conventional understandings of obesity as an imbalance of energy intake and expenditure. In their article, *The Economics of Obesity: Why are Poor People Fat?*, Drewnowski and Eicheldoefer bring attention to a dynamic that we witnessed in our research: “Health promotion literature generally emphasizes the psychosocial aspects of food selection. Underlying this is the unspoken middle-class premise that successfully adopting a healthful diet depends primarily on increased awareness, heightened motivation, and making better choices. Consideration of food prices and diet costs has been notably absent from the research literature” (2010:729; see also McLaughlin, Tarasuk & Kreiger, 2003). Moreover, as Drewnowski & Eicheldoefer point out: “If healthier foods cost more, then so should healthier diets” (2010:730). One participant questioned a logic in which the less processed and more natural a food is, the more likely it is to increase cost: “*And that’s the other thing too. It seems that the more they take out of a product to make it healthier, the more expensive it just got. And that concept for me doesn’t make sense. Especially now that organic stuff is out [in stores]*”. For participants, the challenge of affording and being able to prioritize healthy food that would aid in conventional weight loss or maintenance strategies was a central obstacle. In conversation, participants frequently identified a “catch-22” in relation to knowing how to choose better food options, but being unable to do so due to cost:

Participant 1: *Oh yeah! I said it’s a catch-22 because right here it says, what was on the (flipchart paper) ...a link between food insecurity and being overweight. So, if you can’t afford to eat, –*

Participant 2: *Then how are you overweight? Like, you know what I mean? So...*

Participant 1: *It’s the, it’s the type of food that you’re eating that’s causing your overweight. Starchy food.*

Participant 2: *Chips and pop.... You can get a bottle of pop for ninety-nine cents, two-litres. How much are you paying for two litres of milk?*

Participant 3: *Three eighty-nine.*

Participant 1: *Three forty-nine.*

The inability to make the food choices they wanted was one way these women felt a lack of a control over their lives. One participant described a cycle of being highly stressed and using food as a form of comfort, and how this in turn contributed to further weight gain.

First thing we look for is food to comfort us, to make us feel better about all of this crap that's going on in our life that we've got no control over. And we're creatures of habit. We need control over our life. We need to know that we have a little bit of control. So you start shoving things in your mouth that aren't good for you. And then you end up, you've come [up] with high cholesterol then because you're eating all this shit to give you comfort. What?! And the government has caused most of this. So you know it's like a vicious cycle? And it's like the comfort seems to come in the form of grease, sugar, and salt. Anything that isn't good for you.

Even though almost every participant self-reported as being in the obese range and self-identified as experiencing some form of chronic disease – the women spoke about their health obstacles in terms of poverty. One participant outlines the linkages between poverty and health in her comments:

And I find, with the weight issue, it fluctuates because sometimes you don't have the proper meal to eat? And you're eating just whatever you can eat. And so you're just putting all this weight on? Then you start having health problems. And then when you go to the doctor, the doctor's telling you that you got to eat a certain way in order for you to maintain your weight in order for you to maintain your health. Because of that, now you end up having a health problem, because certain things are just not balanced the way they're supposed to balance. And so, you have a hard time trying to prepare proper meals. And then before you know it, you are starting to worry about...different things. And it always goes back to, are you going to have enough food on the table? Because food is very costly.

This finding is in keeping with research by Drewnowski & Eicheldoefer: “Obesity-promoting foods are – in a word – cheap, whereas foods that may stem the obesity epidemic are likely to be more expensive. Choosing healthful versus unhealthy food is an economic decision,

especially for people with limited resources” (2010:728). Participants had much to say about the linkages between food insecurity, obesity and chronic diseases, with one woman stating succinctly: *“Personally, my fear is if I don’t gain control of my eating is that I will be dealing with diabetes.”*

Participants also talked often about managing chronic diseases and the frustrations they faced. The food insecurity-obesity paradox combined with the daily management of chronic diseases was a complex and difficult process for participants. One participant discussed a typical experience with her doctor this way:

I’m on the tread mill and, so the doctor was there and...thank God everything went alright, as far as I know. But anyway, he said: ‘You got to get some weight off ya.’ I said: ‘Yeah’. He said: ‘Stick to the fruits and vegetables.’ And I started to laugh [and then] he laughed. And I said: ‘Well, I bought different things, meat and stuff like that.’ He says: ‘No, stick to vegetables like a rabbit.’ And we start to laugh again. And I said: ‘Listen doctor, I said, it’s okay to turn into a rabbit if you can afford the vegetables, you know.’ Which is true, you know?

Another woman was equally exasperated by the lack of understanding from her doctor, and the presumption that she must be seemingly making ‘bad choices’:

And I have diabetes and I have heart trouble, and I have asthma, and I have high cholesterol. I mean, they tell you to have these fruit and vegetables but I can’t afford them! I can just barely afford eggs sometimes. After I pay everything, and the light bill, there’s nothing left! They tell you this and that, and how easy it is. You go to the doctor, [who says:] ‘Oh it’s really easy to keep your sugar down’ and this and that, but everything without sugar in costs more! And the fruits and vegetables cost more. And they just tell you: ‘Well, you must be drinking.’ I don’t drink and I don’t smoke. And I live in a very tiny, tiny, tiny, small apartment. And I still have to pay my light bill. And I have to eat. And there’s not much left. Even bread is over three dollars a thing.

An additional concern that came up for participants was taking care of a child with a chronic disease, such as diabetes, while being food insecure. One person commented:

Like my son, he's supposed to be on a specific diet for his diabetes with the nutritionist at the [clinic]. And she has got him down to drink five cups of milk, fresh milk a day. I can't afford it. I mean, I just can't afford four 2-litres. Like, I went to the market, I bought one. Right? And when it is gone he'll have to do without until the next cheque.

One other parent talked about balancing her needs as a diabetic with those of her son, who is also a diabetic:

I'm diabetic. My son is diabetic. And I just can't go out and afford to buy all the proper foods that we're both supposed to eat. I'll go out and buy by the can, but mostly, the proper foods are for him...not me. Like, I'll go out and buy fruits. I'll give it to him, right? And I'll do without because I know he needs it more than I do. That's the thing I'll do, you know?

This example of a mother sacrificing for her child was very common in our discussion and will be discussed at length in the next section.

Gendered Constructs of Maternal Deprivation: Eating Less and Last

This section focusses on our discussions with participants around maternal deprivation “in which mothers sacrifice their intake so that their children will be less affected” (Dinour, Bergen & Yeh, 2007: 1956). As Martin & Lippert summarize: [F]ood insecurity is a ‘managed process’, meaning that families strategize and diligently work to avoid hunger. That responsibility, however, falls more heavily on women given the traditional discourses about family life and ‘women’s work’ that place greater expectations on women for feeding and nurturing their family, especially when children are present” (2012:1754). Mothers compromising their food intake and eating less and last is well documented in the literature (Olson, 2005; Hanson, Sobal & Fongillo, 2007, McIntyre et al, 2003; Tarasuk, McIntyre & Li, 2007; McIntyre et al, 2002; Dinour, Bergen & Yeh, 2007). Hanson argues this has further gendered implications for women because there is a dominant Canadian value system that perceives women as ultimately responsible for feeding their families and works to divert responsibility away from the state onto women, and specifically mothers (2011:33). Hanson contends that:

If examining healthism through a combined gender and food insecurity lens, when family structures are viewed in terms of individual units rather than part of larger social cohesion, women as caregivers become targets to blame rather than the state. Women, in traditional caregiving roles may as well assume blame for any poor health of individual family members based on the food she provides. Thus food insecurity, due to the inability to provide healthy food for family members, objectifies the role of 'women as caregiver' in scrutinizing ways (2011:33).

Recognizing that 81% of participants surveyed had children and one third were lone mothers, this issue was highly significant to our findings.

In our discussions, many participants spoke intensely about prioritizing their child or children's needs and about their willingness to sacrifice their intake. The comments repeated the same sentiment over and over again: One woman said: *"I feed them and then I eat. It's just that, you know what I mean, I just make sure. I mean, they're more important than I am."* Another commented: *"I feed my daughter first"*. Another explained: *"In my house, it goes youngest to oldest."* When discussing their compromises, participants also seemed to mask some of the discomfort by making light of the issue, frequently laughing or joking. One participant remarked how her male partner prioritized food distribution differently:

Participant 1: Always my children. Make sure they were looked after there. I think everybody [reckons] God made women especially with a different kind of an instinct than he gave to men.

Participant 2: Men will eat first before their [children].

Participant 1: Yeah. They think they should be, even after they have children of their own, they think that they should be the first ones. Oh no. See the children get fed first. You'll get fed afterwards.

Participant 2: So, your partner would get fed later?

Participant 1: Oh, hell yeah! (laughs). So he thought because he was the head of the household and he was the bread-winner – well we were both bread-winners, but – because he was the head of the household, he should get fed first and the children could

eat [after]. No, no, you don't! These children, God only gives you your children for a very short time. They're a gift. And you look after them first.

Furthermore, Olson, Bove & Miller indicate that “[e]xperiences of poverty-associated food deprivation in childhood appeared to super-motivate some women to actively avoid food insecurity in adulthood” (2007:198). The experience of food insecurity during childhood and then as a parent trying to protect their child from the same experience was discussed by several participants. One woman gave her story:

I grew [up], my father died when I was three. Mom was pregnant. She had one one-year old, and I was two. And she had seven in the family. And mom was a single mother, and she always worked.... But we never had enough to eat. I could remember having a can of soup and it was for four or five of us, a can of soup. You know? And when I grew up and had my children, I always, every day there was a cooked meal there for them – [Another participant asks: Because of your experiences?] Because I never wanted them to go hungry, and this is the big, major thing. And this is why I think I'm such a good at budgeting everything.... But I think this is what caused me, my childhood poverty.... But I always cooked for [my children]... But this is why I think it goes from, each generation gets a little bit better and a little bit better.

In addition, participants remembered childhood experiences of feast and famine, and reflected on the impact this had on their relationship to food as adults. One participant framed it this way:

The things we learned as children, we take into our adulthood, you know. And if certain things are forced on you as children, we tend to go with those. And it's really hard to adjust our thinking, readjust our thinking. So if you don't have a healthy knowledge of what you should eat and what you shouldn't eat, and [are not] given that when you're a child, you're not going to have it when you grow up.

Dinour, Bergen & Yeh suggest “that children who grow up in poverty are more likely to become obese adults and, thus, childhood food insecurity as a result of poverty may amplify the effect of poverty on adult obesity” (2007:1958). One participant affirmed this notion: *“I have never been normal weight since I was four years old. So to me – I think that the weight increases...it correlates with the level of stress I’m going through. And one of those stressors, a major stressor for me, has been poverty. And financial worry. Now, some of that financial worry goes back to my childhood too.”*

What was also very significant was that some older participants reflected on a trajectory of poverty; and in this instance, for one woman there was no expectation of change:

...[It was] when I was 6 or 7 years old that I realized. I never knew I was poor until I started school and saw the other kids with things that we could never afford. And it just went on over all these years and it’s still going on, and I’m almost 68 years old. And I know now, unless there’s a great miracle that is not going to ever change. I am going to go to my grave poor. You know, that is the way it’s going to be. I can’t see any...if I won a lottery. Every now and then I buy tickets, you know, but...I can’t see it ever changing. There’s nothing that will change. I don’t, I just can’t see it. Just can’t see it at all.

The strain of maternal deprivation does not stand alone; it is also linked to overall feelings of stress and mental health issues, which are discussed in the next section.

Social Isolation, Vulnerability, Stress, Dark times, Depression

Participants regularly referred to experiences of feelings “depressed,” going through “dark times”, and feeling “lonely”, and discussed treatment and care for sleeplessness and mental health issues. Again referring to a vicious cycle – participants revealed feeling highly stressed and how this in turn contributed to further weight gain. One participant explained: *“When you get depressed, you don’t really think about all the [rest of the] month. You’re going to eat. If that’s what you do when you get depressed, you’re going to eat. No matter, you don’t really think. You’re depressed; you’re going to eat it.”* Chilton & Booth’s work on “hunger of the mind” offers insights into our discussion. Using a phenomenological approach, “[i]n an effort to

resist reducing the suffering of hunger to a medical illness or social pathology, [Chilton & Booth's study on low-income African American women] sought to ground its inquiry in lived experience and understand the relationship between food insecurity and health in ways that mattered to individuals" (2001:117). From their research, they determined that "[t]he relationship between hunger and health also included how food deprivation was a physical experience that could be attributed to the psychological and emotional anguish related to the stresses of poverty, ill health, and exposure to violence" (Chilton & Booth, 2007:120). They describe 'hunger of the mind' as being "related to trauma, encompassing feelings of depression and hopelessness" (2007:116). In Tarasuk's research on women's food intake patterns and contextual factors related to household food insecurity in Toronto, "[s]ixty-four per cent of study participants reported feeding isolated and alone, some or most of the time" (2001:2673).

As evidenced by numerous comments throughout this paper, participants regularly talked about feeling socially isolated, stigmatized, and vulnerable. They spoke about this in the context of being poor, of being lone mothers, of being unattached women living alone, of going to food banks, of being overweight and obese, of being disabled or immobile, of dealing with chronic diseases, of coping with mental health issues, and when dealing with bureaucratic hoops related to government assistance programs, amongst other things. Throughout the focus groups, participants regularly spoke about obstacles they were experiencing and the impact these stressors had on their abilities to cope with day-to-day life. They discussed a complex web of feelings that included depression, isolation, guilt and humiliation. There were a myriad of comments from participants on mental health challenges, and this sample of quotations can only highlight some the participants' concerns. Further research on this issue would be valuable. One participant spoke about how weight gain was linked her experiences of blame and guilt:

When I left my husband, it was the same thing, like, my kids blame me [saying:] 'It's your fault.' So probably because I didn't want to tell them, you can't really tell your kids the whole truth. You try to, you know, hide the ... bad facts from them. Because you can't, you know, really, it takes two people to make a marriage. It takes two people to work at it, and

if there's only one working at it, it ain't going to work. If, when your kids blame you, it's even more stressful, so then when you're at work and you stress all the time because you're worried about your kids and you're worried, you know, and your husband isn't going to take them away from you, you're worried uh. Kids (laughs), the kids really were, and then they say, 'my God you've gained weight!' Well yeah. I would imagine you gain weight. You're so stressed that you're eating for like three, because you don't know from one day or the other what's going on.

Many participants spoke directly of experiencing depression: *"Um, I have gone through a really bad depression for the last three years, so with medications and stuff, I have fluctuated. But a lot of the depression came from not having enough money for food."* Others spoke about sleeplessness and being unattached: *"No, I don't sleep much. I go to bed and I worry most of the time. Yeah. Cause there's a lot to worry about. Even though I'm only one, in fact, just being one person sometimes is harder. Because you know... I mean I can't turn around, I'm disabled so I can't turn around and really go and live with someone else, a male friend, because they'll cut me off."* Participants also talked about their relationships or lack thereof. One participant discussed her feelings of social isolation:

I pretty much have nobody to talk to about it. Because I don't go out very much. I don't have much a social circle anymore, because [of the]... mobility issue. I just don't go to the soup kitchens anymore, because the food's not that good. And I just have nobody. I call [xxx]. It's a help line. A crisis help line. For people with mental illness and stuff like that. When things get too much for me, I will call them because they help in a crisis or, and when you're in a bad situation and stuff like that. Um, I just have nobody to talk to.

Several talked about their relationships with parents or siblings and of being judged. One other participant said:

Because I tried to talk to my mother and I either get laughed at or, you know, humiliated. You know, [she said:] 'Oh you can. [Social assistance] gives you that much money [and] you should be able to do it. You know, you should be able to balance a year, [and] not balancing out.' And the last thing that she said, 'Oh you're probably lending from other people'. And I

don't. Like you know? She just doesn't take it, so I can't. [Interviewer asks: Borrowing from other people?] Borrowing. Yeah. Borrowing from other people. And I said no, of course not! Like, how can I do that? I can't repay them. And so and all the rest of the family are the same. And they don't understand, so it's very difficult to talk to them!

In addition to mental health challenges, participants also talked about forms of resilience and in doing so, the positive changes they were undertaking. In the excerpt below a participant talked about how hard she was trying to make positive changes for herself and her children, and yet still felt isolated.

Participant 1: Well, people look down at me a lot too because I am younger and I do have, you know, three kids. And I don't even have a man in sight, you know (laughs). That's how far away from marriage I am. And they look down on me. And especially now, living in low income housing, you know. They're like, you know, they don't want anything to do with me. Like, I'm a terrible person or, you know. They're not going waste their time on me. You know, without getting to know me or getting to know, like I am trying. I'm not just here for a free ride, right? I work my butt off. I go to school every day. I'm there for eight o'clock every morning. And I'm not late, you know (laughs), trying my hardest and they just, they don't care.

Participant 2: I have to compliment you though, because at, if I had been your age, I was 38 when I separated and I could hardly manage one child, and you've got three and... You, you've done a great job. You're doing a great job.

Participant 1: Thank you. It's just, I don't want them to grow up, I guess, the way I did. Not that I had a bad childhood or it was terrible, but I wanted more for them. But even now, going through school and seeing what we're going through now, I mean...my oldest is almost 9, so it's not, she's not seeing it, or she's not living it because we're doing it –

Participant 2: She's going to be so, she must be so proud of you.

Participant 1: Yeah, she says so –a lot. Yeah. I know, and I mean it's –

Participant 3: She sees you going to school and you're doing something, just something so radical! Daring!

Overall, exchanges between participants were a promising reflection of Kintanar's claim that focus groups "promote a sense of solidarity and connectedness" (1997:84). The "fundamentally social nature of talk" that Wilkinson (1998:121) alludes to was alive and well in the groups we spoke with. Participants were fully engaged in the discussions as evidenced by the back and forth between participants, the asking of questions, the offering of comparable experiences, the bolstering of reflections and realizations with supplementary comments, and the 'ahas' and nods that encouraged others to tell their stories, as well as the kind and supportive words that were said between participants.

CONCLUSIONS

For participants the food insecurity-obesity paradox was experienced as a vicious cycle that included overlapping experiences of poverty, food insecurity, weight gain leading to obesity, stress, and chronic disease. This paper has outlined the findings from the *Full Plate Project: Women, Obesity and Food Security*. Based on a review of the recent literature, it was clear that given the impact of food insecurity on health, gaining further insights into the relationships between obesity, food insecurity and chronic diseases was imperative. By focusing on qualitative analysis, this research offers first-hand accounts of the vicious cycle that surrounds the food insecurity-obesity paradox for women in Atlantic Canada.

Participants spoke frequently about their frustrations of being poor, food insecure, and trying to managing their weight and associated chronic diseases while living in country of such abundance. When we asked participants what they would ask their Premier to change if given the chance, the recommendations essentially came down to two key elements: 1) they should receive more money on a monthly basis, i.e. through social assistance or other programs¹⁰, and 2) there should be a better understanding of what it is like to be food insecure in Atlantic Canada. Every group said that their province's Premier "*should live in our shoes and see first-hand what it is like to live like this*". The first recommendation responds to the fact that these women, who lived primarily on income support, simply did not have enough money for the day-to-day costs of living in Canada. The feeling of 'being stuck between a rock and a hard place' that was discussed in the paper has left these women with very tough choices, and in some way artificial choices – artificial in the sense that they are choosing which basic needs to eliminate just to get by, and as such, is no choice at all. The second recommendation urges policymakers to fully engage with the complexity of the factors that these women are facing. The vicious cycles they are experiencing are intertwined and cannot be addressed by compartmentalizing elements of health or social services. This recommendation addresses what the participants deem to be a real lack of understanding and empathy coming from government to assess both

¹⁰ See Kirkpatrick, & Tarasuk for further discussion: "[T]he existing evidence points very strongly to the need for adequate incomes, suggesting that improvements to the adequacy of welfare rates and minimum wage levels, for example, would be useful in ameliorating food insecurity" (2008:326)

the deep-rootedness and breadth of the obstacles they experience daily; and in turn, a willingness to respond to their needs in an equally meaningful way¹¹. The women we spoke with from New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island living with food insecurity and weight challenges were heavily burdened by a cycle of overlapping factors that were threaded together by poverty. The daily obstacles they faced in trying to obtain sufficient and nutritious food for themselves and their children were numerous. The effects of poor quality diets and constant stress on their physical and mental well-being were significant. These women felt like they did not have control over their lives in many ways. The vicious cycle associated with the food insecurity-obesity paradox encompasses a myriad of health challenges for women in Atlantic Canada that need to be further understood and addressed.

The Right to Food and Food Security in Canada

“Food banks very presence sends the message that Canada is failing to provide its citizens with adequate food to meet their basic needs” (CFSJ, 2010:2). The WHO identifies food security as being built on three pillars: *food availability* defined as sufficient quantities of food available on a consistent basis; *food access* defined as having sufficient resources to obtain appropriate foods for a nutritious diet, as well as culturally appropriate food; and, *food use* defined as appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation (WHO, 2011). The WHO’s expanded definition provides a useful and holistic health lens of what is needed for sustainable food security. The United Nations identifies the right to food as a human right. “The right to food protects the right of all human beings to live in dignity, free from hunger, food insecurity and malnutrition” (Ziegler, Right to Food, 2011).

Food insecurity in a country like Canada, whose “agriculture and agrifood system is a key pillar of the country’s economy, accounting for 8.1 per cent of national GDP and employing 2.1 million Canadians, roughly 13 per cent of all employment in the country,” (UNHCHR, 2012, see OECD, 2011) is a perplexing dichotomy. After an official visit to Canada in May 2012, Olivier De

¹¹ See Hamelin, Mercier & Bédard (2009) for further discussion.

Schutter, the United Nations Special Rapporteur on the Right to Food had these remarks on the situation of food security in Canada:

Canada is ranked sixth in the Human Development Index and has average GDP per capita of USD 39,070. While the recent financial and economic crises have impacted Canada, with rising unemployment rates and a drop in income per capita, Canada has fared relatively well in comparison to its peers. At the same time, however, the gaps between those living in poverty and the middle- and high-income segments of the population are widening. Whole groups of the population are being left behind. A growing number of people across Canada remain unable to meet their basic food needs. In 2007/2008, approximately 7.7 per cent of households in Canada reported experiencing moderate or severe food insecurity. Approximately 1.92 million people in Canada, aged 12 or older, lived in food insecure households in 2007/2008 and a staggering 1 in 10 families, 10.8 per cent, with at least one child under the age of six were food insecure during the same period. Fifty-five per cent of households in which the main source of income was social assistance are food insecure, the result of a huge discrepancy between social assistances levels and the rising costs of living. The failures of social assistance levels to meet the basic needs of households have resulted in the proliferation of private and charity-based food supplements. In 2011, Food Banks Canada calculated that close to 900,000 Canadians were accessing food banks for assistance each month, slightly over half of whom were receiving social assistance. The Special Rapporteur was disconcerted by the deep and severe food insecurity faced by aboriginal peoples across Canada living both on- and off-reserve in remote and urban areas (UNHCHR, 2012).

Interestingly, De Schutter “was undiplomatically dismissed by several Government ministers at the end of his official mission to Canada[...] and castigated for wasting time and resources looking into challenges in upholding the right to food in a developed democracy such as Canada” (Food Secure Canada, 2012). In an open letter, Prime Minister Stephen Harper was criticized by food security networks, social justice organizations and other community leaders

across Canada for “trivializ[ing] the evident and continuing food and poverty-related human rights challenges faced daily by hundreds of thousands of Canadians” (Ibid) .

The stark contrast between a country with such an abundance of food production and people not having enough healthy food to eat was regularly addressed by participants in our study. One participant called for more coherence in our food system, and many group members strongly agreed as she spoke:

And there is a way we could just have strategy. And maybe if the government went into different communities, and they did like little sessions like we're trying to do here, and really find out what is the core problem – which they already know – but if they would do some new studies and find out what [the] statistic is now. Not what they had ten years ago, or twenty years ago, because things [have] changed. And then really work with the rural communities, well then maybe they can find a solution to work with us so that people would have healthy food and wouldn't be hungry. Because this here is almost like a Third World country. The way it's getting, sooner or later you're not going to have any food. It's only going to be for the wealthy and the ones that could afford it. And we don't want to see that happening. So if we can find a way to work together in harmony, then people could have food on the table and we could be healthier. And I know that, the farmers and whoever is producing the food, they got to make money. They got to make a living. But at the same time, people got to live. So if we could work together in harmony, everybody could come out and have things.

APPENDIX A: Discussion Group Guiding Questions

- In your experience what is the connection, if any, between food insecurity as we describe it [a definition was posted and discussed] and a healthy weight?
- What do you feel are the challenges in achieving and maintaining a healthy body weight?
- Where do you get your food?
- In your household how is food shared?
- As a woman (or mother¹²), what do you see as your specific challenges?
- We know that food insecurity and overweight or obesity increases the risk of chronic diseases such as diabetes, high blood pressure and heart disease. In your experience, does food insecurity affect the ability to live with these chronic diseases? If so, how?
- If you had 5 minutes with the Premier of this province, and had the power to change things, what's the one thing you would tell him/her to do or change?
- Is there anything you want to add or we haven't covered in this discussion that you would like to talk about?

¹² This word was added (as an example of a gendered role) in response to participants' requests for greater clarification to the guiding question.

BIBLIOGRAPHY

- Adams, E., Grummer-Strawn, L. & Chavez, G. (2003). Food Insecurity is Associated with Increased Risk of Obesity in California Women. *Journal of Nutrition* 133 (4) (APR): 1070-4.
- Blaylock, J. R. & Blisard, W. N. (1995). Food security and health-status in the United States. *Applied Economics*, 27(10), 961-966.
- Burns, C. (2004). A review of the literature describing the link between poverty, food insecurity and obesity with specific reference to Australia. *VicHealth*, 1-26.
- Carbert, Louise. (2006). *Rural Women's Leadership in Atlantic Canada: First-Hand Perspectives in Local Public Life and Participation in Electoral Politics*. Toronto: University of Toronto Press.
- Chambers, R. (1999). "Foreward" in I. Gujit and M. Kaul Shah (Eds.). *The Myth of Community: Gender Issues in Participatory Development*. London: Intermediate Technology Publications. xvii-xx.
- Charmaz, K. (2006). *Constructing grounded theory. A practical guide through qualitative analysis*. London: Sage.
- Chilton, M. & Booth, S. (2007). Hunger of the body and hunger of the mind: African American Women's perceptions of food insecurity, health and violence. *Journal of Nutrition Education and Behavior*, 39(3), 116-125.
- Chilton, M. & Rose, D. (2009). A rights-based approach to food insecurity in the United States. *American Journal of Public Health*, 99(7), 1203-1211.
- Clow, B., Pederson, A., Haworth-Brockman, M. & Bernier, J. (2009). *Rising to the Challenge: Sex and Gender-Based Analysis for Health Planning, Policy and Research in Canada*. Halifax: Atlantic Centre of Excellence for Women's Health.
- Common Front for Social Justice. (2010a). *Food Banks and Soup Kitchens: An Overview, Report prepared in response to the questionnaire addressed to food bank and soup kitchen clients*. Moncton: The New Brunswick Common Front for Social Justice Inc. 1-12.
- Common Front for Social Justice. (2010b). *Impact of Food Cost on Food Security in N.B., Survey conducted by the Common Front for Social Justice (CFSJ) during the summer of 2010*. Moncton: The N.B. Common Front for Social Justice Inc. 1-27.

- Common Front for Social Justice. (2010c). *Impact of Food Price Increases on Low-Income New Brunswickers, Survey conducted by the Common Front for Social Justice (CFSJ) during the summer of 2010, Executive Summary*. Moncton: The N.B. Common Front for Social Justice Inc. 1-9.
- Common Front for Social Justice. (2011). *Sharp Hike in the Cost of Food: Results of a 2011 N.B. Survey*. Moncton: The N.B. Common Front for Social Justice Inc. 1-11.
- Denzin, N.K & Lincoln, Y. (2008). "Introduction to Critical Methodologies and Indigenous Inquiry" in N.K. Denzin, Y. S. Lincoln & L. Tuwai Smith (Eds.). *Handbook of Critical and Indigenous Methodologies*. California: Sage. 1-20.
- Dietz, W. (1995). Does hunger cause obesity? *Pediatrics*, 95(5), 766-767.
- Dinour, L. M., Bergen, D. & Yeh, M. (2007). The food insecurity-obesity paradox: A review of the literature and the role food stamps may play. *Journal of the American Dietetic Association*, 107(11), 1952-1961.
- Drewnowski, A. & Specter, S.E. (2004). Poverty and Obesity: The role of energy density and energy costs. *American Journal of Clinical Nutrition*, 79, 6-16.
- Drewnowski, A., & Eichelsdoerfer, P. (2010). "Chapter 58: The Economics Of Obesity: Why Are Poor People Fat?" in L. Dubé, A. Bechara, A. Dagher, A. Drewnowski, J. Lebel, P. James and R.Y. Yada (Eds.). *Obesity prevention: The Role of Brain and Society in Individual Behavior* San Diego: Academic Press. 727-743.
- Egeland, G.M.(2010). *2007-2008 Inuit Health Survey: Nunatsiavut*. 1-35.
- Evans,M. & Clow,B. (2012a). "Body Weights" in A. Pederson A, B. Clow, M. Haworth-Brockman, H. Isfeld H., A. Liwander, L. Snyder (Eds.). *Women and Healthy Living in Canada*, Vancouver: BC Centre of Excellence for Women's Health. 75-102. (forthcoming)
- Evans, M. & Clow, B. (2012b). "Food Security" in A. Pederson A, B. Clow, M. Haworth-Brockman, H. Isfeld H., A. Liwander, L. Snyder (Eds.). *Women and Healthy Living in Canada*, Vancouver: BC Centre of Excellence for Women's Health. 75-102. (forthcoming)
- First Nations Information Governance Committee. (2008). *First Nations Regional Longitudinal Health Survey, Adult Questionnaire*.
- Franklin, B., Jones, A., Love, D., Puckett, S., Macklin, J. & White-Means, S. (2011). Exploring Mediators of Food Insecurity and Obesity: A Review of Recent Literature. *Journal of Community Health*, Published Online: 5 June 2011, 1-12.

Food Banks Canada. (2010). *HungerCount 2010*. Food Banks Canada. 1-46.

Food Secure Canada. (2012). *Groups Call for Apology to UN Special Rapporteur on Right to Food*. From <http://foodsecurecanada.org/sites/foodsecurecanada.org/files/ENGLISH-LETTER-FINAL,JUNE10-1.pdf>

Glanville, N. T. (2006). Diet Quality of Atlantic Families Headed by Single Mothers. *Canadian Journal of Dietetic Practice and Research*, 67(1), 28-35.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine.

Guh, D., Zhang, W., Bansback, N., Amarsi, Z., Birmingham, C.L. & Anis, H.A. (2009) The incidence of co-morbidities related to obesity and overweight: A systematic review and meta-analysis. *BMC Public Health*, 9: 88. Published online: 25 March 2009, 1-20.

Hamelin, A-M., Mercier, C. & Bédard, A. (2010). Discrepancies in households and other stakeholders viewpoints on the food security experience: a gap to address. *Health Education Research*, 25 (3), 401-412.

Hampel, J. S. & Hall, R. (2002). Dietetic approaches to US hunger and food insecurity. *Journal of American Dietetic Association*, 102 (7), 919-923.

Hanson, K.L., Sobal, J. & Frongillo, EA. (2007). Gender and Marital Status Clarify Associations Between Food Insecurity and Body Weight. *Journal of Nutrition*. 137: 1460-65.

Hanson, Y. (2011). *Recipes for Food Insecurity: Women's Stories from Saskatchewan*. Project #238. Winnipeg: Prairie Women's Health Centre of Excellence, 1-64.

Health Canada. (2005). *Canadian Community Health Survey 3.1 Final Questionnaire*. From http://www23.statcan.gc.ca/imdb-bmdi/instrument/3226_Q1_V3-eng.pdf

Health Canada. (2007). *Canadian Community Health Survey, Cycle 2.2, Nutrition (2004)—Income-Related Household Food Security in Canada*. From http://www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/surveill/income_food_sec-sec_alim-eng.pdf

Health Canada. (2010). *Household Food Insecurity In Canada in 2007-2008: Key Statistics and Graphics*. From <http://www.hc-sc.gc.ca/fn-an/surveill/nutrition/commun/insecurit/key-stats-cles-2007-2008-eng.php#fnb6>

- Hoblen, D.H. & Pheley, A.M. (2006). Diabetes Risk and Obesity in Food-Insecure Households in Rural Appalachian Ohio. *Preventing Chronic Disease: Public Health Research, Practice, and Policy*, 3 (3), 1-9.
- Jones, S. J. & Frongillo. E.A. (2006). The Modifying Effects of Food Stamp Program Participation on the Relation between Food Insecurity and Weight Change in Women. *Journal of Nutrition*, 136,(4), 1091-1094.
- Kintanar, T. (1997). "Focus Group Discussion (FGD) as a Feminist Research Method" in S. Guerrero (Ed), *Feminist Research Experiences: A Casebook*. University Centre for Women's Studies, University of the Philippines. 72-88.
- Kirkpatrick, S.I. & Tarasuk, V. (2008). Food insecurity in Canada: Considerations for monitoring. *Canadian Journal of Public Health*. 99, 324-27.
- Larsen, K. & Gilliland, J. (2008). Mapping the evolution of 'food deserts' in a Canadian city: Supermarket accessibility in London, Ontario, 1961–2005. *International Journal of Health Geographics*. 7, 1-16
- Lent, M. D., Petrovic, L. E., Swanson, J. A. & Olson, C. M. (2009). Maternal Mental Health and the Persistence of Food Insecurity in Poor Rural Families. *Journal of Health Care for the Poor and Underserved*, 20(3), 645-661.
- Lohman, B., Stewart, S., Gundersen, C., Garasky, S. & Eisenmann, C. (2009). Adolescent Overweight and Obesity: Links to Food Insecurity and Individual, Maternal, and Family Stressors. *Journal of Adolescent Health*, 45, 230-237.
- Lyons, A-A., Park, J & Nelson, CH. (2008). Food insecurity and obesity: A comparison of self-reported and measured height and weight. *American Journal of Public Health*. 98: 751-57.
- Madison, S. D. (2008). "Narrative Poetic and Performative Interventions" in N.K. Denzin, Y. S. Lincoln & L. Tuhwai Smith (Eds.). *Handbook of Critical and Indigenous Methodologies*. California: Sage. 391-405.
- Martin, D. (2011). "Now we got lots to eat and they're telling us not to eat it": Understanding changes to south-east Labrador Inuit relationships to food. *International Journal of Circumpolar Health*, 70:4, 384-395.
- Martin, K. S., & Ferris, A. M. (2007). Food insecurity and gender are risk factors for obesity. *Journal of Nutrition Education and Behavior*, 39(1), 31-36.

- Martin, M. A., & Lippert, A. M. (2012). Feeding her children, but risking her health: The intersection of gender, household food insecurity and obesity. *Social Science & Medicine*, 74(11), 1754-1764.
- Marx, M. (2001). Invisibility, interviewing and power: A researcher's dilemma. *Resources for Feminist Research*, 28, 3/4, 131-152.
- McIntyre, L., Glanville, N.T., Officer, S., Anderson B., Raine K.D. & Dayle J.B. (2002). Food insecurity of low-income women and their children in Atlantic Canada. *Canadian Journal of Public Health*. 93: 411-15.
- McIntyre, L., Glanville, N.T., Raine, K.D., Dayle, J.B., Anderson, B., Battaglia, N. (2003). Do low-income lone mothers compromise their nutrition to feed their children? *Canadian Medical Association Journal CMAJ*, 168(6), 686-91.
- McLaughlin, C., Tarasuk, V. & Kreiger, N. (2003). An examination of at-home preparation activity among low-income, food insecure women. *Journal of Academy of Nutrition and Dietetics*, 103 (11), 1506-1512.
- Mies, M. (1983) "Towards a Methodology for Feminist Research" in G. Bowles and R. Duelli-Klein (Eds). *Theories of Women's Studies*. London: Routledge. 117-139.
- Morland K., Wing S., Roux A.& Poole C. (2002). Neighborhood characteristics associated with the location of food stores and food service places. *American Journal of Preventive Medicine* 22(1):23-29.
- Nova Scotia Participatory Food Security Projects. (2006). *Thought about food? Understanding the relationship between public policy and food security in Nova Scotia. A Background Paper and Policy Lens*. Halifax: Atlantic Health Promotion Research Centre, Nova Scotia Nutrition Council and Collaborating Family Resource Centres/Projects. 1-39. From http://www.ahprc.dal.ca/pdf/food-security/2006_ThoughtAboutFood_Policy.pdf
- Olson, C. (2005). Food Insecurity in Women: A Recipe for Unhealthy Trade-offs. *Topics in Clinical Nutrition*, Vol 20(4) 321-328.
- Olson, C. M., Bove, C. F., & Miller, E. O. (2007). Growing up poor: Long-term implications for eating patterns and body weight. *Appetite*, 49(1), 198-207.
- Organization of Economic Development (OECD), 2011. *Stats Extracts*. From <http://stats.oecd.org/index.aspx?quervid=558>

- Petite, K. & Clow, B. (2010). *The Impact of Overweight and Obesity on Maternal and Newborn Health: A Critical Review of the Literature*. Halifax: Atlantic Centre of Excellence for Women's Health. 1-28.
- Power, E. (2008). Conceptualizing food security for Aboriginal People in Canada. *Canadian Journal of Public Health*. 99 (2), 95-97.
- Public Health Agency of Canada (PHAC) & Canadian Institute for Health Information (CIHI). (2011). *Obesity in Canada: Health and Economic Implications*. Ottawa. From <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/oic-oac/assets/pdf/oic-oac-eng.pdf>
- Ziegler, Jean, Right to Food. (2011). "What is the Right to Food?" From <http://www.righttofood.org/work-of-jean-ziegler-at-the-un/what-is-the-right-to-food/>
- Sandelowski, M. (2004). Using Qualitative Research. *Qualitative Health Research*, 14, 1366-1386.
- Sarlio-Lähteenkorva, S. & Lahelma, E. (2001). Food Insecurity is Associated With Past and Present Economic Disadvantage and Body Mass Index. *Journal of Nutrition*. 131: 2880-84.
- Schafft, K.A., Jensen, E.B. & Hinrichs, C.C. (2009). Food deserts and overweight schoolchildren: Evidence from Pennsylvania. *Rural Sociology*. 74: 153-77.
- Seligman, H. K., Laraia, B. A. & Kushel, M. B. (2011). Food Insecurity Is Associated with Chronic Disease Among Low-Income NHANES Participants. *Journal of Nutrition*, 141(3), 542-542.
- Statistics Canada. (2011). *Low income cut-offs before and after tax by community and family size, 2009 constant dollars*. From <http://www.statcan.gc.ca/search-recherche/bb/info/low-faible-eng.htm>
- Statistics Canada. (2012). *Definitions*. From <http://www.statcan.gc.ca/pub/85-002-x/2012001/definitions-eng.htm>
- Tarasuk, V. (2001). Household Food Insecurity with Hunger is Associated with Women's Food Intakes, Health and Household Circumstances. *Journal of Nutrition*, 131 (10), 2670-2676.
- Tarasuk, V., McIntyre, L., & Li, J. (2007). Low-income women's dietary intakes are sensitive to the depletion of household resources in one month. *Journal of Nutrition*, 137(8), 1980-1987.
- Terrell, A, Drew, C. & Vargas, R. (2009). Is Food Insecurity Associated with Chronic Disease and Chronic Disease Control?. *Ethnicity and Disease*. Vol 19 (2): S3-3-S3-6.

- Townsend, M. S., Peerson, J., Love, B., Achterberg, C., & Murphy, S. P. (2001). Food Insecurity Is Positively Related To Overweight In Women. *Journal of Nutrition*, 131(6), 1738-1745.
- Townson, M. (2009). *Women's Poverty and the Recession*. Canadian Centre for Policy Alternatives. 1-53.
- Treuhaft, S. & Karpyn, A. (2010). *The Grocery Gap: Who has Access to Healthy Food and Why it Matters*. PolicyLink & The Food Trust. 1-39.
- UNHCHR, (2012). *Olivier De Schutter, United Nations Special Rapporteur on the right to food : Visit to Canada from 6 to 16 May 2012 - End-of-mission statement*. From <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=12159&LangID=E>.
- Velasquez-Melendez, G., Schluessel, M. M., Brito, A. S., Silva, A. A. M., Lopes-Filho, J. D., & Kac, G. (2011). Mild but not light or severe food insecurity is associated with obesity among Brazilian women. *Journal of Nutrition*, 141(5), 898-902.
- Wadham, Ben (2009). *Qualitative Research*, Key Characteristics of Grounded Theory. From http://web.me.com/benwadham/QualitativeResearch/grounded_theory.html.
- Wilde, P. E., & Peterman, J. N. (2006). Individual weight change is associated with household food security status. *Journal of Nutrition*, 136(5), 1395-1400.
- Wilkinson, S. (1998). Focus Groups in Feminist Research: Power, Interaction, and the Co-Construction of Meaning. *Women Studies International Forum*, 21, 111-125.
- Williams, P.L. (2009). *Cost and Affordability of a Nutritious Diet in Nova Scotia: Report on 2008 Participatory Food Costing*. Nova Scotia Participatory Food Costing Project, Mount Saint Vincent University. 1-26.
- World Health Organization. (2011). Trade, Foreign Policy, Diplomacy and Health: Food Security. From <http://www.who.int/trade/glossary/story028/en/>.



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