

Growing Roots: An Action Research Project to Build Newcomer Food Security in
Winnipeg's North End

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ABSTRACT

Many newcomers¹ to Canada struggle with food insecurity and the health impacts of dietary acculturation, including increased risk for chronic disease. Few evaluated programs or resources exist to support newcomers with their food challenges and there is little collaboration between agencies working with newcomers on food issues. This action research project included the development, implementation and evaluation of a newcomer nutrition program and the Newcomer Food and Nutrition Network. Qualitative action research methods were used for data collection, including oral questionnaires, semi-structured interviews, focus groups, observation and field notes. An online questionnaire was also conducted. Data analysis included transcription, thematic analysis, triangulation and member checking. Interrater reliability testing was also conducted. The Growing Roots food and nutrition program had positive impacts on participants' food and nutrition knowledge specific to the Canadian context as well as significant impacts on nutrition behaviours. There were also modest impacts on food security. Growing Roots also resulted in enhanced social networks of participants. Members of the Newcomer Food and Nutrition Network, reported greater collaboration, resource-sharing, knowledge-sharing and communication between agencies.

¹ The term 'newcomers' is used here to describe community members born outside of Canada.

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CHAPTER 1: INTRODUCTION

Overview of the Problem

The newcomer population in Canada is rapidly growing, and with the Government of Canada committed to welcoming 300,000 more immigrants and refugees in 2017, there is no indication of a plateau occurring anytime soon (Government of Canada, 2017). When newcomers arrive in Canada, many are in search of a better life but still face numerous obstacles before achieving health and prosperity in their new home. Some newcomers, especially refugees, have limited opportunities to learn English before arrival in Canada and must do this upon arrival, while also learning new cultural norms, Canadian laws, and navigating social services. Many experience challenges that impact the social determinants of health, such as housing (Carter, 2008; Farrell, 2005; Newbold, 2010; Simone & Newbold, 2014), employment (Aycan & Berry, 1996; Creese & Wiebe, 2012; Dlamini, Anucha, & Wolfe, 2012; Fuller & Vosko, 2008; Guo, 2013; Lochhead & Mackenzie, 2005; Nakhaie & Kazemipur, 2013; Raza, Beaujot, & Woldemicael, 2013) and food security (Ghattas, Sassine, Seyfert, Nord, & Sahyoun, 2014; Rush, Ng, Irwin, Stitt, & He, 2007; Statistics Canada, 2013b; Vahabi, Damba, Rocha, & Montoya, 2011), which can result in diminished health status and increased risk for chronic diseases, such as type 2 diabetes (Bilkis, Marie, Zheyuan, Shelly, & Kazanjian Arminée, 2004; Pottie, Ng, Spitzer, Mohammed, & Glazier, 2008; Van Hulst, Seguin, Zunzunegui, Velez, & Nikiema, 2011). This increased risk can be due to many factors related to immigration, such as stress and changes in lifestyle (Sanou et al., 2014b), but one major factor that cannot be overlooked – is food.

When newcomers arrive in Canada, many bring with them healthy traditional food knowledge and practices from their home countries but face many challenges to maintaining their

healthy diets in their new environment (Henderson, Epp-Koop, & Slater, 2017; Sanou et al., 2014a). Newcomers, especially refugees, face high rates of poverty and food insecurity (Health Canada, 2007; Carter, 2008; Rodriguez, 2015; Tarasuk, Dachner, Tarasuk, & Dachner, 2014; Vahabi, Damba, Rocha, & Montoya, 2011). These obstacles, along with social exclusion, lack of transportation, social pressures and other factors, can make accessing healthy traditional foods very difficult (Henderson et al., 2017; Sanou et al., 2014a). These foods can be expensive, difficult to find, and of poor quality due to importation timelines of world foods (Adekunle, Cidro, & Filson, 2015; Henderson et al., 2017; NEEDS, 2009).

Finding themselves in a new food environment surrounded by packaged, highly-processed and fast foods, and with limited access to traditional foods, over time, many newcomers begin to eat a more Western diet, high in fat, sugar, and salt (Sanou et al., 2014a). So, as food security status tends to improve over time (Government of Canada, 2012), diet quality does not . Because of this and other lifestyle changes, many newcomers end up with diminished health status compared to the time of their arrival, including increased risk for, and incidence of, chronic diseases, such as diabetes and cardiovascular disease (Bilkis, Marie, Zheynuan, Shelly, & Arminée, 2004; Pottie, Ng, Spitzer, Mohammed, & Glazier, 2008; Van Hulst, Seguin, Zunzunegui, Velez, & Nikiema, 2011; Varghese & Moore-Orr, 2002). Unfortunately, there is also often a lack of culturally-appropriate food and nutrition programs (Hyman & Guruge, 2002) to support them during their transition to life in Canada.

Studies have shown that Winnipeg is no exception. Newcomers in Winnipeg face many challenges in their efforts to eat healthy food, whether it be traditional or Canadian food that they desire (Adekunle et al., 2015; Henderson et al., 2017). This is exacerbated by the fact that there are few supports to help newcomers overcome these food challenges, due to a lack of resources

and structural issues. A previous study conducted by the author revealed that there was little capacity in the community to do newcomer food security and nutrition work, as well as almost no collaboration between agencies (Henderson et al., 2017). The few agencies who were doing work in this realm were not connecting, had little knowledge about what other resources and programs existed, resulting in few referrals and a general lack of awareness about what the demand for these programs really was. One of the only newcomer nutrition programs in the city had a waiting list nearing 200 people at the time of the study, yet few other organizations knew this (Henderson et al., 2017). Some organizations who presented themselves during the study were interested in running additional food programs for newcomers, but had experienced difficulty engaging the newcomer community. This too was indicative of a lack of collaboration between newcomer agencies and other agencies who were looking to work with newcomers.

This study took a community development approach in order to break down some of the structural barriers to newcomer food and nutrition security, as well as develop a nutrition program with some key community partners to increase the resources available to the organizations who work on, or wish to work on, newcomer food and nutrition issues.

Overview of the *Growing Roots* Program

The *Growing Roots* program, an initiative of Food Matters Manitoba², aims to work with the newcomer community in Winnipeg to improve access to healthy food and give newcomers the knowledge and tools to navigate their new food environment. A 2014 study was conducted by the University of Manitoba, in partnership with Food Matters Manitoba and the Winnipeg Foundation,

² Food Matters Manitoba (foodmattersmanitoba.ca) is a non-profit organization that partners with communities to increase access to healthy food.

to determine what barriers to healthy eating were being experienced by newcomers living in Winnipeg's North End neighbourhood. Barriers found included traditional food access, food production challenges, and lack of nutrition knowledge in the Canadian context (Henderson et al., 2017). The *Growing Roots* program was developed to improve access to newcomer nutrition education and resources, improve access to land for food production practices, as well as to build community through food-related programming and events. The program also runs modified Food Safe Level 1 courses to help newcomers obtain the Food Handlers Certificate. The program began in Winnipeg's North End but has since expanded to other parts of the city. The Newcomer Food and Nutrition Network is facilitated as part of the *Growing Roots* program, as is the *Growing Roots* newcomer nutrition program, which were developed, implemented and evaluated as part of this research project. The researcher is also the coordinator of the *Growing Roots* program at Food Matters Manitoba.

Study Purpose

This action research project documented the community development process, and conducted a case-study evaluation of *Growing Roots*, a newcomer food and nutrition program in Winnipeg's North End, hosted by Food Matters Manitoba. This project was a response to a request made by Karen, Congolese, and other refugees living in the North End of Winnipeg to increase their knowledge of food and nutrition in the Canadian context (Henderson et al., 2017). The goal of *Growing Roots* was to increase levels of food security in newcomer (primarily refugee) populations. This was achieved through the development of: a network of organizations interested in newcomer food issues; a nutrition education training program for newcomers; and food and nutrition resources. Qualitative action research methods were used for data collection, including key informant interviews, focus groups, observation, administrative data, and field notes.

Qualitative data analysis included coding, thematic analysis, memos, and member checking. This project addresses the gap in food and nutrition program availability and evaluation, and disjointed program development for newcomers. Output of this study will also include newcomer nutrition program curricula and resources that can be used by other agencies across the country.

Research Questions

1. What impact do nutrition education classes and resources have on newcomer participants with respect to knowledge, attitudes and food security status?
2. What are the key elements of a sustainable newcomer food security network?
3. Does participation in the Newcomer Food and Nutrition Network increase the capacity of community organizations to positively influence food security for newcomers?

Thesis Structure

This thesis is structured as an integrated article thesis. It represents work from one research project but includes two related, but separate manuscripts as individual chapters in the thesis. For this reason, there is not a separate methods chapter. Chapter 4 describes the development, implementation and evaluation of the Growing Roots nutrition program, and Chapter 5 describes that of the Newcomer Food and Nutrition Network.

CHAPTER 2: LITERATURE REVIEW

When newcomers arrive in Canada, many are in search of a better life but still face numerous obstacles before achieving health and prosperity in their new home. Some newcomers, especially refugees, have limited opportunities to learn English before arrival in Canada and must do this upon arrival, while also learning new cultural norms and Canadian laws, and navigating social services. All of these challenges can contribute to difficulties with housing (Carter, 2008; Farrell, 2005; K. Newbold, 2010; Simone & Newbold, 2014), employment (Aycan & Berry, 1996; Creese & Wiebe, 2012; Dlamini, Anucha, & Wolfe, 2012; Fuller & Vosko, 2008; Guo, 2013; Lochhead & Mackenzie, 2005; Nakhaie & Kazemipur, 2013; Raza, Beaujot, & Woldemicael, 2013) and food security (Government of Canada, 2012; Henderson et al., 2017; Rush, Ng, Irwin, Stitt, & He, 2007; Tarasuk et al., 2016; Vahabi et al., 2011), which results in diminished health status and increased risk for chronic disease (Bilkis et al., 2004; Pottie et al., 2008; Van Hulst et al., 2011).

For many newcomers, these obstacles, along with social exclusion, lack of transportation, social pressures and many other factors, can make accessing healthy traditional foods very difficult (Henderson et al., 2017; Sanou et al., 2014a). These foods can be expensive, difficult to find and of poor quality due to importation timelines of world foods. Finding themselves in a new food environment surrounded by packaged, processed and fast foods, and with limited access to traditional foods, over time, many newcomers begin to eat a more Western diet, high in fat, sugar, and salt (Sanou et al., 2014a). So, as food security status tends to improve over time, diet quality does not. Because of this and other lifestyle changes, many newcomers end up with diminished health status compared to the time of their arrival, including increased risk for, and incidence of,

chronic diseases, such as diabetes and cardiovascular disease (Bilkis et al., 2004; Pottie et al., 2008; Van Hulst et al., 2011).

This review of the literature will examine factors contributing to food insecurity and other food and nutrition struggles for Canada's newcomer population. It will also examine the components of a successful newcomer health promotion program, and how these can be used to develop a newcomer-specific food and nutrition program.

Immigration to Canada

The Canadian government has made a commitment to increase immigration to Canada in order to facilitate economic growth and innovation. As such, 300,000 new immigrants and refugees are expected to arrive in Canada in 2017, up from 250,000. (Government of Canada, 2017). Twenty-five thousand of those people will be refugee-path immigrants, which is double than in recent years (Government of Canada, 2017). The city of Winnipeg, in particular, has experienced a large influx of newcomers over the past few years, becoming home to approximately 85% of the 15,000 newcomers who arrive in the province of Manitoba each year. (Province of Manitoba, 2014). Many of the newcomers arriving in Winnipeg initially settle in the inner city due to lower housing costs (Carter, Polevychok, & Osborne, 2009). Nearly one-third of inner city Winnipeg residents were born outside of Canada (compared with 18.7% in the city as a whole) (Social Planning Council, 2011). Increasingly, newcomers are settling in the inner city neighbourhood known as the North End, which has a total population of approximately 39,000 (Statistics Canada, 2013b). This neighbourhood is appealing for many newcomers due to its low-cost and subsidized housing. In many cases, newcomers can find other community members from their country of origin. Over a five-year period between 2006 and 2011, the recent newcomer population in the North End more than doubled (Statistics Canada, 2013b) This growth has

occurred throughout the neighbourhood, with some census tracts now reporting recent immigrant populations higher than 15% (Statistics Canada, 2013b). Despite the increasing newcomer population in this area, most of the settlement services are located in other areas of the city.

Social Determinants of Health

According to the World Health Organization Commission on the Social Determinants of Health social injustices are causing the premature deaths of the world's citizens on a global scale. They describe the socioeconomic gradient on-which health exists – the poorest people having the poorest health. This is the result of imbalances in “power, income, goods and services” (p.1), which affect one's access to a livable income, healthy food, good education and many other aspects of the conditions in which we live (WHO Commission on the Social Determinants of Health, 2008). Social determinants of health (SDH) then, can be defined as: “the societal factors that shape the health of individuals and populations” p.45 (Bryant, Raphael, Schrecker, & Labonte, 2011).

The importance of the SDH has been understood for decades, yet many governments around the world have failed to address them. Canada, although often seen as a leader in population health, is no exception (Bryant et al., 2011; Pathak, Low, Franzini, & Swint, 2012; Raphael, 2011)

Not all Canadians have equal access to healthy food, due to a wide array of social factors and inequities. According to Statistics Canada, nearly 5 million Canadians live in poverty (Statistics Canada, 2013a) and almost 7% are unemployed (Statistics Canada, 2013a). Also alarming, is that according to *The State of Homelessness in Canada* report, at least 28,500 Canadians are homeless on any given night, and approximately 200,000 Canadians sleep in homeless shelters each year (The Homeless Hub, 2013). Tarasuk reported that in 2014, over 3 million Canadians experienced food insecurity (Tarasuk et al., 2016)

Clearly, many Canadians are struggling – but these struggles are not randomly distributed. Instead, they are concentrated in Canada's lower-income, lower social-status populations, who tend to have less access to the resources that contribute to a healthy life (Graham, 2009). These people include women, the indigenous population, people living with disabilities and visible minorities - including newcomers to Canada (Mikkonen & Raphael, 2010).

Newcomers and the Social Determinants of Health

Immigrants and refugees in Canada can find themselves especially affected by several of the SDH. Race, income, employment, social exclusion, lack of social safety nets, and various other SDH can negatively affect their health (Creese & Wiebe, 2012; De Maio G., 2012; Dlamini et al., 2012; Haan, 2008; Van Hulst et al., 2011; Wang, 2014). Moreover, it has been suggested that immigration, itself, should be considered a determinant of health, as the stresses and lifestyle changes that are undergone during migration can result in substantial barriers to optimal health (Bilkis et al., 2004; Meadows, Thurston, & Melton, 2001).

According to a report published by Canada Without Poverty, recent immigrants, refugees, and women are most likely to be living in poverty (Canada Without Poverty, 2011). One can imagine the implication that this has for recently-arrived female refugees. Newcomer women do experience an especially difficult time finding suitable employment (Creese & Wiebe, 2012; Dlamini et al., 2012), which may help to explain this disparity. Newcomer women are not alone in these struggles to find employment. This is an issue for many recent arrivals, as is moving up the ranks once employment is obtained (Guo, 2013; Haan, 2008; Picot, Hou, & Coulombe, 2008). According to Mikkonen and Raphael (2010), not only are non-European newcomers experiencing higher unemployment rates and lower incomes than the average Canadian, this problem is even

worse than it was in the 1970's; one more indication of Canada's lack of progress in addressing the SDH.

Low official language ability is also a factor that has been shown to be associated with the high rates of poverty, making it more difficult to obtain employment and access social services related to poverty reduction (Beiser, 2009; Raza et al., 2013). Language difficulties can also lead to decreased healthcare access and are associated with poorer health (Pottie et al., 2008).

Finding suitable housing is normally one of the first priorities for newcomers when they arrive and can prove to be quite a challenge (Carter, 2008; Farrell, 2005; McKeary & Newbold, 2010; Simone & Newbold, 2014). According to a recent study by Simone & Newbold, refugees have the greatest difficulty, whereas economic immigrants have the least (2014). Regardless of immigrant status though, overcrowding is a common issue, due to the cost of housing and large family sizes. Winnipeg is no exception - in a 2008 study of the housing situation among Winnipeg's refugee population, researchers found that 94% of the refugee families in the study were living below the poverty line (Carter, 2008). Rates of poverty increased with family size, with 100% of families with 5 or more members living below the Low Income Cut-Off threshold. The average newcomer household income was just over \$22,000 – which is about one third of the average household income in the city (Carter, 2008). Half of the participants in the study were paying 30% or more of their income on housing, leaving insufficient money for the other necessities of life (Carter, 2008).

It is documented that discrimination can also be a predictor of health outcomes, which unfortunately, is a peril that many newcomers face here in Canada (De Maio G., 2012; Mikkonen & Raphael, 2010). According to Mikkonen and Raphael (2010), visible minorities in Canada endure three types of racism: institutional, personally mediated and internalized racism. It is

beyond the scope of this paper to go into these types of racism in detail, but suffice it to say that this discrimination can have negative effects on many aspects of one's life including employment opportunities, housing, access to healthcare and more. This racism can certainly negatively affect one's sense of belonging in Canadian society, which has been linked to negative health outcomes in Chinese immigrants (Wang & Hu, 2013). The significant impact that discrimination has on the health of newcomers emphasizes the fact that the reasons for health decline go beyond poverty, and potentially affect all socioeconomic groups of newcomers.

All of the social determinants of health discussed above are closely linked to food insecurity. Living in poverty is the most obvious, but language, and discrimination can make it difficult to find work – resulting in a low-income and social isolation. This, in turn, results in difficulty finding affordable housing, leaving little money for healthy, traditional food. Discrimination and social isolation could also result in an aversion to seeking out social and educational programs, further limiting the resources available. Newcomer food and nutrition insecurity is a complex issue – one that has yet to be adequately addressed.

Newcomer Food Security

Food insecurity is one of many social determinants of health affecting the newcomer population (Asanin & Wilson, 2008; Beiser & Hou, 2014; Bilkis et al., 2004; Bruce Newbold & Danforth, 2003; De Maio, 2010). Food security is defined as: “when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life” (Food and Agriculture Organization of the United Nations, 2008). Unfortunately, for many Canadian families this is not the reality. This lack of food security results in over 800,000 Canadians accessing food banks each month (Food Banks Canada, 2016), although research shows that only a small number of food

insecure people actually use food banks (Kirkpatrick & Tarasuk, 2009)(Kirkpatrick & Tarasuk, 2009). Food security is an important determinant of health. Therefore, living without it increases risk of poor health outcomes, including chronic disease and mental health issues (Vozoris & Tarasuk, 2003).

Although food insecurity affects many different types of households, similar to poverty, there are certain households that are at greater risk; these include indigenous households, households where the main source of income is social assistance, and newcomer households (Government of Canada, 2012). Recent newcomers, who have been in Canada for less than five years, are nearly 60% more likely to be food insecure than Canadian-born citizens (Tarasuk, Mitchell, & Dachner, 2014). It is likely that this is an underestimate however, due to the exclusionary information gathering practices of government and other agencies (Vahabi et al., 2011). These practices will be discussed in more detail under “Limitations of Newcomer Research”.

Newcomers in Manitoba, similarly to other newcomers across Canada, are experiencing barriers to healthy food access. A study published in 2009 by the Newcomers Employment and Education Development Services Inc (NEEDS) described newcomers’ difficulties finding fresh, affordable fruits and vegetables – especially those people living in the inner-city. Newcomers living in Winnipeg’s North End confirmed these accounts during a 2014 study conducted by Food Matters Manitoba and the University of Manitoba (Henderson et al., 2017) as did the participants in another study conducted in Winnipeg around the same time (Adekunle et al., 2015). Both of these newcomer studies confirm that availability of traditional foods is limited in Winnipeg, which leaves many newcomers purchasing lower-cost processed/packaged foods. Other barriers include

poverty, lack of nutrition knowledge, time constraints and a lack of culturally-appropriate programs and resources (Henderson et al., 2017; NEEDS, 2009)

Healthy Immigrant Effect and Dietary Acculturation

New arrivals to the country are typically healthier than the average Canadian, especially with regards to chronic disease risk. This phenomena is often referred to as the “Healthy Immigrant Effect” (McDonald & Kennedy, 2004, 2005; B. Newbold, 2005). While food security status tends to improve for newcomers who have been in Canada for more than five years (Government of Canada, 2012), their health often begins to decline (McDonald & Kennedy, 2005; Sanou et al., 2014a; Varghese & Moore-Orr, 2002). This health decline is thought to be the result of many lifestyle changes, including dietary acculturation, which normally includes a shift to a more “Western” diet – a diet that includes higher consumption of processed and convenience foods (Sanou et al., 2014a). This can lead to a diet high in sodium, fat and added sugars, putting newcomers at increased risk for many chronic diseases (McDonald & Kennedy, 2005; Regev-Tobias et al., 2012; Sanou et al., 2014a; Varghese & Moore-Orr, 2002).

It is unclear to what degree the Healthy Immigrant Effect applies to the refugee population or not, as well as which newcomer groups may be more or less affected, since most newcomer research does not distinguish between refugees and immigrants and often does not compare various countries of origin. Due to the screening process that immigrants have to undergo, and different life circumstances, immigrants may be in greater health than refugees upon arrival in Canada.

Food and Identity

For newcomers living in Winnipeg’s North End, maintaining their traditional diets is extremely important (Henderson et al., 2017), which is consistent with newcomer food experiences

across Canada (Sanou et al., 2014a). According to D' Sylva and Beagan (2011) food traditions can take on an especially important role in a context where language, dress and other aspects of one's culture are not well understood. Food becomes a way of passing on traditions and maintaining cultural identity, both within the family and as a community (D'Sylva & Beagan, 2011). It can also be a tool to facilitate connection with people in the community, outside of one's cultural group.

Maintenance of these cultural food practices, however becomes difficult, and newcomers' new Canadian environment begins to influence their food choices and preferences. As Beiser emphasizes, it is of great importance to successful resettlement (often measured by employment, language and health parameters), that a balance be found between one's cultural norms, and those of the new home country (Beiser, 2009). He states that:

According to behavioral science theory, people who retain their own cultural identity while incorporating elements of the new are more likely to be successful than people who choose to assimilate completely to the new, or who retreat to the familiar while rejecting the new, or who abandon the old and at the same time reject the new (Beiser, Collomb, & Ravel, 1981; Berry, 1984.) (p.546, Beiser, 2009)

In order to find this balance and avoid complete dietary acculturation, many newcomers require support and nutrition education to find ways of adapting their traditional diets in the healthiest manner (Henderson et al., 2017). Their physical and mental health depend on it (Beiser, 2009; Sanou et al., 2014a). As discussed above, 'Western' nutrition education has not helped to maintain these food traditions, and has, in fact, done the opposite by eliciting feelings of guilt about these practices, making some feel that they have been failing their families (Anderson, Mah, & Sellen, 2015a). As Beiser also states: "North America offers little reassurance to immigrants and refugees

from other places that their cultural histories make them worthwhile people” (p.563, Beiser, 2009). This profound statement emphasizes that cultural identity of nutrition program participants should be an important focus for educators – without this consideration, these programs may be doing more harm than good (Anderson et al., 2015a).

What is Being Done to Address the Problem?

Many health and community organizations across Canada are attempting to provide health and social services for this population, however the social safety net for newcomers is still lacking in resources, coordination and collaboration, and the programs and services available are not always culturally-relevant or able to meet the growing demand from the immigrant and refugee community (Anderson, Mah, & Sellen, 2015; Edge, Newbold, & McKeary, 2014; Henderson et al., 2017; Hyman & Guruge, 2002; Simich, Beiser, Stewart, & Mwakarimba, 2005). In a 2002 review of health promotion strategies for recent newcomer women, it was identified that only a few culturally-appropriate programs existed and even fewer had ever been evaluated (Hyman & Guruge, 2002). They found that there was a strong need for the development of resources in various languages and spoke to the unique cultural learning patterns of various groups; suggesting that programs should be specially tailored for different groups of newcomers, based on their cultural traditions and beliefs. Fifteen years later, evidence-based newcomer health promotion programs are still few and far between.

Nutrition professionals, in particular, are guilty of delivering well-meaning, yet culturally inappropriate programming. Although Canada’s Food Guide is now available in twelve languages, it is still based on the usual diet of the majority culture in Canada. A study released in 2015 illustrated the deleterious effects of using Canada’s Food Guide for newcomer nutrition education. These included acculturation with regards to nutrition beliefs, feelings of guilt over not “eating the

right foods”, and thinking that the foods illustrated on the food guide are the only ones that fit into those food groups (Anderson et al., 2015a). Participants in this study also noted that many of their staple foods are not included on the Food Guide, further emphasizing the lack of cultural considerations during its creation. Canada’s Food Guide also does little to educate newcomers about the processed and convenience foods, which is crucial for the mitigation of unhealthy dietary acculturation.

Limitations of Newcomer Research

We know that newcomers are especially at risk for negative health and social outcomes, like food security and poverty, but it is difficult to understand the full extent of these matters because much of the long-term data is obtained through national surveys, such as the National Household Survey and the Canadian Community Health Survey. Although these surveys are instrumental in obtaining socioeconomic and health data from the Canadian population, they are voluntary and only administered in English and French (Vahabi et al., 2011). Knowing that over 6.5 million people in Canada speak another language as their mother tongue (Statistics Canada, 2015), one can imagine that many newcomers are not participating in these surveys, especially recent arrivals – the ones at greatest risk (Pan-Canadian Health Network, 2010). One report, called the *Poverty Trends Scorecard Canada 2012*, failed to even include newcomers who had been in Canada for less than two years. In another study on the effects of poverty and lack of social support on the health of children of newcomer mothers (Van Hulst et al., 2011) participants were excluded if they could not speak one of Canada’s official languages. Considering the linkages between language, poverty and health (Beiser, 2009; Pottie et al., 2008); one must question the validity and significance of the results of such a study. Due to these shortcomings, and others, in the research

community, it would appear that we simply do not know the actual poverty or food insecurity rates for newcomers to Canada.

Research is also lacking with respect to social and health inequalities between refugees, immigrants, other Canadians of visible minority, as well as within their many subgroups. Immigrants are often arriving with a greater number of assets, and likely from different parts of the world than refugees. Some are coming from countries ravaged with war and poverty; some are not. The limited research that has been done to compare the health of different immigrant groups based on country of origin has shown that there are significant differences in relation to various health outcomes, as well as the degree of impact of certain determinants of health, such as physical activity level (Wang, 2014). It is to do all newcomers an injustice not to recognize their heterogeneity (De Maio, 2010; B. Newbold, 2005; Rodney & Copeland, 2009; Wang & Hu, 2013) both in research and in program development.

Newcomer Health Promotion Strategies

Despite the fact that there has been little research and evaluation on newcomer health education programs, the existing literature does highlight several features that contribute to successful newcomer programs. These can be summarized as; 1) Cultural considerations; 2) Accessibility and support; 3) Empowerment and self-efficacy; and 4) Community consultation and collaboration.

Cultural Considerations

Ensuring that a newcomer program respects and celebrates the cultural diversity of the program participants is key to developing a successful program - it appears though, that this is often lacking (Hyman & Guruge, 2002; Simich, Beiser, Stewart, & Mwakarimba, 2005a). Program developers and facilitators must attempt to understand the traditions and beliefs of their

participants, otherwise they may be suggesting practices that go against or replace important cultural norms and traditions.

Language can also be a serious barrier to participation in health promotion programs. According to the Canadian Task Force on Mental Health Affecting Immigrants and Refugees (1988), newcomers who do not speak English or French are less-likely to participate in these types of programs (Canadian Taskforce on Mental Health Issues Affecting Immigrants and Refugees, 1988). Translation of health promotion material, as well as translation provided during programs, is crucial in order to reach these at-risk populations. Tailoring these programs to specific groups of newcomers may be the most effective way to ensure cultural appropriateness and individual language translation (Hyman & Guruge, 2002). Different learning strategies should also be considered, which for some cultures may include the use of storytelling, or song (Hyman & Guruge, 2002).

A leader in the field of newcomer health, Dr. Morton Beiser has found that a balance between acculturation and cultural maintenance – that is the maintenance of one’s own cultural traditions – is linked to more successful integration into Canadian society (Beiser, 2009) Knowing this, newcomer health and nutrition program development should focus on facilitating a healthy integration into majority society, while maintaining traditional food and health practices, where desired.

Accessibility and Support

When developing newcomer health promotion programs, the literature suggests a strong focus on elimination of barriers to access of the program (Hyman & Guruge, 2002). Appropriate hours of delivery are necessary, as many newcomers attend school on a daily basis and have many

other obligations as well (Henderson et al., 2017). Child-minding services can also be crucial for newcomer mothers (Hyman & Guruge, 2002).

Empowerment and Self-efficacy

Hyman and Guruge (2002) also emphasize the importance of focusing on empowerment and self-efficacy in newcomer health promotion strategies. The United Nations defines empowerment as:

...the process of enabling people to increase control over their lives, to gain control over the factors and decisions that shape their lives, to increase their resources and qualities and to build capacities to gain access, partners, networks, a voice, in order to gain control. (p.5, United Nations Social Development Network, 2013)

Self-efficacy is discussed in further detail under “Theoretical Framework”.

Community Consultation and Collaboration

Collaboration between organizations, community workers and health professionals working with newcomers, and newcomers themselves is also very important for effective program development (Hyman & Guruge, 2002; Simich et al., 2005a), especially at a time when financial and human resources are scarce. This is discussed in more detail under “Action Research”.

Study Significance

This study is being completed at a pivotal time when the newcomer population in Canada is steadily increasing and resources to serve this population have lagged behind (Henderson et al., 2017). Given the current international refugee crisis – the influx of refugees to Winnipeg is unlikely to decrease in the near future. As Canadian scholars, a responsibility exists to study how

these refugee-stream immigrants can achieve a healthy transition into Canadian society, and to determine what types of programs and resources are needed to facilitate this. Recent research has suggested that our current practices in regards to newcomer health promotion and nutrition education have often been culturally inappropriate and unsuccessful (Anderson et al., 2015a; Hyman & Guruge, 2002; Jessri & L'Abbé, 2015). Given that health and social programs for newcomers, especially refugees, will need to expand to meet the growing demand, health professionals and community organizations require guidance on the development and implementation of culturally-appropriate programming. This action research project presents a unique opportunity to develop a nutrition program that is evidence-based, thoroughly evaluated and developed in close consultation with the newcomer community, Immigrant Settlement Workers and Food Matters Manitoba – a local charity doing food security work.

The development and evaluation of a Newcomer Food and Nutrition Network is also needed (Henderson et al., 2017) in order facilitate collaboration between the many community workers and organizations that are becoming increasingly concerned for the nutritional health of their clients. It is believed that this Network will begin to eliminate some of the structural barriers that exist in Winnipeg that are impeding access to much-needed newcomer food and nutrition supports. Based on a scan completed prior to this study, no such network exists in Canada, therefore this is also an opportunity to lay the foundation and develop a model for the creation of other similar networks around the country.

CHAPTER 3: GROWING ROOTS: THE IMPACTS OF A NEWCOMER NUTRITION PROGRAM DESIGNED USING ACTION RESEARCH METHODS

Abstract

Many newcomers to Canada struggle with food insecurity and the health impacts of dietary acculturation, including increased risk for chronic disease. This action research project was designed to document the development, implementation and impacts of the Growing Roots newcomer nutrition program, whose aim was to help immigrants and refugees adapt to healthy eating in Canada. The eight-week program was run in the North End neighbourhood of Winnipeg, Manitoba, Canada, an area with a large newcomer³ population, as well as high rates of poverty and food insecurity. Qualitative action research methods were used for data collection, including oral questionnaires, semi-structured interviews, observation, administrative data and field notes. Qualitative data analysis included coding, thematic analysis, memos, and member checking. Impacts of the program included: changes in attitudes, knowledge and behaviours resulting in: 1) Healthy adaptation to the Canadian foodscape, 2) Enhanced nutrition knowledge and behaviours, 3) Improvements to food security for some participants, and 4) Additional benefits, such as cross-cultural understanding and enhanced social networks. Knowledge translation will include ongoing implementation of the Growing Roots program, incorporating findings of this research, a facilitation manual for educators, as well as a community celebration with past program participants and community members.

³ The term ‘newcomers’ is used here to describe community members born outside of Canada.

Introduction

There are over 250,000 new immigrants and refugees moving to Canada permanently each year, with a commitment from the Canadian government to increase that to 300,000 for 2017 (Government of Canada, 2017). When newcomers arrive in Canada, many are in search of a better life but still face numerous obstacles before achieving health and prosperity in their new home. Some newcomers, especially refugees, have limited opportunity to learn English before arrival in Canada and must do this upon arrival, while also learning new cultural norms and Canadian laws and navigating social services. Many experience difficulty obtaining suitable housing (Carter, 2008; Farrell, 2005; K. Newbold, 2010; Simone & Newbold, 2014), and employment (Aycan & Berry, 1996; Creese & Wiebe, 2012; Dlamini et al., 2012; Fuller & Vosko, 2008; Guo, 2013; Lochhead & Mackenzie, 2005; Nakhaie & Kazemipur, 2013; Raza et al., 2013). As a result, rates of poverty are high - according to a report published by Canada Without Poverty, recent immigrants, refugees and women are more likely to be living in poverty than the average Canadian (Canada Without Poverty, 2011).

Food insecurity is another issue that many newcomers face (Government of Canada, 2012; Rush et al., 2007; Tarasuk et al., 2016; Vahabi et al., 2011) which can result in diminished health status and increased risk for chronic diseases, such as type 2 diabetes and cardiovascular disease (Bilkis et al., 2004; Pottie et al., 2008; Van Hulst et al., 2011). Food security is defined as: “when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life” (Food and Agriculture Organization of the United Nations, 2008). Food insecurity is the lack thereof, and is one of many social determinants of health affecting the newcomer population (Asanin &

Wilson, 2008; Beiser & Hou, 2014; Bilkis et al., 2004; Bruce Newbold & Danforth, 2003; De Maio, 2010; Government of Canada, 2012; Tarasuk et al., 2016).

Recent newcomers, who have been in Canada for less than five years, are nearly 60% more likely to be food insecure than Canadian-born citizens (Tarasuk et al., 2014). It is likely that this is an underestimate, however, due to the exclusionary information gathering practices of government and other agencies (Vahabi et al., 2011). While food security status tends to improve for newcomers who have been in Canada for more than five years (Tarasuk et al., 2014), paradoxically, their health often begins to decline (McDonald & Kennedy, 2005; Sanou et al., 2014a; Varghese & Moore-Orr, 2002). New arrivals to the country are typically healthier than the average Canadian, especially with regards to chronic disease risk. This phenomena is often referred to as the *Healthy Immigrant Effect* (McDonald & Kennedy, 2004, 2005; B. Newbold, 2005). This health decline is thought to be the result of many lifestyle changes, including dietary acculturation (Sanou et al., 2014b). Finding themselves in a new food environment surrounded by packaged, processed and fast foods, and often with limited access to traditional foods (Adekunle et al., 2015; Henderson et al., 2017; NEEDS, 2009), over time, many newcomers begin to eat a more ‘Western’ diet - a diet that includes higher consumption of the processed and convenience foods that constitute their new food environment (Sanou et al., 2014a). This can lead to a diet high in sodium, fat and sugar, putting newcomers at increased risk for many chronic diseases (McDonald & Kennedy, 2005; Regev-Tobias et al., 2012; Sanou et al., 2014a; Varghese & Moore-Orr, 2002). Dietary acculturation is driven by many factors, including lack of access to familiar foods, social pressures and requests from children who are exposed to unhealthy convenience foods at school and in the community (Henderson et al., 2017; Sanou et al., 2014a).

The Winnipeg Context

The city of Winnipeg, in particular, has been experiencing a large influx of newcomers over the past few years, many of which settle in the inner city. Nearly one-third of inner city Winnipeg residents were born outside of Canada (compared with 18.7% in the city as a whole) (Social Planning Council, 2011). Increasingly, newcomers are settling in the inner city neighbourhood known as the North End, which has a total population of approximately 39,000 (Statistics Canada, 2013b). This neighbourhood is appealing for many newcomers due to its lower-cost and subsidized housing (Carter et al., 2009), and in many cases, newcomers can find other community members from their country of origin. Over a five-year period between 2006 and 2011, the recent newcomer population in the North End more than doubled (Statistics Canada, 2013b). Despite the increasing newcomer population in this area, most of the settlement services are located in other areas of the city.

As in other areas of Canada, poverty rates are high for newcomers in Winnipeg. In a 2008 study of the housing situation among Winnipeg's refugee population, researchers found that 94% of the refugee families in the study were living below the poverty line (Carter, 2008). The average newcomer household income was just over \$22,000 – about one third of the average household income in the city (Carter, 2008).

Newcomers in Winnipeg, similarly to other newcomers across Canada, are experiencing barriers to healthy food access. A study published in 2009 by the Newcomers Employment and Education Development Services Inc. (NEEDS) described newcomers' difficulties accessing fresh, affordable fruits and vegetables – especially those people living in the inner-city. Newcomers living in Winnipeg's North End corroborated these accounts during a 2014 study conducted by Food Matters Manitoba and the University of Manitoba (Henderson et al., 2017) as

well as during another Winnipeg study looking at newcomer access to cultural foods (Adekunle et al., 2015). These findings are not surprising, especially for Winnipeg's North End neighbourhood, which is known for having high rates of poverty and food insecurity among even the Canadian-born population (Malabar & Grant, 2010).

All of these newcomer studies confirm that availability of traditional foods is limited in Winnipeg, which can leave newcomers purchasing lower-cost processed/packaged foods. Other barriers to healthy eating for Winnipeg newcomers include poverty, lack of nutrition knowledge in the Canadian context, and time constraints (Henderson et al., 2017). Few culturally-appropriate programs or resources exist to support newcomers' in accessing healthy food, and the food and nutrition programs that do exist have long waiting lists, indicating that the demand for this support is not being met (Henderson et al., 2017; NEEDS, 2009).

Newcomer Food and Nutrition Education

As the newcomer population in Canada grows, many organizations across Canada are attempting to deliver health promotion programs for these new arrivals. However the social safety net for newcomers is still lacking in resources, coordination and collaboration (Henderson et al., 2017). The programs and services that *are* available are not always culturally-relevant or able to meet the growing demand from the immigrant and refugee community (Anderson, Mah, & Sellen, 2015b; Edge et al., 2014; Henderson et al., 2017; Hyman & Guruge, 2002; Simich et al., 2005a). In a 2002 review of health promotion strategies for recent newcomer women, it was identified that only a few culturally-appropriate programs existed and even fewer had ever been evaluated (Hyman & Guruge, 2002). They found that there was a large need for the development of resources in various languages and spoke to the unique cultural learning patterns of various groups; suggesting that programs should be specially tailored for different groups of newcomers, based on

their cultural traditions and beliefs (Hyman & Guruge, 2002). Fifteen years later, evidence-based newcomer health promotion programs are still few and far between (Henderson et al., 2017).

Nutrition professionals, in particular, have unwittingly been delivering well-meaning, yet culturally-inappropriate programming that is often rooted in nutritionism – a reductionist approach to looking at food solely through its nutrient composition (Scrinis, 2008). Although Canada’s Food Guide is now available in twelve languages, it is still based on the usual diet and dietary needs of the majority (European) culture in Canada and does not encompass ways of knowing about food that are common in other parts of the world (Ristovski-slijepcevic, Chapman, & Beagan, 2008). A study released in 2015 illustrated some of the deleterious effects of using Canada’s Food Guide for newcomer nutrition education; these included acculturation with regards to nutrition beliefs, feelings of guilt over not “eating the right foods”, and thinking that the foods illustrated on the Food Guide are the only ones that fit into the desired food groups (Anderson et al., 2015b). Participants in this study also noted that many of their staple foods are not included on the Food Guide, further emphasizing the lack of cultural considerations during its creation. Canada’s Food Guide also does little to educate newcomers about the processed and convenience foods found in Canada, which is crucial for the mitigation of unhealthy dietary acculturation.

Research shows that nutrition education should focus on helping newcomers to find a balance between traditional foods and foods that are common in their new home. The cultural identity of nutrition program participants should be an important focus for nutrition educators – without this consideration, these programs may be doing more harm than good (Anderson et al., 2015b).

According to D’Sylva and Beagan (2011) food traditions can take on an especially important role in a context where language, dress and other aspects of one’s culture are not well

understood. Food becomes a way of passing on traditions and maintaining cultural identity, both within the family and as a community (D'Sylva & Beagan, 2011). It can also be a tool to facilitate connection with people in the community, outside of one's cultural group.

Maintenance of these cultural food practices, however becomes difficult, and newcomers' new Canadian environment begins to influence their food choices and preferences. As Beiser emphasizes, it is of great importance to successful resettlement, that a balance be found between ones' cultural norms, and those of the new home country (Beiser, 2009). He states that:

According to behavioral science theory, people who retain their own cultural identity while incorporating elements of the new are more likely to be successful than people who choose to assimilate completely to the new, or who retreat to the familiar while rejecting the new, or who abandon the old and at the same time reject the new (Beiser, Collomb, & Ravel, 1981; Berry, 1984.) (p.546, Beiser, 2009)

In order to find this balance and avoid complete dietary acculturation, many newcomers require support and nutrition education to find ways of adapting their traditional diets in the healthiest manner (Henderson et al., 2017). 'Western' nutrition education has not helped to maintain these food traditions, and has, in some cases, done the opposite by eliciting feelings of guilt about these practices, making some feel that they have been failing their families (Anderson et al., 2015b).

The availability of newcomer nutrition, and other health promotion programs will need to expand to meet the growing demand (Henderson et al., 2017) and to curb the rising rates of chronic disease (Kimberly Elmslie, 2012). Food and nutrition programs for newcomers are scarce but drastically needed in order to support newcomers with the many food issues that they face in their new homes (Henderson et al., 2017). Health professionals and community organizations require

an evidence-base on which to develop and implement culturally-relevant and effective food and nutrition programming in order to see positive impacts on food security as well as healthy adaptation to the Canadian foodscape.

Study Significance

This study, titled *Growing Roots: An Action Research Project to Build Newcomer Food Security in Winnipeg's North End*, aimed to fill the gap in knowledge regarding how to develop an effective newcomer food and nutrition program, and what the impacts of such a program could be for participants' knowledge, attitudes and food security status. This action research project presented a unique opportunity to develop, implement and evaluate a nutrition program in close consultation with the newcomer community, immigrant settlement workers and Food Matters Manitoba – a local charity doing food security work.

This research project also included the development and evaluation of a Newcomer Food and Nutrition Network in order facilitate collaboration between the many community workers and organizations that are becoming increasingly concerned for the nutritional health of their clients (documented elsewhere). It is believed that this Network will begin to eliminate some of the structural barriers that exist in Winnipeg that are impeding access to much-needed newcomer food and nutrition supports.

Study Purpose

The purpose of this study was to develop, implement and evaluate the Growing Roots newcomer nutrition program and determine its impacts on the knowledge, attitudes and food security status of participants.

Methodology

Qualitative Action Research Design

Action research is a method that can be used to find solutions for everyday problems, develop effective programs, and fuel social change (Stringer, 2013). It is a “systematic process of inquiry” (p.5) that involves cycles of development, implementation and evaluation of a given program, strategy or plan (Stringer, 2013). As Stringer describes throughout his book, *Action Research*, there are many applications for the action research method, including; health promotion, program evaluation, community development, and community engagement (2013).

The need for evidence-based newcomer health promotion programs is clear and the literature confirms that community involvement in program development and evaluation is needed (Hyman & Guruge, 2002). Action research is the obvious strategy with which to do this, as it includes cycles of community consultation, program delivery and evaluation (Stringer, 2013). In action research, the researcher acts as the “catalyst” for change, but the stakeholders also have direct involvement in the creation and evaluation of the given program (Stringer, 2013).

In 2014, a community-based research project took place in Winnipeg’s North End to determine the barriers and opportunities that existed in the way of newcomers and food. This study led to the development of a 5-week pilot newcomer nutrition program, which was run at Turtle Island Community Centre, in partnership with the Winnipeg Regional Health Authority, North End Food Security Network, Food Matters Manitoba and the University of Manitoba. The pilot program was evaluated and informed the development of the more comprehensive newcomer nutrition program as part of this Masters research project.

For this study, *Growing Roots: An Action Research Project to Build Newcomer Food Security in Winnipeg’s North End*, the program was developed, followed by two cycles of

program implementation, which both included further community consultation, program modification, and evaluation. See Figure 1. Growing Roots action research framework

Community Consultation

The 2014 research project was completed in the North End community of Winnipeg and included both community workers and newcomers themselves. This consultation with the newcomer community revealed the need for newcomer nutrition education in this area of the city, based on a long waiting list for the only such program identified in the entire city, as well as a desire for this education expressed by the community. Further consultation with neighbourhood immigrant settlement workers was done throughout the project, including to discuss program topics and logistics, to gain feedback during the program and during the evaluation to confirm the legitimacy of findings.

Program Development/Review

The *Growing Roots* nutrition program was developed in close consultation with community partners and based on the existing academic literature on newcomer health promotion strategies and theories. Program accessibility (language, location, etc.), embracing cultural diversity, self-efficacy, as well as nutrition education best-practices were key considerations. The 8-week program was designed with the following objectives: 1) To give newcomers the knowledge and skills needed to eat healthily in the Canadian context; 2) To help newcomers find a healthy balance between traditional and ‘Canadian’ foods; 3) To provide an environment where traditional food practices are shared and encouraged. Topics covered included: food safety, whole foods vs packaged foods, label/package reading, healthy school lunch ideas, sugar, plant foods and a grocery store tour. There was a large cooking component to the classes, where participants learned to prepare mostly healthy Canadian foods. Originally, it

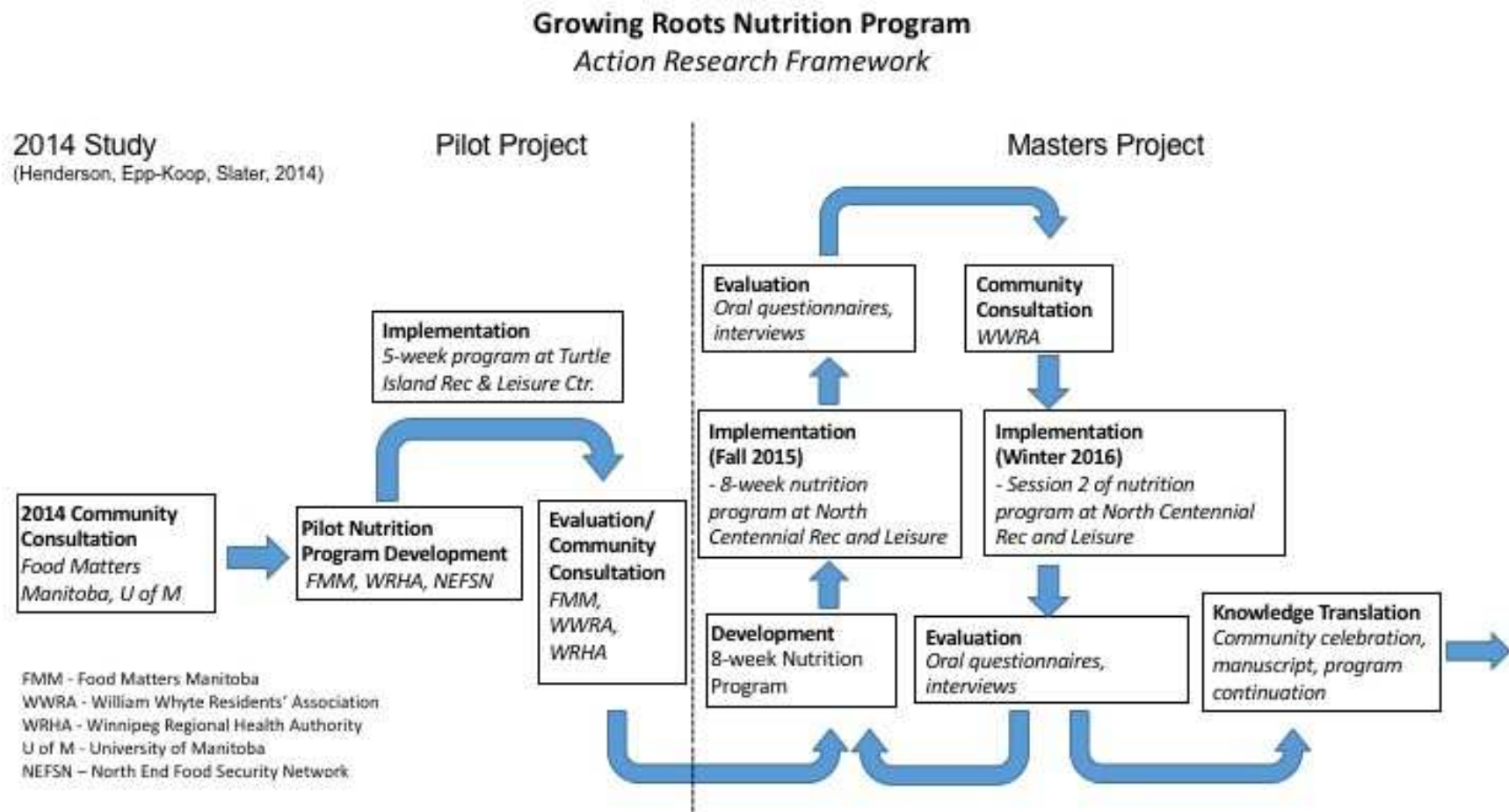


Figure 1. Growing Roots action research framework

was planned to have more traditional recipes, tailored for the Canadian kitchen, however what participants wanted to learn was to make the Canadian foods that their children often requested, such as pizza and burgers. Healthy versions of these requested recipes were used in the program, including vegetarian pizza, fruit smoothies and salmon burgers.

Nutrition lessons were conducted informally while sitting around a table with participants, settlement workers and translators, when needed. A large focus was put towards encouraging participants to share their knowledge and ideas, as well as ask questions and interact with tactile and visual learning tools, such as sugar cubes, dried pulses, food packages and handouts. Additional teaching took place in the kitchen while preparing recipes together. Topics included healthy preparation methods, how to use an oven and how to make common store-bought foods at home. Participants were encouraged throughout the program to suggest recipes that they wanted to learn, and program facilitators made every effort to accommodate these requests.

Study Participants

Participants for this study included all participants from the *Growing Roots* newcomer nutrition program, facilitated by the researcher and Food Matters Manitoba in Winnipeg, Canada. See Table 1: Inclusion and exclusion criteria for newcomer participants. Twenty-two newcomers from a variety of cultural communities in Winnipeg were recruited for the nutrition program. Home-countries represented in this study include Burma (ethnic Karen community), Syria, the Philippines, and the Congo. Twenty-one participants were female, and one was male. Participants arrived in Canada through a variety of immigration paths. Although specifics about these settlement paths were not obtained, at least eight people arrived as refugee-path immigrants. Ages were between 18 and 65 and seventeen were parents. Eleven participants

Table 1: Inclusion and exclusion criteria for newcomer participants

<i>Inclusion Criteria</i>	<i>Exclusion Criteria</i>
<ul style="list-style-type: none">• Interest in the program• 18 years or older• self-identify as a newcomer• live in North End community• self-identify as having a predominant role in household food work	<ul style="list-style-type: none">• under 18 years of age• Canadian-born

required translation during the program and 6 during the interviews. See Table 2. Program participant demographics. Immigrant settlement workers who were involved in the implementation of the program were also interviewed, as was a program volunteer who was university-educated in nutrition.

Participant Recruitment. Participants were recruited for this study at two different points in each of two program sessions, 1) recruitment of participants to take the program itself, and 2) recruitment for the semi-structured interviews once the program had ended. This primary selection of program participants was necessary to ensure that study participants had knowledge of the program and were able to answer the interview questions, which pertained directly to their experiences in the program. Newcomers were purposively recruited from a variety of countries, age groups and family types to take the nutrition program. This ensured some variability in the opinions and feedback about the program. Participants were advised at the beginning of the program that we would be requesting feedback throughout the program in order to improve the program for future participants.

Table 2. Program participant demographics

Characteristic	Number of Program Participants (N=22)
Age range, in years	
18-29	4
30-39	6
40-49	8
50-59	2
60+	1
Did not enter	1
Gender	
Male	1
Female	20
Did not enter	1
Country of birth	
Burma	5
Congo	2
Philippines	11
Syria	4
Years in Canada	
<1	7
1-5	9
6-10	5
>10	1
Immigration path	
Immigrant	14
Refugee-path immigrant	8
Required translation during program	
Yes	11
No	11

Participants from both Fall 2015 and Spring 2016 sessions of the program were invited to participate in an interview in Winter 2016 or Summer 2016, respectively. A total of 13 program participants were recruited for the interviews, based on the substantive criteria above, that took place six to eight weeks after each of the sessions of the program. Two settlement workers and one volunteer who were involved in the development and implementation of the program were also recruited by the researcher and interviewed within these timeframes.

Participants were recruited for the program and the interviews by the immigrant settlement workers at William Whyte Residents' Association who were also involved in the nutrition program as support/interpreters. These workers had established trust with the participants and spoke their languages, facilitating easier recruitment and increased participant comfort in attending the program and participating in the interviews. They recruited participants in-person and by telephone, using the recruitment script designed by the researcher, and by scheduling interviews at a time and location convenient for the participants. Timing of the interviews was very flexible due to the often-hectic schedules of newcomers to Canada. Participants were given a \$25 honourarium for their time.

Because the immigrant settlement workers were recruiting participants for the program, we were limited to the newcomer communities that they had established relationships with. Because of this, only a limited number of home-countries are represented in this study. Also, although we provided the workers with a recruitment script, we could not control exactly what was said to participants.

Data Collection

Data for this project included participant responses to oral questionnaires and interviews, as well as observations, administrative data and field notes and were all collected by the primary

researcher, who was also the program creator and facilitator. See ‘Quality’ section for notes on these data collection methods. See Figure 2. Summary of data collection methods.

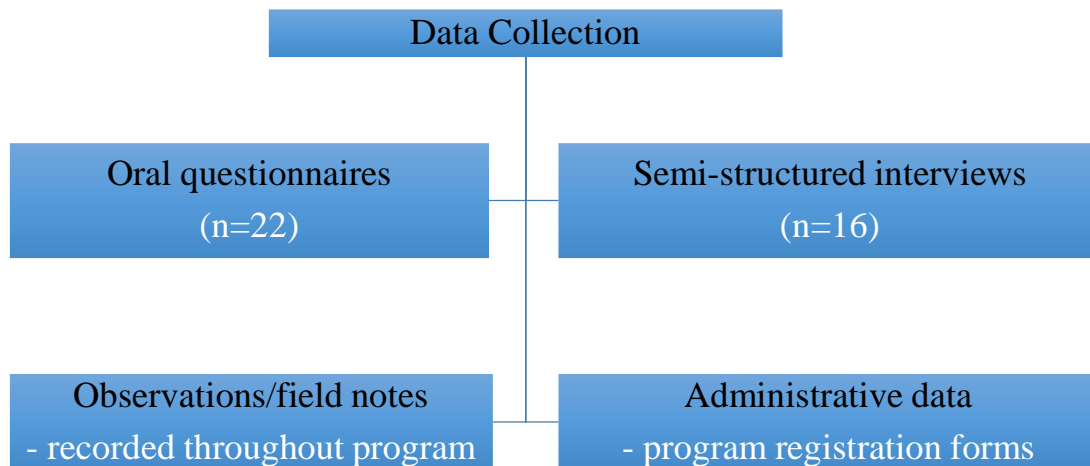


Figure 2. Summary of data collection methods

Data collection began at the first nutrition program class with unstructured oral questionnaires administered to participants by the researcher at the end of each class. These were conducted informally and voluntarily by giving the participants an opportunity to give feedback on the class. Sample oral questionnaire questions are shown in Table 3. Sample oral questionnaire questions. Responses were manually recorded by the researcher and/or research assistant.

Table 3. Sample oral questionnaire questions

Sample Questions
<ul style="list-style-type: none"> • What did you think of the program today? • Did you learn anything? If so, what did you learn?

Observations and field notes were also important data collection strategies throughout the program. Observations of participant engagement, social interaction, and skills and knowledge demonstration were valuable tools in the action research process and were carried out by the researcher, as well as the settlement worker partners and nutrition class volunteers. Observations were also helpful in determining which recipes were most and least successful, based on consumption, desire to take home leftovers and interest in taking home the recipes. Field notes were taken throughout the program to record observations, lessons learned, program feedback and any other relevant information.

Semi-structured interviews were completed after each 8-week program session, with a total of 13 newcomer nutrition program participants, as well as 2 settlement workers and 1 program volunteer. See

Table 4. Sample semi-structured participant interview questions.

Table 4. Sample semi-structured participant interview questions

Sample Questions
<ul style="list-style-type: none"> • What made you interested in taking this program? • What did you think of the program? • What information did you find most useful? • Have you used any information or skills that you learned in the program since it ended? • Do you eat more, less or the same amount of traditional foods since the program? • Did the program effect the amount of money that you spend on food each month? • Have you shared any of the information that you learned in the program with anyone who wasn't there? • How can the program be improved for future participants?

A modified version of this interview guide was used for the settlement workers and program volunteer interviews, in order to gain their insight on the program impacts for the participants, based on their observations and discussions with program participants during and after the program. For example, the question ‘What made you interested in taking the program?’ was reworded to, ‘What made your clients interested in taking this program?’.

All interviews were conducted either individually or in dyads, in locations and at times that were convenient and comfortable for participants. Locations included participant homes, settlement offices and coffee shops. Interviews were all conducted by the primary author and were digitally recorded and transcribed orthographically by the researcher and a trained transcriber. Audio recordings were replayed in order to verify the accuracy of the transcriptions. Detailed field notes were taken by the researcher after each interview and throughout the transcribing and data-cleaning processes. These field notes included general thoughts, emerging themes and reflexive activities/observations.

Data Analysis

Experiential thematic analysis (Braun & Clarke, 2013 p.175) was the method used to analyze participant interviews and oral questionnaire data in order to gain an in-depth understanding of participant experiences in relation to the research question.

Data analysis began after the first nutrition class and continued throughout the program implementation and evaluation processes. Themes began to emerge early on in the program implementation, based on the oral questionnaires and the observations of the program facilitators, volunteers and settlement workers. Detailed field notes were taken during this stage.

The semi-structured interviews were transcribed orthographically and then reviewed a second time by the primary researcher in order to ensure high quality transcriptions, as well to

become more immersed in the data. Transcriptions were then uploaded to NVIVO 10, where they underwent thematic analysis.

Data was coded hierarchically starting with high-level themes that were developed using a top-down approach, based on the research question. These themes were: ‘Attitudes’, ‘Knowledge’, ‘Food Security’, and ‘Other Impacts’. As the data was then further coded using a bottom-up approach in order to identify data-driven sub-themes – these became the 2nd level codes. Once the sub-themes were created, further analysis warranted the collapse of some sub-themes into others as well as the development of additional high-level themes: ‘Self-Reported Behavior Changes’ and ‘Unintended Outcomes’. Third-level codes were then identified, falling under each sub-theme.

Theme definitions. ‘Changes in attitudes’ were defined as participants’ evaluation of their own food and nutrition behaviours, and beliefs related to food and health. This is a definition that was modified from *Health Promotion and Behavioural Change* (Parmar & Taylor, 2010). For example, many participants reflected on their past food practices describing changes in the ways they think about how these practices impact their health. Perhaps they had not been aware that food could have *negative* impacts on health (ie sugar), although certain foods were traditionally consumed for their health *benefits*. ‘Changes in Knowledge’ were simply defined as what the participants had learned in the program and ‘self-reported behaviours’ were behaviours that had changed since the program, according to participants. Evaluating behaviour change was not a focus of this study, however all of the participants volunteered a great deal of data on the behavior changes that they had made, in most cases without being specifically asked. As a result, self-reported behaviour change became an important theme.

Changes in food security status were analyzed qualitatively based on the four dimensions of food security: availability (the presence of food), access (physical, economic and social), utilization (the knowledge and skills to use the food that is available) and stability (of the other three dimensions) (Gross, Schoeneberger, Pfeifer, & Preuss, 2000). The Household Food Security Questionnaire was not used based on its focus on evaluating economic access to food, which was not the sole focus of this program. This tool also has questionable validity in the newcomer context, based on a previous study by the primary author.

The interview data were then triangulated with the field notes taken during the program, and member-checking was completed with the settlement workers to ensure that the results found were inline with their experiences and views of the program impacts on their newcomer clients.

Research Quality

Although there are no agreed-upon criteria for ensuring qualitative research is done well (Braun & Clarke, 2013), several researchers have developed sets of criteria with which to evaluate the merit of these studies. Throughout this study, the matter of quality was approached using Tracy's "8 'big-tent' criteria for excellent qualitative research", 1) Worthy topic, 2) Rich rigor, 3) Sincerity, 4) Credibility, 5) Resonance, 6) Significant contribution, 7) Ethical and 8) Meaningful coherence (Tracy, 2010). These criteria provide a set of 'end goals' for the researcher to strive for, therefore it was important in this study to repeatedly review the criteria and ensure that these goals were met at every stage in the research. Positionality was also an important factor to consider, and the interview transcript themes were also tested for inter-rater reliability.

Positionality

As a Caucasian woman of European decent, it was important for the primary author to repeatedly reflect on how culture, social status and a 'Western' nutrition education impacted the nutrition program, interactions with participants from the newcomer community, as well as the research findings. Without the experience of being a newcomer herself, it is impossible to fully comprehend all the complexities of the food insecurity and dietary transitions that many newcomers experience. For this reason, she attempted not to make assumptions about the experiences of the participants during the program, or about the healthfulness of traditional diets, but rather focus on the accounts given to her by participants. Reflexivity was also an integral part of ensuring the quality of this project during development of the program, the creation and use of oral questionnaire and interview questions, and interpretation of the data.

Due partially to cultural differences (shyness, respect, perceived or actual power differentials), and to the fact that the researcher was also the program facilitator, it was anticipated that some participants may only feel comfortable providing positive feedback. To mitigate this, interview questions were designed in a way that some constructive criticism would be likely be obtained. For example, participants were asked, 'What was your least favourite part of the program?', rather than 'What didn't you like about the program?'. Relationship building with participants during the program was also a priority, both to enrich their experience in the program and also to ensure they felt comfortable giving honest feedback about the program. It was reiterated to them several times throughout the program that their feedback was crucial for the future success of the program.

Inter-rater Reliability

Once the primary author completed initial coding, the inter-rater reliability tool in NVIVO 10 was used to compare the coding of two interview transcriptions done by the primary researcher to that of 2 other researchers, including the graduate student advisor and another graduate student. Agreement surpassing 85% was found, affirming the majority of the findings, and the other researchers offered insights in order to strengthen the analyses.

Results

Program participants and settlement workers reported many positive impacts of the *Growing Roots* food and nutrition program and many of these were confirmed in observations and field notes taken throughout the program. Impacts of the program included changes in attitudes, knowledge and behaviours resulting in: 1) Healthy adaptation to the Canadian foodscape, 2) Enhanced nutrition knowledge and behaviours, 3) Marginal improvements to food security for some participants, and 4) Additional benefits, such as cross-cultural understanding and enhanced social networks. Unintended outcomes of the program included introduction to processed foods (by way of store-bought bread), ideas about Canadian vegetables being expensive, as well as some confusion about the source of their own nutrition knowledge after the program.

Theme 1: Healthy Adaptation to the Canadian Foodscape

The program helped participants adjust to their new food environment without sacrificing healthy food traditions. For many participants, many aspects of buying, storing and preparing food was very different in Canada when compared to back home. Fresh food markets, family farms and food aid in refugee camps were some of the main food sources for them prior to their arrival in Canada. Once here, they are bombarded with premade, packaged and fast foods and it can be difficult to make healthy food choices in this new environment. It is also difficult for

some participants to find their healthy traditional foods here in Canada, especially ones that are fresh and affordable, making healthy eating that much more challenging. It was for these reasons, and others, that participants became interested in the food and nutrition program.

Sub-Theme 1: Pre-Program Attitudes about Adapting to Canadian Food Environment.

Participants described many motivations for taking the newcomer nutrition program, with some reporting a willingness or desire to adapt to their new food environment, even before the program began. The desire to understand the foodscape in Canada was often driven by general feelings of unfamiliarity with the foods around them and where they came from. As one participant put it:

There is different recipes that, I mean, so many recipes that we did not know so just want to learn every single things is possible...just, I mean because we don't know, we just need to know a lot of information about the Canadian food system...

- Female Karen Participant

Another participant also explained her desire for greater knowledge of Canadian foods and the Canadian food system.

Important to come to this program because in our culture we know our vegetables, but not how to make salad – and ways Canadians eat vegetables. Important we learn different kinds of vegetables, meat, milk and how they work in Canada, for our kids

- Female Participant

One participant described health as her motivation for taking the program and described how her lack of knowledge about food in Canada had quickly began to impact her health:

For me, when I came here, my weight started, to gain weight and because I, health is priority so I decided really to know what is the nutritious food and where can I get those things and I'm not familiar with foods here and that's why I said, 'I really need to go for the nutrition class'.

- Filipina⁴ Participant

There were however, some participants who had limited interest in Canadian food and food preparation methods prior to the program and preferred to stick to traditional foods, despite challenges in doing so. The most frequently cited reason for taking the program, was because of their children. Prior to the program, many of the participants' children would ask for Canadian foods that they had tried at school, or in the community, such as pizza, but the parents we were often unaware of how to make these foods, sometimes leading them to buy a prepackaged version of the dish.

Because it's not our food so our children like it when people prepare it but I have no idea how to do it.

- Female Karen Participant

After the program, many participants reported changes in their attitudes, knowledge and behaviours with regards to Canadian food, their traditional foods, and how they are finding a balance between the two.

Sub-Theme 2: Changes in Attitudes About Canadian Food.

Although attitudes were already generally positive towards learning about Canadian foods, by the end of the program, participants' feelings towards Canadian food generally became more positive. Some participants described a lack of interest in eating Canadian foods prior to the

⁴Female participant from the Philippines

program, but then enjoyed the taste, simplicity and nutritious properties of the healthy Canadian recipes that were prepared in the program.

Yeah, because of the program I started doing the baking because I had no... because I've been here for almost 3 years and before I said 'it's ok, I'm fine not to use the oven and not to learn how to use that', however when I do the dishes, now I'm operating it, using it.

- Filipina Participant

I never liked Canadian food, honestly. But I think I try more Canadian food [after the program].

- Female Karen Participant

In the beginning I did not like it either [Canadian food], but now I try a few times and now I like it.

- Female Karen Participant

Yeah, and I think how you prepare your food is easier compared to our dishes so you don't really have to invest more time to learn this kind of dishes because it's really convenient and it's easier.

- Filipina Participant

It's so simple yet so so nutritious.

- Filipina Participant

Canadian way it's prepare like very simple but Filipino way, we prepare it more complicated.

- Filipina Participant

A settlement worker also explained during the nutrition program that often times at community events and programs, many newcomers would be reluctant to try the Canadian food that was being served, for example soup, but that now that they have tried preparing and eating some Canadian soups, the next time they see a similar food they will likely be less reluctant to try it.

One participant also commented that she was happy to now know how to prepare foods that were well-suited to the Canadian climate – such as soups and stews, that she felt were great recipes to make during the cold winter months.

Yes, especially we have a long cold weather here so it's really favourable if you know how to make soup.

- Filipina Participant

Many participants expressed an increased willingness to eat Canadian foods since the program, and some were also eager to learn additional Canadian recipes.

Have to learn more, want to learn more about Canadian Foods.

- Female Karen Participant

Yes, I want to learn about how to make a tuna sandwich because my husband said he came here once and he ate it and he liked it a lot. So when I came here for the program my husband told me one day you make me a tuna sandwich and I say we did not learn that.

- Female Karen Participant

If you do next time, invite me and if I want to learn tuna sandwich, spaghetti, potato, mushrooms and macaroni different kind of macaroni.

- Female Karen Participant

Potato roasted and also potato smashed. Yeah I think this would be so good to learn this... potatoes and also macaroni.

- Female Karen Participant

Attitudes about what 'Canadian foods' are changed from before participation in the program.

When asked what participants thought 'Canadian foods' were prior to the program, most described fast foods. As one Filipina participant described,

Burgers. Yeah literally. I think Canadian people eat burger.

- Filipina Participant

One participant did note that she observed Canadians eating a lot of ‘leaves’, which was new for her, stating that in the Philippines, most vegetables were consumed only after being cooked.

I used to say [about Canadians] they love to eat leaves!!

- Filipina Participant

Some participants did say however, that even though they enjoyed the Canadian recipes and knew they were healthy, they did not feel ‘full’ as they do when consuming rice.

Although all of them won’t make me full but it’s all healthy.

- Filipina Participant

Sub-Theme 3: Attitudes about Traditional Food.

Generally, preferences for and feelings about traditional food did not change for participants, and all participants reported still eating predominantly traditional diets after the program, but usually with some modifications. Throughout the program, participants described many ‘healthy’ and ‘unhealthy’ aspects of their traditional foods and the cooking methods used to prepare them, based on the subject matter of the day. For example, during the lesson about sugar, they discussed the common traditional dishes they eat that contain large amounts of sugar. Or, during the lesson about plant foods, they discussed the traditional vegetables that they eat, and that they miss from home.

Some participants realized that their traditional diets were quite healthy, either because of consuming a mostly plant-based diet, or because most dishes were traditionally made from scratch at home.

They're both healthy in their own way, for example, our traditional food also, is very healthy because it, we eat a lot of vegetables...

- Female Karen Participant

She's telling, in Syria they used to bring things to prepare everything at home so everything she has to prepare at home. When she moved here, she started to preparing everything nearly ready-made or precooked. She has a limited role in everything. But now she returned back for, after this course started to realized the importance to do everything by herself so she's telling, now she's doing the yogurt at home, the cheese at home, the pizza. Now she's doing most of things at home.

- Female Syrian Participant

Throughout the program and during the interviews, participants often identified foods, or common practices in their respective cultures that they now felt were not healthy, such as deep-frying, eating large quantities of sugary or salty foods and cooking with large amounts of butter.

Yeah it made me realize that I'm eating, not really healthy because what we said before, we really like to eat meat and we like to sauté everything using different oil using butter because they say butter makes it better so

- Filipina Participant

We Filipinos loves sweet foods.

- Filipina Participant

We have a sweet tooth and a salty tongue

- Filipina Participant

I think the main thing in the preparing the food, the frying. It's like deep frying.

- Filipina Participant

One point she's telling one point about the fat, or for her culture, butter number 1 on most of the recipes.

- Female Syrian Participant

Despite their desire to eat traditional food here in Canada, in some cases there were barriers to doing this. Many referred to their traditional dishes as ‘complicated’ and/or time consuming, and others described not enjoying these foods as much in Canada, due to lack of freshness or different taste compared to back home.

Anyways, Canadian way it's prepare like very simple but Filipino way, we prepare it more complicated.

- Filipina Participant

Yeah it's not fresh and I don't like the taste, especially if I prepare veggies with coconut milk because we really do it that way back home. I really don't like it, I cook it like, oh everybody's like testing it, like very very good. They feel like it's yummy but I don't really like it. It's like sweet.

- Filipina Participant

Sub-Theme 4: Changes in knowledge about Canadian Food and Food Environment

Prior to the program many participants were unfamiliar with many of the staple foods in Canada, as well as where food came from, where to best purchase it and how to prepare it. It can be difficult for newcomers to know if a Canadian produce item should be cooked, peeled, or just consumed as is. Moreover, it is very difficult for them to know which foods should be avoided or eaten minimally – such as processed meats. During one of the grocery store tours in the program, participants found it shocking that so many processed meats were available despite the fact that they are shown to have such negative health impacts. Prior to this, many trusted that if it was being sold in Canada, it must be ok to consume.

All participants reported an increase in knowledge about foods that were commonly available in Canada, such as fruits and vegetables, as well as dishes that are commonly consumed, like salads.

But to me, since after the program, I know how to make salad so I make vegetable salads a lot for my husband.

- Female Karen Participant

I think that it's good. We learn a lot. We, because we never knew how to make for example, like a smoothie, and fruit salads, so now we know.

- Female Karen Participant

I had been in Canada many years but didn't know how to make soup or salad but I learned here

- Filipina Participant

One participant also reported that she was happy that she now knew how to make foods that were suitable for Canada's cold winters.

Yes, especially we have a long cold weather here so it's really favourable if you know how to make soup

- Filipina Participant

Participants also gained knowledge about the food system, such as how and where to best purchase food in Canada and where foods come from. Some participants had previously been purchasing all of their food from specialty stores, but were very happy to learn that many of their traditional foods could be found at larger grocery stores for a fraction of the price. Others just felt they had a better understanding of the 'food process' in general.

Here don't know where the food is from – how it is produced – not like home where we know where it is from... fruit trees, fishing, vegetable markets... Now we know how to look at the label and make healthy food for our kids.

- Female Karen Participant

The thing is that newcomers...I think most of the newcomers just like us. We came to the new country, we did not know how to read, we don't familiar with the foods so since we attend so many program, included this program, so we know how to look at the food process.

- Female Karen Participant

Sub-Theme 5: Finding a Balance Between Canadian and Traditional Food.

Participants described how they managed to find a balance between eating both their traditional food and the Canadian food that they learned about in the program. This balance looked different for each participant, some eating more Canadian food than before the program and some eating the same (minimal) amount. The people eating more Canadian food described eating the healthy Canadian food that they had learned to prepare in the program, such as salads and fruits, whereas the participants who were still eating the same amount of traditional food, often described making these healthy Canadian foods for the children in the household, while the adults continued to eat their cultural foods.

Yes, I make a salad and I make a breakfast for my kids and for myself and the salad everybody enjoys that.

- Female Karen Participant

I still eat the same. But usually the change is usually breakfast we try to eat more Canadian food, we eat more Canadian food, the breakfast especially.

- Female Karen Participant

But to me, since after the program, I know how to make salad so I make vegetable salads a lot for my husband

- Female Karen Participant

The soup yeah just like a portion of that then you feel full and how to store that one also interesting so it's less my work my time.

- Filipina Participant

Less, less traditional food. Because now we make salad, like the vegetable salad.

- Filipina Participant

After the program, many parents discussed the simplicity of the Canadian recipes prepared in the program compared to their traditional dishes. They felt these new recipes were quick and easy options for their children's school lunches, but at home most still described eating their traditional foods for dinner. One Karen woman from Burma described her attitude towards her traditional food versus Canadian food and how that has affected the food that she prepares:

They're both healthy in their own way, for example, our traditional food also is healthy because it, we eat a lot of vegetables. Other thing is we need to cook it every day but this is, we do it [prepare Canadian food] for our kids because we pack for their lunches so they eat it for lunch time, but when they came home, we still eat our [traditional] foods.

- Female Karen Participant

...the recipe that she learned if she wants to do something fast and healthy, always back to the recipes that she learned [in the program], especially she was, she like the pasta. It was very fast and delicious and she like and she's telling, she like to make it.

- Female Syrian Participant

As stated earlier, participants often reflected on the less healthy aspects of their cultural food practices and many reported changes to these practices after the program. They often described watching the facilitator use only small amounts of sugar, salt and oil in the program recipes and realized that the dishes still tasted good despite this. Several participants stated that this realization resulted in changes to their preparation methods of traditional dishes, while often still eating primarily traditional foods.

And also the salt, because like I always said on the class that we have a salty tongue so we really love salty, now it's lower down [in our cooking] and we are used to it.

- Filipina Participant

She has motivation little by little because if she make dramatic change she will not find acceptance and she will not an expert in doing this. She's keeping on the change a little bit.

- Female Syrian Participant

Participants frequently reported modifying their food preparation practices, using less oil, butter and salt in their cooking.

“...she’s telling now she’s always thinking about cholesterol and she doesn’t like have high cholesterol. So she changed a lot of her recipes.”

- Female Syrian Participant

Participants from Burma and the Philippines often described eating rice for every meal, but were finding that the Canadian breakfast recipes learned in the program (oatmeal, smoothies, fruit salad), gave them some healthy choices that they could make more quickly in the morning when compared to the more traditional dishes that they had been preparing. Some also explained that they had become bored with eating rice at every meal and were happy to try something new.

Yes because you know when you wake up the morning, we always eat rice before we go somewhere, we go to school, we go somewhere. every morning, every morning and we get so bored of that and we don’t want to eat any more of it so we come in here so we can also prepare [Canadian food] and I like it and I eat it and also my kids also like it.

- Female Karen Participant

In general, participants maintained positive views of their traditional foods, and continued to eat them most often, while incorporating healthy foods into their diets that are commonly found in Canada and often making these foods for their children.

Sub-Theme 2.1: Changes in Attitudes About Nutrition.

Some participants began the program with some preexisting nutrition knowledge, which affected their attitudes about nutrition and its importance for health, and served as their motivation for taking the program. Participants discussed the importance of nutrition in relation to the aging process, maintaining a healthy weight as well as the general health of their children.

Because you know, we're aging. We really need to be healthy. Almonds yeah!

- Filipina Participant

Because it's all about food, especially if it's nutritious and healthy. Especially if the Phil, if somebody is married and she has some children to feed. Yeah. They would be very eager to have this program.

- Filipina Participant

For me, when I came here, my weight started, to gain weight and because I, health is priority so I decided really to know what is the nutritious food and where can I get those things and I'm not, I'm not familiar with foods here and that's why I said, I really need to go for the nutrition class.

- Filipina Participant

For some, nutrition was already a priority, but for others, thinking about the relationship between food and health was a new concept. One participant described a change in attitude about the importance of nutrition in general. She said:

...for us [in Karen culture] we never mention our food soooo we just take whatever we want and then we taste it so we don't know how much there is fat, how much the...whatever it's salt or oil we just check whatever we have to taste so...we never make sure it's healthy or not.

- Female Karen Participant

Interesting to note, is that three participants discussed how socioeconomic class in their home countries impacted their food choices. Two Filipino participants stated that only rich people ate fresh fruit and vegetables in their countries, due to the high costs, especially in the cities.

Having the veggies in our country is really just for rich people who can really afford buying those. In Canada we really can afford those things

- Filipina Participant

Yeah I want to remove the stigma that when you eat good food and healthy food, plus they would say, because it's expensive, they would say, "oh because you can afford it, you too acquire this food you can afford it but come on, this is healthy eating and that's why I would take advantage or those harvest, Winnipeg Harvest, because they are providing fresh vegetables right.

- Filipina Participant

Whereas, a Karen participant mentioned that, in Burma, only rich people ate bread. They had however, begun to eat bread in Canada.

*We never actually eat bread back home so we just actually eat it when we come to Canada....
Yes, people who eat bread in our country, is people who rich but like people like us cannot afford
to buy bread.*

- Female Karen Participant

Subtheme 2.2: General Healthy Eating.

Participants discussed learning the importance of various healthy eating practices, such as eating a variety of foods, the importance of fruits and vegetables, limiting intake of sugar, as well as the benefits of fibre and what foods were good sources of it.

As one participant stated:

...we need the variety because we are focus on just rice and meat, that's all, for the 3 times a day. Now, as we've learned, we need a variety of food, like vegetable and fruits.

- Filipina Participant

Some participants also discussed their meat choices prior to the program consisting mainly of fatty red meats, pork belly for example, and these meats had made up a large proportion of their diets due to little focus on vegetable consumption. After the program, some participants were choosing leaner meat options, such as extra lean ground beef, as well as eating more vegetables with their rice and meat, as mentioned above.

Sugar was also one of the most frequently-mentioned areas of behavior change for the families of participants. Many discussed having a better understanding of the risks of high sugar consumption, especially for children, and described the many changes that they had made, such as replacing sugar-sweetened beverages with the fruit smoothie recipe learned in the program, and reading beverage packages in order to find 100% juice options.

She's telling that there is lots of change in her shopping way. First of all for the juice. Now she's looking for natural juice. Trying to avoid, she doesn't buy now ...just flavour, forgot the name...

- Female Syrian Participant

The other point which she's telling is really the most favourite thing for her is about the sugar content and when you talked about juice and the daily requirement of the sugar, especially about the kids. She asked you especially about the kids and the requirement, the daily requirement of sugar for them, so she's happy with this as she knew something, now she knows something she doesn't know before.

- Female Syrian Participant

She's telling, sure there is a lot change. She says that she knows that sugar is not so good but she wasn't do something regarding this but now she's started to reduce sugar and to calculate for the kids and for herself.

- Female Syrian Participant

Many parents described understanding that even 100% juice was not healthy in large quantities, but their children liked juice so much that they did not feel they could eliminate it from their daily diet.

Some participants described their newly acquired knowledge about whole grains, the importance of fibre and how they have shared this and other information from the program with their families. As one Karen participant stated:

...usually we eat white bread and then I talked to my families that the benefit of the whole bread, all this, and look at the label when we go shopping.

- Female Karen Participant

She went on to explain that back home in Burma, only the rich eat bread. This was a luxury only afforded to them once they were living in Canada.

Lastly, some participants acquired new knowledge with regards to food safety practices, such as handling of raw meat and thawing of frozen food. Unsafe meat handling practices had been observed and corrected during the program, for which one participant expressed

appreciation for. For many newcomers frozen food was a new concept, having been accustomed mainly to fresh food in their home countries. Learning of safe thawing practices specifically were mentioned during the interviews.

It's the wrong way I did, I used to do the wrong way and when I attend this and I realize that I should not thaw the meat a day on the counter like that and there is a certain temperature that they need to keep them.

- Filipina Participant

Sub-theme 2.3: Cooking from Scratch.

Many completed the program with a deeper understanding and greater value placed on the importance of home cooked meals and the risks associated with consuming large amounts of processed food. This was knowledge that participants were able to demonstrate early on in the program, as well as during the grocery store tour. When discussing frozen, ready-made dinners, one of the settlement workers (also a newcomer) described them as “quick to make, quick to die”.

Many participants had little exposure to packaged foods before arriving in Canada, or came from places where they were less readily available. Feelings about these foods were mixed. Some had adopted these foods into their diets in Canada over time, but others found the concept of frozen and canned foods repulsive. Regardless of their feelings towards these foods prior to the program, all reported a better understanding of how to choose packaged foods that are healthier than other alternatives. Some also reported increased knowledge about frozen food and its nutrient value, whereas before they had assumed it was unhealthy. Referring to frozen fruits and vegetables as discussed in the program, one participant stated:

Before I heard that frozen was not okay, but now when we join the program we know, and we are surprised that, 'oh, frozen is still good.

- Filipina Participant

The Syrian participants in particular, described the common practices of making everything from scratch back in Syria. Frequent examples given were fermented bread, yogurt and cheese. Here in Canada, however, they had begun to eat more processed and ready-made foods, due to time constraints and the frequent availability of ready-made foods. After the program, one mother described (through a translator) her return to her previous food preparation practices from home:

In Syria, they used to bring things to prepare everything at home....When she moved here, she started to preparing everything nearly ready-made or pre-cooked. She has limited role in everything. But now she returned back for, after the course started to realize the importance to do everything by herself so she's telling, now she's doing the yogurt at home, the cheese at home, the pizza. Now she's doing most of things at home.

- Female Syrian Participant

Another Syrian mother described her purchasing of prepared baby food prior to the program and how she has now found ways to make baby food from the recipes that they learned in the program:

...she started prepare for the young one, food, before she buy food, ready made baby food for him. She learn how to use fruits with yogurt and to make for him something which is similar so she was happy with that.

- Female Syrian Participant

Knowledge gained in the program about other processed foods changed the views of participants about which foods are healthy for their children. As one mother explained through a translator:

Before she said she pay a lot for cornflakes. She believe that it's a very nutritional food and very important for the kids, but when she ask and she know that there must be some modification.

- Female Syrian Participant

Sub-theme 2.4: Grocery Shopping Practices.

The most frequently self-identified behavior changes expressed by participants were changes to their grocery shopping practices – reported by 100% of participants interviewed. One of the settlement workers who was interviewed, who is also a newcomer herself, described the common perception that if a food is produced and available in Canada, then it must be ok to consume. She said this often leads newcomers in her community not to consider the nutritional value of a food before purchasing it. After the program, she reported that participants, herself included, viewed food selection differently and began to read labels and food packaging prior to purchasing a food.

They're doing that [reading labels] and also myself. I start to do that, since I know. Before I just picked, po po po, whatever delicious, for our kids, no matter what, just eat because we thought that the food that you produce... 'they make it, why not?'.

- Settlement Worker

Ten of the thirteen interviewed participants also reported frequently reading labels since the program in order to choose the healthier options, and some explained that they taught their family members to do the same. They usually reported looking at sugar content, trans fat, sodium and fibre.

Learned to look at labels; before I never looked, like at the expiry date. Now I look at the label to see if it is good for my kids

- Filipina Participant

Before we went shopping and whenever we went we didn't know how to look at, but now we know to look at how much iron. We also look at sugar, fibre, fat. The most important part that we did learn, is how to call trans fat. That's it, she never knew that before, that was not good, but now this kind of trans fat have a lot I did not buy it.

- Female Karen Participant

Yes, uh, now I start to look at the label or how many percent of sugar...

- Female Karen Participant

Other behaviour changes that were described include planning ahead for food purchases, bulk buying, and alternatively, buying less food at one time for some participants.

The other things that I learn is I try, I feel like I spend a little bit less money because I just a big packet, and I did not do before, I usually, so much a little bit cheaper

- Female Karen Participant

Yeah we more, lessen because as what you said because before I am buying sounds like good for one month and now I am buying things we know to cook for this week. Because mostly we were going for grocery every 2 weeks

- Filipina Participant

Theme 3: Food Security

Participants reported varying impacts on two of the four food security dimensions: access (economic) and utilization. Not surprisingly, the program did not affect availability of food, nor stability of the other pillars.

Sub-theme 3.1: Economic Access.

Some participants reported that the program effected the amount of money they were spending on food – some reported improved economic access to food, some felt they were spending more on groceries, whereas others found it difficult to say, due to a rise in food prices since completing the program.

The participants who were spending less on groceries reported that they had either changed their grocery shopping practices and/or were making more food from scratch.

Participants changed their grocery shopping practices by planning food purchases differently – either by planning ahead, buying more food in bulk and shopping less often; or by buying staple foods ahead of time and grocery shopping more often for fresh foods.

. The other things that I learn is I try, I feel like I spend a little bit less money because I just a big packet, and I did not do before, I usually, so much a little bit cheaper...

- Female Karen Participant

Some participants – primarily Syrian ones – reported shopping primarily at specialty halal stores since arriving in Canada. During the program they began shopping at more affordable stores and this helped them to stretch out their limited food budgets.

Some Syrian participants also reported that after moving to Canada, they had begun to buy more convenience and ready-made food, rather than making foods like cheese, yogurt and baby food from scratch, as they had done in their home countries. After the program, they reverted back to preparing food at home, which saved them money.

Before she was here [at the program], she used ready made foods most of the times. Now she started to prepare most of things at home so she spend less money. Same time she feels happy, as she feels she gives her kids healthier food.

- Female Syrian participant

She's telling, sure it affects their spending of money. Before she was here, she was used ready made foods most of the times. Now she started to prepare most of things at home so she spend less money. Same time she feels happy, as she feels she gives her kids healthier food.

- Female Syrian participant

Lastly, two Filipina participants began buying food based on nutritional quality (determined by reading packages/labels) rather than brand name, as they had done prior to attending the program. They reported that this has helped them to save money as well.

So what we learned there is applied also to our day to day preparation...and make save for us. Because before when we buy a food, honestly, more on brand but when I came to the class, I learned that even though no brand name the best to look at it is more on the table stated there, listed all.. so I am very much aware about it.

- Filipina participant

I think yeah a little because before I used to look at the brand but usually the more popular brand is like more expensive even if just the cents it counts a lot if you will buy a lot so even if its not like familiar, the brand, and when you look at the nutrition facts I would go for the less familiar brand so it saves like a little, a little by little.

- Filipina participant

The participants who reported spending more money on food after the program either referred to fruits and vegetables as being expensive, or to the fact that they were eating more Canadian food (recipes from the program) and that this food was more expensive when compared to their traditional food.

I think vegetables are more expensive than meat so that will add to expense.

- ⁵Filipino Participant

Sub-theme 3.2: Utilization of Common Foods.

In order to be food secure, one must be able to make use of the foods that are found in the food supply. For many newcomers, knowing how to prepare the foods commonly found in Canada can make finding healthy, affordable food that much more difficult.

⁵ Male participant from the Philippines

Knowledge and utilization of available staple foods in the Canadian food environment increased for 100% of participants. For some, this resulted in buying and using more commonly available whole foods, rather than spending more money buying processed alternatives, like pizza and baby food.

“She started prepare for the young one, food, before she buy food, ready made baby food for him. She learn how to use fruits with yogurt and to make for him something which is similar so she was happy with that.”

- Female Syrian Participant

For others, it resulted in using slightly fewer traditional foods, but replacing these foods with healthy Canadian alternatives that were acceptable to their friends, family, and most importantly to them – their children.

Yes, I make a salad and I make a breakfast for my kids and for myself and the salad everybody enjoys that.

- Female Karen Participant

But to me, since after the program, I know how to make salad so I make vegetable salads a lot for my husband

- Female Karen Participant

Because I observe that people really bring fruits in their packed meals like that and the way that we prepare fruit salad is different and I didn't realize that you could mix the citrus like the orange things and actually I made that one with our potluck...I made like a big fruit salad, and it's empty, they like it.

- Filipina Participant

I think that it's good. We learn a lot. We, because we never knew how to make for example, like a smoothie, and fruit salads, so now we know...I came home and I use recipes like a smoothie and the other thing, like a, we make a, just like a... yeah, like a pita pizza.... yes, all my children love it.

- Female Karen Participant

[We learned] How to make nutritious food when we could not get food from back home.

- Female Participant

I had been in Canada many years but didn't know how to make soup or salad but I learned here.

- Female Participant

Theme 4: Other Impacts

Apart from the more predictable impacts described above, many other benefits of the program were noted by participants, volunteers, settlement workers, and the researcher, including cross-cultural connections, enhanced social networks, and benefits to the wider community, such as friends and family.

Sub-theme 4.1: Cross-Cultural Connections.

The program provided a platform for participants to interact with both Canadian-born community members (facilitator, volunteers), as well as other newcomers from various backgrounds. It was observed and noted by others that this was an opportunity to learn about Canadian culture, helping people to feel more comfortable in their new surroundings.

For me I enjoy the program, especially I met more friends, knowing each other, you as our teacher in cooking, you are very patient to us and then meet other country too, people, even though we have different language but still happy during that time.

- Filipina Participant

Learning about Canadian foods and recipes also gave participants a tool for building cross-cultural connections outside of the program, both with classmates as well as new Canadian friends. One participant had described being invited to the house of their new Canadian friends

and not knowing what type of food to prepare, feeling that their traditional food had not suited the occasion.

Because I observe that people really bring fruits in their packed meals like that and the way that we prepare fruit salad is different and I didn't realize that you could mix the citrus like the orange things and actually I made that one with our potluck [at school]. I made like a big fruit salad, and it's empty, they like it.

- Filipina Participant

I thought that this kind of program, it would benefit a lot because sometimes we also have a thanksgiving also with our Canadian friends we we come here so if we know how to make all those things we prepare some for them but because we didn't know so we just prepare our traditional foods

- Female Karen Participant

It was also observed that newcomers who had been in Canada longer than others took it upon themselves to make the newer arrivals feel welcome and that their food traditions and skills were valued. On multiple occasions participants from different backgrounds compared 'food words' in mother tongues and when newly-arrived Syrian women began attending the program, other participants were teaching them the English words for the foods being prepared. Hand gestures were often used to communicate across cultures as well, if the program interpreter was not immediately present.

Sometimes it's not only just the language. Sometimes I have a hard time understanding right, some, something but it's not about that. Communication can be in a different way. That's why the food is an important way to communicate with different people.

- Settlement Worker

Sub-theme 4.2: Enhanced Social Networks.

Some participants reported feeling isolated when they first arrived in Canada, so for them, one of the greatest benefits of the program was that it gave them an opportunity to meet

other community members, including other newcomers as well as Canadian-born people, and develop friendships that would last after the program was over.

*Not only the program for food but other concern...connect...If you meet friends, not only for that session but you become friends until now and forever.
That's it.*

- Filipina Participant

Many of the participants brought this point up repeatedly during and after the program and for some, this was also the reason for joining the program in the first place. One newly-arrived Syrian participant mentioned that it was the first program of any kind that she had joined since arriving in Canada. Another participant said, that she joined because it was a way of getting out of the house.

*What interested me to join the program is first to meet new people like a change of environment.
I'm only confined to the house...*

- Filipina Participant

Discussion

The *Growing Roots* food and nutrition program had positive impacts on participants' food and nutrition knowledge specific to the Canadian context as well as meaningful impacts on nutrition behaviours. There were also modest impacts on food security by way of stretching their food budget and increasing their abilities to use staple foods common to the Canadian food system. These impacts facilitated healthy adaptation to the Canadian foodscape, while still maintaining healthy food traditions from their home countries. Participants were able to find a balance between traditional and Canadian foods that helped to satisfy their children's desire for Canadian food, as well as their own preferences for mainly traditional foods. Participants were

able to build upon their own food and nutrition knowledge which, in many cases, included advanced food skills, and apply these to new ways of shopping for food and cooking for their families in Canada. Participants developed a new appreciation for home-cooked meals, leading them to purchase fewer processed and packaged foods, if they had begun to do so in Canada – an outcome that, in itself, has the potential for long-term health benefits for the entire family. These impacts to food and nutrition knowledge and practices have the potential to mitigate unhealthy acculturation to the typical Canadian diet as well as the preservation of valuable food traditions across generations. With the rising rates of childhood obesity and type 2 diabetes in Canada (Kimberly Elmslie, 2012), future programs should include newcomer children so that they can learn directly about the value of their traditional foods, as well as learn the food skills necessary to eat healthily in the Canadian food landscape, where they are bombarded with processed and convenience foods.

The *Growing Roots* newcomer nutrition program also provided additional benefits to individuals, families and communities, showing potential to be a useful community-building tool, as it brings people from different cultural groups together and strengthens the social safety net by introducing newcomers to a variety of supports in the community and sparking interest in other food-related community programs. These impacts are especially important because they highlight the impacts that take place at the community level, emphasizing the community-development potential of food and nutrition programs for newcomers, if conducted in culturally-relevant and inclusive ways. This is consistent with other research that has found a link between greater social support and health and well-being (Cohen, 2004; Lee & Yoon, 2011). These benefits, while often not anticipated when developing such programs, should not be overlooked

as important outcomes because of their potential longer-term impacts to the health and wellness of the participants, as well as the community.

This research has implications for the organizations and health professionals aiming to provide more supports for newcomers arriving in Canada, by providing an evidence-base for the potential impacts of food and nutrition programs as well as an effective model for newcomer program development. In order to provide further guidance on newcomer food and nutrition program development, some key program features will be highlighted.

Important Program Features

It is important to note that the outcomes discussed above were achieved by focusing on several key areas during program development and implementation. Some of these were discussed in previous literature as important aspects of newcomer health promotion, such as cultural considerations, accessibility and support, empowerment and self-efficacy and community consultation (Anderson et al., 2015b; Hyman & Guruge, 2002). This research confirmed the importance of these features but also highlighted some other important features unique to the development of nutrition programs, including a focus on the importance of eating whole foods rather than highly-processed foods and the maintenance of cultural food traditions.

This program focused on building awareness of the benefits of eating whole foods and foods prepared in the home, rather than processed and convenience foods, as well as the importance of plant-based foods. This strategy did not include discussion of the ‘4 food groups’, appropriate serving sizes, number of servings per day, or caloric intake, which may be typical for nutrition programs in Canada and other Western countries.

This program was also developed in close consultation with the newcomer community and by building strong relationships with newcomer settlement agencies. These partnerships

ensured that the program was designed to meet the needs of the community and that the newcomer community members felt welcome and valued in the program. The program was made as accessible as possible by offering interpreters and translated materials, childminding, and holding the program in the North End neighbourhood where many newcomers live.

The information was presented to participants in an empowering context, focusing on self-efficacy and encouraging preservation of healthy food traditions, rather than generating negative feelings towards them. Participants' ways of knowing about food were respected and valued throughout the program, knowing that these ways of knowing are often rooted in valuable traditional knowledge about the relationship between food and health and also greatly influence food choices (Ristovski-slijepcevic et al., 2008). The program focused on increasing participants' food and nutrition knowledge, relevant to their new food environment, in order for them to feel confident choosing and preparing healthy foods in the Canadian context. Participants were given the tools to decide for themselves and their families which foods are healthy for them, rather than being informed which foods they should be eating in Canada. This approach likely contributed to the maintenance of healthy food traditions that the participants reported, as well as a strong desire to continue to eat these foods, which is contrary to what has been found in other programs where following Canada's Food Guide is a focus of the program (Anderson et al., 2015b). Finding a balance between one's own culture and that of your host country has been shown in other research to be most conducive to successful resettlement (Beiser, 2009).

As past research has documented, failure to incorporate appropriate cultural considerations can lead to negative perceptions of healthy food traditions (Anderson et al., 2015b), which could, in the long-term, contribute to dietary acculturation. In order to avoid these negative outcomes, it is important that newcomer nutrition programs be developed based on the

best evidence available. It is equally important for funding agencies, including Immigrant, Refugee and Citizenship Canada, to recognize the importance of culturally-relevant and appropriate programming when deciding how to distribute funds, as well as to recognize the potential positive impacts that these programs can have on long-term integration.

Conclusion

The findings of this research have important implications for the development of food and nutrition programs for the rapidly growing newcomer population in Canada. The Canadian government has committed to welcoming 300,000 newcomers in 2017, including 25,000 refugees – double than in recent years (Government of Canada, 2017). With more and more newcomers arriving each month, some are settling in communities with low levels of immigration, and therefore, limited settlement supports (Martin, 2014). Even larger centers are struggling to meet the demand for such services, especially ones to support newcomers in navigating their new food environment (Henderson et al., 2017). Evidence-based health promotion strategies are increasingly important in order to mitigate a rise in chronic disease rates, such as diabetes, and the associated costs on our already over-burdened health care system (Kimberly Elmslie, 2012). The newcomer nutrition program curriculum associated with this study will be circulated to nutrition professionals, settlement workers and other community organizations in order to increase their capacity to provide such programming, without being required to use their limited resources to develop and evaluate a new program. Rather, they will be able to use a program that has already been thoroughly evaluated and adapt it, as needed, for their newcomer clients.

Further research should be conducted to e,mitigating factors involved. Nutrition programs have the potential to help mitigate the negative dietary transition that is undergone by many newcomers to Canada, but there are many other initiatives that could also help to mitigate this, such as strategies to increase local production of world foods, better employment and language supports to reduce poverty rates, as well as government policy that prioritizes health promotion and social support programs for newcomers.

Further research is also needed to evaluate the long-term health and social impacts of newcomer food and nutrition programming, and to determine the cost-benefit of such programs to promote government investment in them, in order to decrease healthcare spending on diet-related chronic disease.

Ethics

Ethical approval for this study was granted by the University of Manitoba Joint Human Research Ethics Board.

CHAPTER 4: THE NEWCOMER FOOD AND NUTRITION NETWORK - INCREASING COLLABORATION TO COMBAT NEWCOMER FOOD ISSUES

Abstract

Many newcomers to Canada struggle with food insecurity and the health impacts of dietary acculturation, including increased risk for chronic disease. Few evidence-based programs or resources exist to support newcomers with their food challenges and there are structural issues including the number of supports available, as well as newcomers' access to supports to help them overcome these issues. Previous research in Winnipeg has found that there is little collaboration between the few agencies working with newcomers on food issues, and the agencies are often under-staffed and under-resourced. This action research project sought to enhance communication and collaboration by developing, implementing and evaluating a 'community of practice' – the Newcomer Food and Nutrition Network. This project was conducted in partnership with Food Matters Manitoba. Qualitative action research methods were used for data collection, including focus groups, observation and field notes. An online survey was also administered. Members reported greater collaboration, resource-sharing, knowledge-sharing and communication between agencies. By eliminating structural barriers to accessing food security and nutrition supports, the Network has the potential to have a positive impact on the health of newcomers in Winnipeg.

Introduction

Newcomers to Canada face many barriers to food security and nutritional health when they arrive in Canada and other Western host countries. People arriving from other countries also often experience difficulty learning the language, finding employment, and accessing the health and social services there to help them navigate these difficulties, which contribute to their difficulties with food (Aycan & Berry, 1996; Dlamini et al., 2012; Hynie, Crooks, & Barragan, 2011; Merry, Gagnon, Kalim, & Bouris, 2011). Food insecurity, increased exposure to unhealthy processed and convenience foods, social pressures and lack of access to traditional foods can all contribute to an eventual shift towards a more ‘Western’ diet (Delisle, 2010; Popovic-Lipovac & Strasser, 2015; Sanou et al., 2014a). This process is often referred to as dietary acculturation (Hassan & Abou, 2012; Regev-Tobias et al., 2012; Sanou et al., 2014a; Varghese & Moore-Orr, 2002). For many, this phenomenon results in higher intakes of sugar, fat and salt, lower fruit and vegetable intake (Delisle, 2010; Popovic-Lipovac & Strasser, 2015; Sanou et al., 2014a) as well as implications for maintenance of cultural identity (D’Sylva & Beagan, 2011; Laroche, Kim, & Tomiuk, 1999). This shift away from traditional dietary practices has been associated with increased risk for chronic disease, such as type 2 diabetes and cardiovascular disease (Gilbert & Khokhar, 2008; Popovic-Lipovac & Strasser, 2015; Sanou et al., 2014a)

Winnipeg, Manitoba has been experiencing an influx of immigrants and refugees over recent years (Statistics Canada, 2013), especially to inner city areas of the city (Social Planning Council, 2011) where rates of food insecurity are high and accessing healthy food can be difficult even for Canadian-born residents (Malabar & Grant, 2010). These issues can become conflated, for newcomers due to the limited availability of their traditional foods, transportation difficulties, and lack of knowledge about the Canadian food system as a whole (Henderson et al., 2017). A

study conducted in 2014 uncovered a lack of culturally-relevant programs and supports related to food and food security for new arrivals to Winnipeg (Henderson et al., 2017). Specialty food stores selling traditional foods were highly concentrated in the downtown area, there were few food security programs tailored for newcomers and there was only one nutrition program for newcomers with an ever-growing waiting list of nearly 200 people (Henderson et al., 2017). In summary, Winnipeg was found to be lagging behind in social supports for newcomers experiencing food insecurity, leaving families with difficulty finding traditional foods and finding assistance with learning to navigate their new food environment in Canada (Adekunle et al., 2015; Henderson et al., 2017; NEEDS, 2009).

The 2014 study also found that community workers and organizations working in the relevant sectors (doing food and nutrition work) were working in isolation, were under-resourced and unaware of other newcomer food security and nutrition programs in the community, revealing that there are also structural barriers within the sectors themselves that impede access to services, such as lack of communication and collaboration between agencies, and limited human and financial resources to meet demands for programming (Henderson et al., 2017; Simich et al., 2005b). For this reason, Food Matters Manitoba, a local non-profit organization, and the University of Manitoba developed this community-based action research project to establish a 'community of practice' of organizations working on newcomer food and nutrition issues and document the development process of such a network. The project titled: *Growing Roots: An Action Research Project to Build Newcomer Food Security in Winnipeg's North End* included the development, implementation and evaluation of the Newcomer Food and Nutrition Network. It was anticipated that the Newcomer Food and Nutrition Network would facilitate collaboration between community workers and agencies resulting in improved collaboration through the formation of new

relationships and partnerships. Stakeholders were heavily involved in the development and evaluation of the network through the action research model.

Communities of Practice

The community of practice concept informed the establishment of the Newcomer Food and Nutrition Network. With a focus on social interaction, knowledge-sharing, knowledge-creation and identity-building (Roger & Halas, 2012), this model has been used in other disciplines to increase research capacity, enhance interdisciplinary collaboration and to improve patient care in hospital settings (Dijkmans-hadley, Bonney, & Barnett, 2015; Pimentel, Hirshon, Jr, & Browne, 2012; Roger & Halas, 2012). Similarly, this model should increase collaboration in the Winnipeg newcomer food security and nutrition realms. By bringing community organizations together who are doing similar work, the hope was to eliminate some of the structural barriers that impede access to food security and nutrition supports for newcomers in Winnipeg.

Study Significance

The development and evaluation of the Newcomer Food and Nutrition Network is needed (Henderson et al., 2017) in order facilitate collaboration between the many community workers and organizations that are becoming increasingly concerned for the nutritional health and wellbeing of their newcomer clients. A great deal of research has shown that the health of newcomers to Canada diminishes over time, in large part because of dietary changes leading to consumption of a more 'Western' diet (Regev-Tobias et al., 2012; Sanou et al., 2014b; Varghese & Moore-Orr, 2002). As mentioned previously, these dietary changes are due to many factors, including food insecurity, social pressures to conform to majority culture and difficulty accessing traditional foods (Gilbert & Khokhar, 2008; Henderson et al., 2017; Popovic-Lipovac & Strasser, 2015; Sanou et al., 2014a). In often only a few short years, newcomers find themselves at greater

risk of becoming obese and/or developing type 2 diabetes, hypertension and cardiovascular disease (Gilbert & Khokhar, 2008; Popovic-Lipovac & Strasser, 2015; Regev-Tobias et al., 2012).

It is necessary to put into place the appropriate supports to help immigrants and refugees adjust their eating patterns in a healthy way and to access sufficient healthy food to meet their needs. In order to do this effectively, organizations must work together to develop programs, resources and to conduct research that contributes to this end. To our knowledge, no such network exists in Canada, therefore this is an opportunity to not only increase supports for newcomers in Winnipeg, but to lay the foundation for the creation of other similar networks around the country.

Research Questions

1. What are the key elements of a sustainable newcomer food security network?
2. Does participation in the Newcomer Food and Nutrition Network increase the capacity of community organizations to positively influence food security for newcomers?

Establishment of the Newcomer Food and Nutrition Network

The Network was established using an action research framework that included community consultation, and then initiative development, implementation and evaluation. See Figure 3. Newcomer Food and Nutrition Network action research framework for an overview of the process.

Planning Stage

Prior to the establishment of the network, a scan was conducted to determine if similar networks were already in existence in Canada or the United States – none were found. Networks in other fields of practice, including general nutrition practice and qualitative research,

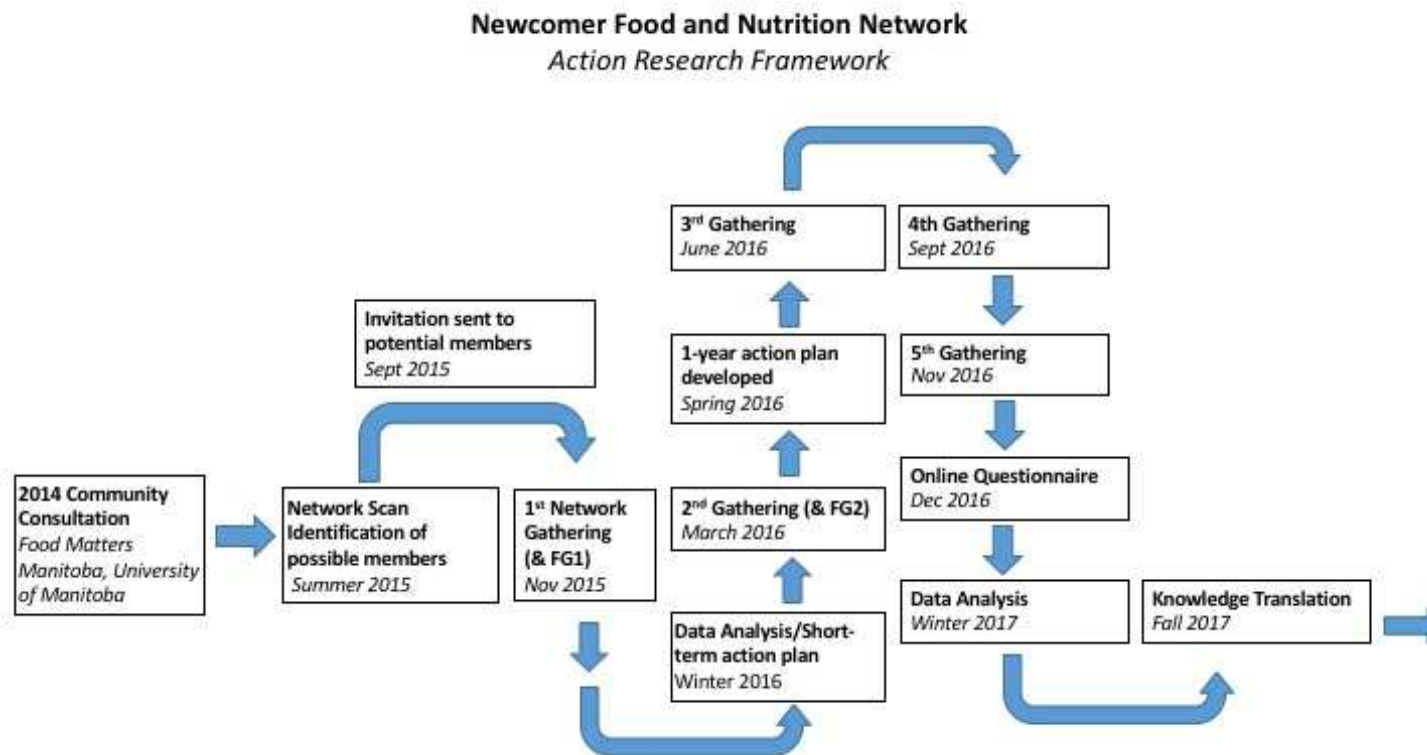


Figure 3. Newcomer Food and Nutrition Network action research framework

were also examined in order to get a sense of what types of networks existed, what type of network would be best-suited to tackle newcomer food issues and how they were developed.

The next steps involved meeting with community agencies to begin determining who should be invited to be part of the network. Meetings were conducted with non-profit organizations as well as the regional health authority and other government agencies, who contributed to a list of potential network members. An internet scan was simultaneously conducted for potential members.

Member Recruitment

Identification and purposive recruitment of Network members took place from Summer 2015 to Fall 2016 and was done through email, phone and face-to-face meetings with government and community workers who:

- were working with the newcomer population, OR
- were doing food and nutrition security work that they wish to expand to the newcomer population (ie. nutrition education, community gardening, cooking classes, etc.)

Network Initiation

The Gatherings. The Network was established through the facilitation of a series of 5 gatherings over the course of one year. Each gathering was facilitated by the researcher, who was also the Newcomer Program Coordinator at Food Matters Manitoba. The gatherings included discussions about local newcomer food issues, presentations from members and a networking lunch. Gatherings lasted approximately 2.5 hours and took place at various Network member facilities across Winnipeg. Lunch was prepared by various local cooks, including newcomers. Prior to the first gathering, Food Matters Manitoba and the University of Manitoba researchers

developed a vision for the Network to be presented to the members at the first gathering. The members unanimously adopted the vision:

That all newcomers in Winnipeg have access to sufficient healthy traditional and Canadian foods, in order to live a healthy, happy life in Canada.

The first two gatherings, which took place at the Immigrant and Refugee Community Organization of Manitoba and Knox Centre Winnipeg, were conducted in order to engage members in the establishment of Network priorities and activities. After ice breakers and presentations from the facilitator and members about their work, focus groups were conducted to gather data from members about what they desired the Network to do.

Data Collection

For the focus groups, participants were either assigned to small groups based on work area or were able to self-select a pre-determined small group based on area of interest. The groups were assigned discussion questions (see Tables 4, 5, and 9), and notes from the discussions were manually recorded by four undergraduate research assistants. The research assistants also helped to facilitate the small group discussions, as needed. Large group discussions were then facilitated by the researcher to further establish key ideas and gain input from the entire membership.

All focus group participants were asked to sign consent forms prior to the commencement of the focus group and informed that their statements would be kept confidential by the researcher but that confidentiality by other focus group attendees could not be guaranteed.

Focus Group 1 (FG1)

For the first focus group, the concentration was on building identity, and social interaction between members. Twenty-eight attendees were present. Members were assigned to five small

groups based on their predominant area of work, for example community gardening, newcomer nutrition education, or general community development. After opening remarks and a brief presentation from the researcher about newcomer food issues and why the network was being established, each group was given cards containing the same instructions and discussion questions. See Table 5. Activity 1 – Brainstorming activity.

Table 5. Activity 1 – Brainstorming activity

1. Write your name, organization info on cards
2. What work do you do that is relevant to this network? (Share in small groups)
3. Brainstorm possible areas for collaboration: <ul style="list-style-type: none"> a. What do you have to offer? b. What are some small gaps that could be filled by collaboration with other organizations/people? c. How can we work together so that we can... <ul style="list-style-type: none"> • reach more people? • have a greater impact? • be more efficient in our work

For the second activity during FG1 group, the small groups were given another set of cards containing discussion questions (See Table 6. Activity 2 - Defining network activities), as well as some ‘suggested network activities’ to aid them in the brainstorming process about what the Network would actually *do*. Some examples given were: professional development opportunities, annual conferences, Facebook page, sub-groups within the Network, etc. The purpose of this activity was to get the groups to identify specific activities/projects that the Network would collaborate on in order to work towards the vision.

Table 6. Activity 2 - Defining network activities

1. Look over possible network activities/resources. What are some other ideas?
2. Brainstorm as a group <ol style="list-style-type: none">What should our network activities be?What kinds of things would make it easier to collaborate with each other?Should we have an online forum for sharing ideas/resources?Other ideas??

A large group discussion was then facilitated by the researcher in order to compile all the ideas from the small groups into a master list of potential Network activities. This list was then used to complete a ‘dotmocracy’ during the lunch break, where each participant was given three stickers and instructed to place their stickers beside the possible network activities on the master list that were most important to them.

Data Analysis

The data from FG1 included the notes from the small group discussions, field notes, as well as the master list of potential network activities that was prioritized by members during the dotmocracy activity. The researcher calculated the top-priority items for members from the master list and these became the first Network activities to be completed (see Table 7: Possible network activities in order of priority)

Table 7: Possible network activities in order of priority

Possible Network Activities	Number of Votes
Contact list including programs offered (for workers and newcomers)	11
Bring gardening and cooking classes together	7
Facebook page	6
List of funding opportunities	5
Action Plan	4
Training nutrition educators to teach newcomers with little English	4
Gardening plot database	4
Subgroup for land acquisition	4
Training for community members	4
Nutrition Education Subgroup	2
Best Practice Portal	2
Interpretation Services	2
Gardening Workshops/Info sessions	1
Way to capture collective community impact	1
Gardening subgroup	1
Blog	0

The notes from the small group discussions, as well as the master list of possible activities were then coded using a bottom-up approach to thematic analysis in order to examine what the overarching priorities of the network would be (see Table 8: Themes and subthemes for top Network priorities)

FGI Results

Table 8: Themes and subthemes for top Network priorities

Themes	Sub-themes
1. Resource Sharing	- Need a forum on which to share resources/best practices
2. Capacity-Building	- Greater capacity to teach nutrition education to newcomers - Need to increase access to garden space for newcomers
3. Communication	- Greater communication between members
4. Collaboration	- Enhanced collaboration with other members on projects - Enhanced external collaboration/partnerships

Resource Sharing

Many of the members expressed that resource sharing should be a high priority for the Network. They wanted to receive and share information about funding opportunities, best practices, nutrition education materials, translation services and more. The desire for increased sharing of resources often stemmed from lack of human and financial resources within member organizations.

Capacity Building

Due to lack of human and financial resources in the sector, capacity-building was seen as an important and necessary step towards achieving some of the other priorities, such as increasing access to nutrition education for newcomers, and developing new programs that encompass both growing and preparing healthy food in Canada. Few Dietitians and Community Nutritionists were working with newcomer groups at the time, and many were working part-time positions. Training more nutrition educators to teach nutrition education to newcomers was seen as one possible way to increase access to this education and decrease the size of existing waiting lists.

Another area identified for potential capacity-building was in the area of newcomer gardening/farming. This sub-theme referred more to community capacity to grow food and how

the Network could potentially work with the newcomer community on land acquisition for community gardening/farming, as well as education about horticultural practices in Canada.

Communication

Communication among members was deemed to be the most important aspect of the Network. Members requested the creation of an email contact list, and a Facebook page in order to promote frequent communication and facilitate resource sharing. Members also wanted to learn about other members' programs and events related to newcomers and food/nutrition and suggested a compilation of such programs be created in order to refer newcomer clients to them.

Collaboration

Lastly, members were eager to collaborate on various projects that were deemed important but that members on their own did not have the capacity to complete, such as combined nutrition and gardening programs, a gardening plot database and various initiatives mentioned above. Also mentioned was greater collaboration with organizations outside of the Network as well, such as settlement agencies who are not currently providing newcomer food or nutrition supports. Often members hoped that these organizations would ultimately join the Network.

"After the first session I saw huge connections and opportunities for cross pollination..."

- FG1 participant

Immediately after FG1, the researcher began working on some of the priority areas, starting with a short term action plan for the following months. A contact list and listserve were created to increase communication and resource-sharing between members. A Facebook page was also set up. Members would be given a chance to contribute to long-term action plan at the next gathering, where they would participate in FG2.

Focus Group 2 (FG2)

The second gathering of the Network was conducted in a similar format to the first and also included a focus group – FG2. Seventeen members were present. The purpose of FG2 was to begin developing plans for how to proceed with some of the Network activities that were prioritized in the first meeting and complete the action plan for the upcoming year. Two smaller meetings took place with individual members between the two gatherings in order to strategize about how to tackle some of the priority areas identified in FG1. These members had specific expertise in these areas and provided guidance to the researcher about how to proceed.

Once again, members were divided into small groups. The small group topics were predetermined by the researcher, based on the identified priorities. See Table 9. FG 2 small group discussion topics. The topics were sent out to the members in advance of the gathering and they were able to self-assign themselves to a group based on their interests and professional priorities.

Table 9. FG 2 small group discussion topics

Group 1 - Newcomer Nutrition Education Mentors– A way to increase our capacity?
Group 2 – Increase newcomer access to garden space
Group 3 – Evaluation Methods

Group 1 – Newcomer Nutrition Education Mentors. In order to increase capacity to provide food-and-nutrition-related education for newcomers, capacity to do so first needed to be addressed. For this reason, it was decided that a newcomer train-the-trainer program would be developed in order to teach nutrition-trained newcomers how to teach nutrition education in Canada. This became a topic discussed by Group 1, which was comprised mainly of current nutrition educators. This program would be used as a stepping stone to accomplish some of the other Network priorities, once the ‘mentors’ were trained. It was the task of Group 1 to determine *how* this program would be developed, *who* would be involved and *what* the first steps would be.

Group 2 - Increase newcomer access to garden space. Group 2, comprised mainly of members whose work included community gardening, were to discuss how to begin increasing newcomer access to garden space. Similar to Group 1, they were to discuss *how* this could be done, *who* would do it and *what* the next steps should be.

Group 3 – Network Evaluation. Lastly, Group 3 was tasked with discussing how the Network should be evaluated. This group was comprised of members with various professional backgrounds, all with experience conducting program evaluation.

The groups were assigned cards, that contained questions to facilitate the small group discussions, in relation to their topic. See Table 10. FG2 small group discussion questions. A large group discussion was facilitated by the researcher at the end of the focus group, in order for the groups to present their ideas and get feedback from the larger group

Table 10. FG2 small group discussion questions

1. What are we going to do?
2. Who will do it?
3. How will we get it done?
4. When? Timeline...
5. Next Steps!

Data collection

A member from each small group volunteered to take notes of the discussion and notes were also taken by the researcher during the large group discussion. Field notes were also taken during and after the focus group, which made note of observations and sidebar discussions that were not captured in the small and large group discussion notes.

FG2 Results

Table 11: Summary of FG2 results

Source	Output
Group 1	<ul style="list-style-type: none">• developed a plan for how to start developing a mentorship program• developed a curriculum for the Newcomer Nutrition Mentor Program,• ran the program in Fall 2016
Group 2	<ul style="list-style-type: none">• discussed a long list of ideas for initiatives that could increase food production capacity for newcomers
Group 3	<ul style="list-style-type: none">• developed a substantive list of possible evaluation strategies for the Network• decided that a survey would be an appropriate method of evaluation
Other	<ul style="list-style-type: none">• 1-year action plan for the Newcomer Food and Nutrition Network was formulated• members of the Network helped to build the North End Garden of Nations in Spring 2016• ‘Nutrition Educators’ subgroup was established in order to discuss in more depth some of the newcomer nutrition resources and initiatives that were needed

Group 1 developed a plan for how to start developing a mentorship program. Members who were present at the focus group committed to being involved, with support from Food Matters Manitoba (the researcher) and determined the next step was a separate meeting to discuss what this new program might entail. There was also discussion of a similar program curriculum that could potentially be adapted to be suitable for this new program.

Group 2 discussed a long list of ideas for initiatives that could increase food production capacity for newcomers (ie. partnering with Manitoba Housing to make use of their greenspace, rooftop gardening, various workshops, etc.) but made little progress developing a plan for how to implement any of their ideas. The group struggled to identify next steps and none of the group members felt they could take a leadership role to facilitate this process.

Group 3 developed a substantive list of possible evaluation strategies for the Network. The ‘Evaluation’ group decided that a survey would be an appropriate method of gaining feedback

about members' experiences on the Network, as well as perceived successes and areas for improvement. Other ideas included Facebook analytics and additional focus groups.

The data from FG2 were used by the researcher to formulate the 1-year action plan for the Newcomer Food and Nutrition Network. The data from the small group discussions, as well as the larger group discussion, demonstrated that the groups had varied degrees of success planning for their given initiative and this was reflected in the actions taken after the focus group as well.

After the focus group, Group 1 developed a curriculum for the Newcomer Nutrition Mentor Program, ran the program in Fall 2016 for five newcomer community members who had nutrition backgrounds from their home countries, and these newcomers now facilitate newcomer nutrition programs through Food Matters Manitoba. Leadership from Food Matters Manitoba was integral to completing this project, but other members of the group were also committed to being as engaged as their work schedules permitted.

Without active agents in the area of land acquisition/community gardening, the ideas discussed by Group 2 to increase growing space for newcomers did not materialize after the meeting. However, when Food Matters Manitoba was able to take the lead on a community gardening project for newcomers, members of the Network did step in to help and the North End Garden of Nations was built in Spring 2016.

After the second gathering, a 'Nutrition Educators' subgroup was established in order to discuss in more depth some of the newcomer nutrition resources and initiatives that were needed. This group was also chaired by the researcher. At the first meeting, the twelve attendees discussed the programs that they were currently involved in as well as the need to have a repository of newcomer nutrition resources in order to avoid duplication of work. It was decided at this meeting that the researcher would establish a Dropbox folder for members to contribute resources to, in

future hopes of establishing a webpage where they could be more widely shared. This folder was established, but with only 2 members contributing to it. For some members, technical difficulties were cited.

Network Evaluation

The Network was evaluated using an online questionnaire, as well as observations, field notes and data from both focus groups.

A short online questionnaire was developed by the researcher using Survey Monkey in order to collect feedback from Network members about their experiences being on the Network and their views about the group's successes and areas for improvement. The survey was developed and tested for face validity by two Network members and three researchers outside of the project to ensure that the questions were going to obtain data relevant to the research questions. A link to the survey was sent out to all 52 Network members in Fall 2016, approximately one year after establishment of the Network. The questionnaire was comprised of four demographic questions, five open-ended questions, one multiple choice and one Likert-style question. See Table 12. Online questionnaire questions. Members had two weeks to complete the survey and were given reminders leading up to the deadline. The questionnaire was expected to take approximately 10-15 minutes. A total of fourteen members completed the survey.

Survey Monkey analytics were used to analyze survey data and provide descriptive statistics, including the mean and range, for the answers to the closed-ended survey questions. Open-ended questions were analyzed using thematic analysis in order to identify recurring themes.

Online Questionnaire Results

Most respondents had attended 1-3 meetings, out of a possible 8 meetings (including the large group gatherings, as well as smaller sub-group meetings). Outside of the scheduled

Table 12. Online questionnaire questions

Questions
1) How many Newcomer Food and Nutrition Network meetings have you attended? 0, 1-3 ,4-6, 7+
2) As a result of the network activities, have you connected with network members outside of the scheduled network meetings? Yes/No Please explain.
3) Has being a member of the Network impacted your work in any way? If so, how?
4) What are your views on the effectiveness of the Network? (Likert Scale – Very ineffective, ineffective, neutral/not sure, effective, very effective) a. Connecting people b. Resource Sharing c. Knowledge-Sharing d. Collaboration (working together towards vision)
5) What would make this Network more effective?
6) What would you like to see this network doing 1-3 years from now?
A bit about you...
7) How many years have you been working in a role that concerns newcomer food issues? Mean and a range
8) What type of organization do you work for? a. Government/healthcare b. Community organization/group c. Other (please specify)
9) Which answer below best describes your organization? a. My organization works strictly with newcomers b. My organization works with some newcomers but works with other community members c. Other (please specify)
10) Which answer best describes your position? a. I work only with newcomers b. I work with both newcomers AND other community members c. Other (please specify)
11) Do you have any other comments/feedback?

meetings, 86% of respondents had connected with other members of the Network, often through email.

Eighty two percent (82%) reported that being a member of the Network had impacted their work in some way. Most commonly, members reported being more aware of programs and

resources available to newcomers in the community, as well as feeling an enhanced sense of connectedness.

“Increased my knowledge regarding working with newcomers and the resources already created”

– Network Member

“Yes, I felt more connected to other newcomer nutrition educators and felt a lot less alone. I felt more inspired and that my work was part of something bigger. I also gained practical support for some classes and ideas that I had for the programs at [Organization name].”

- Network Member

Q4 – What are your views on the effectiveness of the Network?

“Having only attended one meeting and being included in member emails, it is clear that there is more resource sharing happening, in addition to client referrals to appropriate programs”

– Network Member

“The Network allows for each of connecting, resource sharing, knowledge sharing and collaboration by simply existing and for creating the venue for others to meet.”

-Network Member



Figure 4. Percentage of respondents who responded 'effective' or 'very effective' to elements in Q4

Moving Forward

Although members provided very positive feedback on the initiative, they also provided constructive feedback in order to make the Network more effective in the future. Priority areas that were identified included: active participation from members and outside parties, greater continuity, and a greater number of educational opportunities, both for Network members, as well as for community members.

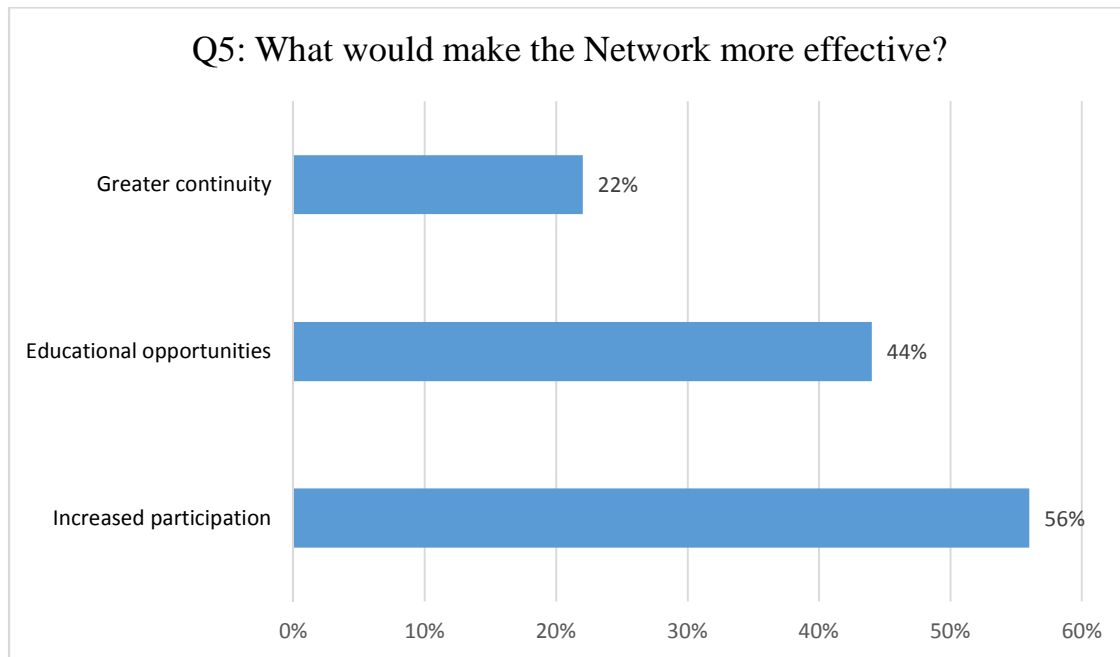


Figure 5. What would make this Network more effective?

“Increased participation from even more groups.” – Network Member

“More hands-on workshops” – Network Member

When asked what the Network should be doing in 1-3 years, respondents most often mentioned: more collaboration, providing more education to community and increased membership. See Figure 6. The Network 1-3 years from now. Increased resource sharing and working towards specific goals were also both mentioned, by one participant.

“I’m so thankful to have been a part of this group to have become aware of many great things going on in our city - things that will make newcomers healthier and happier!”

- Network Member

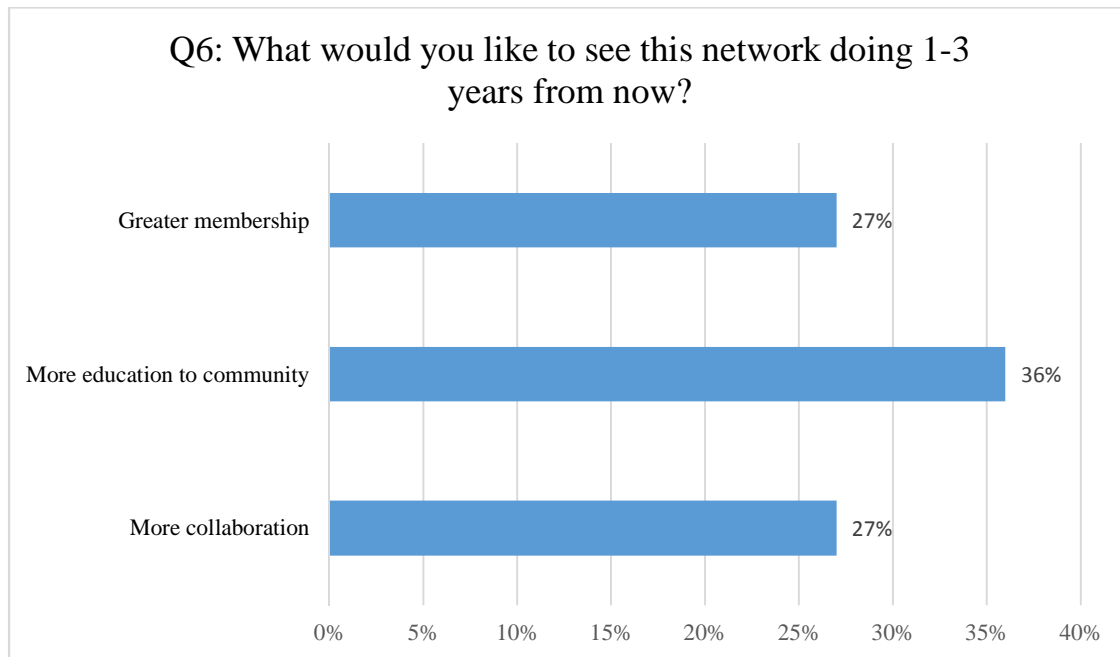


Figure 6. The Network 1-3 years from now

“Continue in putting together a coalition of diverse individuals and groups to help in building a healthy community.” – Network Member

“Empowering Newcomers with the right tools to go into their communities and mentor others.”

- Network Member

Demographic Information of Respondents

Q7: How many years have you been working in a role that concerns newcomer food issues?

Respondents had been working in this type of role from less than 1 year, up to 14 years, with an average of 4.75 years



*responses of 'less than 1 year' were calculated as '0'

Figure 7: Years working in type of role

Q8, Q9 and Q10: What type of organization do you work for?

Seventy-nine percent (79%) of respondents reported working for community organizations and 21% reported working in government or healthcare. Twenty-one percent (21%) work for organizations who work strictly with newcomers versus 79% work for organizations who work with newcomers but also work with other community members. Half of respondents reported that in their role, they work *only* with newcomers.

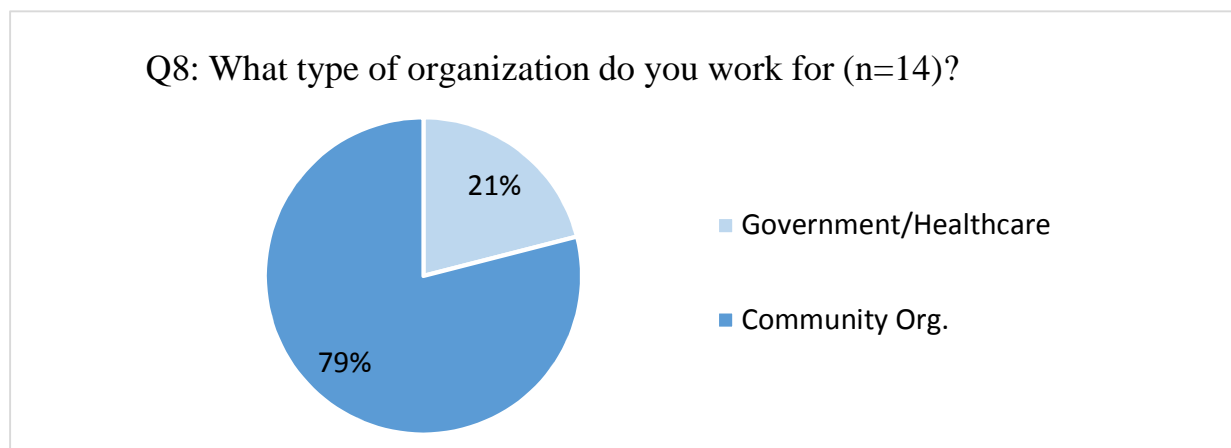


Figure 8. Type of organization respondents report working for

Discussion

The Newcomer Food and Nutrition Network was successful in that it increased the capacity of community organizations to positively influence food security for newcomers. The Network enhanced linkages and resource-sharing between key community organizations, resulting in greater collaboration and increasing collective capacity in the newcomer food and nutrition community in Winnipeg. Members reported many benefits of Network membership, including greater connectedness to other members and knowledge of other programs and resources in the community. These benefits are reinforced by the measurable achievements of the

Network thus far, for example membership has increased by more than 85% in one year (from 28 to 52), a webpage of resources was launched in mid-2017

(<http://www.foodmattersmanitoba.ca/projects/newcomer-food-and-nutrition-network/>), and the

Newcomer Nutrition Mentor program was developed collaboratively to increase opportunities for newcomers to become food and nutrition champions in their respective communities.

Key Ingredients for Success

There are some key features of the Network that have contributed to its success over the past 1.5 years and were documented in field notes, as well as questionnaire responses. These include:

- Lead organization to facilitate Network
- Funding
- Core group of dedicated members
- Planning of meetings well in advance
- Meeting with a purpose

Having an organization dedicated to leading the initiative was of paramount importance. Food Matters Manitoba's commitment to the ongoing facilitation of the Newcomer Food and Nutrition Network ensured that the Network had a dedicated 'Chair' who was mandated with leading the initiative. This ensured frequent contact with Network members, and engendered trust in the future of the Network. A resource-sharing portal is being hosted by the organization and they also ensured that funding (although modest) was available to support the costs of meetings and staff time to ensure that the Network initiatives discussed at the meetings were able to be

accomplished. Having an organization lead the Network has been fundamental to its success and is seen by members to be a substantial benefit.

There is a wide spectrum of level of involvement in the Network between members (as depicted in Figure 9. Levels of membership) from attendance at nearly every meeting and correspondence with members in between (core members), to being on the email list, yet never attending a meeting or corresponding with other members (peripheral members). Many members fall into the middle category of ‘recurrent members’, because they attend some meetings and engage with other members while in attendance, but may or may not have contact with other members outside of meetings. Another feature of the Network that has contributed to its success, is that a core group of members that have been dedicated and engaged since its inception. This core group has been instrumental in establishing what the Network would do, finding funding for the Network activities and meetings, as well as ensuring the items listed in the action plan became a reality.

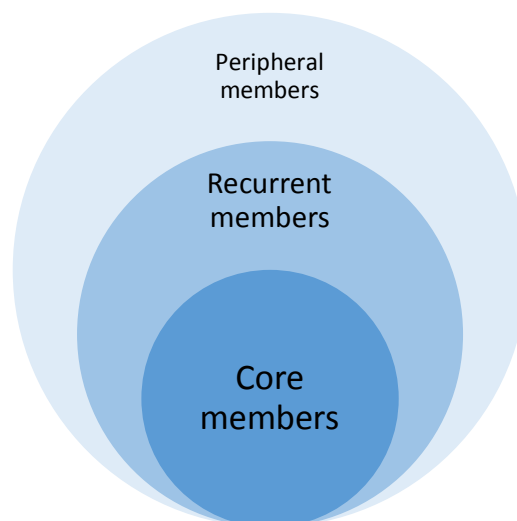


Figure 9. Levels of membership

There were also features related to the Network gatherings that were important to ensure member engagement. Planning meetings well in advance increased attendance. As well, sub-groups of the larger Network were only successful when being assembled for a specific task, such as Newcomer Nutrition Mentor Program curriculum development. Members were less engaged if just meeting based on a common work area, for example, newcomer nutrition education.

Challenges

Despite its success in many areas, as documented above, there were several challenges during the establishment of the Network, as documented in field notes, that will continue to be a threat to Network sustainability moving forward. These challenges include:

- organizational stability/turnover
- organizational priorities
- and human and financial resources

The stability of member organizations had an impact on engagement and commitment to the Network. In several cases, staff turnover at member organizations resulted in losing core or recurrent members and having difficulty replacing these members due to differing priorities of replacement employees or lack of resources for Food Matters Manitoba to spend on recruiting new members.

Organizational priorities were a major barrier to recruiting certain organizations who were deemed by members to be important partners in the improvement of food and nutrition security of newcomers. This was especially the case with newcomer settlement organizations who did not currently have a great deal of programming or supports with regards to food and nutrition, but were seen by members to have crucial linkages to the newcomer community.

Members saw great potential for collaboration with these agencies, but food and nutrition supports were not necessarily in their mandate. Many were more focused on providing housing or employment supports, rather than food and nutrition ones.

Lastly, human and financial resources of the host organization, as well as member organizations had a direct impact on what the Network was able to accomplish. The host organization, Food Matters Manitoba, although very committed to the initiative, had only a part-time employee facilitating the Network, among other projects. Therefore, there was limited staff time to spend on recruitment, engagement, and taking a leadership role in the Network activities. There were also limited financial and human resources to meet as frequently as members would have liked to meet (monthly, rather than bimonthly). Many of the members were also part-time in their positions and had little time to offer towards Network activities.

The Future of the Network

As documented in field notes and questionnaire responses, there are some key areas for enhancement of the Network and to ensure its sustainability as an entity. These areas include:

- 1) Strategic recruitment
- 2) Ongoing engagement
- 3) Strong leadership
- 4) Measurement of long-term impacts

Strategic recruitment of Network members will need to be a key priority, in order to engage all community organizations who are considered essential by existing members, and to gain buy-in from all member organizations by engaging the appropriate levels of leadership within those organizations. The Network currently consists of mainly frontline workers who

have little time or financial resources to contribute, making commitment to long-term projects difficult.

Ongoing engagement of Network members, through frequent meetings, workshops and email communications will be essential in maintaining interest in, and commitment to, the Network. Continuing to engage the members on what their interests and needs are will be instrumental in guiding this the work of the Network by ensuring the Network activities remain relevant to organizations and beneficial to the nutritional health and wellbeing of the newcomer community.

Strong leadership from the host organization will continue to be integral to the success and sustainability of the Network. Having the Network Chair take the lead on the Network activities was crucial in order for them to move forward. Having someone responsible for arranging meetings, liaising with members and being accountable for the outcomes of the Network activities was necessary, given the limited number of active agents on the Network and the amount of time that other members were willing to spend. Members viewed this leadership as an important aspect of the Network and valued the strong connection to Food Matters Manitoba.

Lastly, it is important to determine how to measure the long-term impacts of this new initiative. Indicators will need to be developed in order to measure the collective impact of the Network, through its members. The first step may include the development of a new food security measurement tool that assesses both income-related and cultural components of food security. This tool could include both qualitative and quantitative evaluations of food security status and should aim to transcend cultural differences. The 4 pillars of food security – availability, access, utilization and stability (Food and Agriculture Organization of the United Nations, 2008) – should be considered as a framework.

Conclusion

Although the research aspect of this project has been completed, the Newcomer Food and Nutrition Network continues to work together to improve healthy food access for newcomers in Winnipeg. The Network meets regularly, communicates via email and maintains a webpage of resources that is continuously expanding. Member recruitment is ongoing and will focus on recruitment of members from the newcomer settlement sector. Food Matters Manitoba has committed time and resources to ensure the future sustainability of the Network.

With immigration to Canada on the rise (Government of Canada, 2017), along with healthcare costs and the burden of chronic disease (Kimberly Elmslie, 2012), initiatives to ensure that immigrants and refugees are able to get the healthy food that they need will be increasingly important. Food security is of special importance as Canada continues to welcome large numbers of refugee-path immigrants (Government of Canada, 2017) who tend to have higher rates of poverty than other newcomer groups (Canada Without Poverty, 2011).

Community initiatives, such as the Newcomer Food and Nutrition Network, have the potential to help newcomers overcome structural barriers to food and nutrition security in their new homes by increasing access to programs and services, and by building capacity within the newcomer community to champion food and nutrition initiatives. Adequate settlement services, such as food and nutrition programming, will help families to navigate Canadian culture and foodways, while mitigating the potential for increased risk for chronic disease and maintaining important aspects of their cultural identity. In fact, because newcomers are often healthier than the average Canadian when they arrive in Canada, food and nutrition supports for the newest arrivals will likely prove to be some of the most successful health promotion strategies and provide the greatest cost-benefit for funding agencies.

Recent federal and provincial initiatives have focused largely on housing needs and employment-readiness programs, with little focus on health and wellness supports (Government of Canada, 2017; Province of Manitoba, 2014, 2017). With ongoing funding cuts to healthcare and community programs in Manitoba and settlement agencies and community programs often being under resourced at the best of times, initiatives such as the Newcomer Food and Nutrition Network are of increasing importance. The increase of collective capacity through collaboration, and resource sharing will play an important role in community development and the health and wellness of newcomer families in Manitoba and beyond.

CHAPTER 5: CONCLUSION

The findings of this research study show that community programs, such as *Growing Roots*, can have positive impacts on food security and context-specific food literacy of program participants, leading to healthy adaptation to the Canadian foodscape and maintenance of healthy food traditions. Enhancement of social networks and interest in attending further food programming have the potential to further increase food security of participants and their families in the long-term.

The Newcomer Food and Nutrition Network was shown to increase collaboration in the newcomer food and nutrition realm, showing potential to be a sustainable solution to some of the structural issues impeding newcomer access to healthy food and healthy food programming in Winnipeg. The Network is also building capacity within the newcomer community to champion food and nutrition initiatives, through initiatives like the Newcomer Nutrition Mentor Program.

Having access to adequate settlement services, such as food and nutrition programming, will help families to navigate Canadian culture and foodways, while mitigating the potential for increased risk for chronic disease and maintaining important aspects of their cultural identity. In fact, because newcomers are often healthier than the average Canadian when they arrive in Canada, food and nutrition supports for the newest arrivals will likely prove to be some of the most successful health promotion strategies and provide the greatest cost-benefit for funding agencies by preventing the onset of chronic disease risk, rather than attempting to lessen the diet-related health risks later on.

The findings of this research have important implications for the development of food and nutrition programs and initiatives for the rapidly growing newcomer population in Canada. Evidence-based health promotion strategies are increasingly important in order to mitigate a rise

in chronic disease rates, such as diabetes, and the associated costs on our already over-burdened health care system (Kimberly Elmslie, 2012). The newcomer nutrition program curriculum associated with this study will be circulated to nutrition professionals, settlement workers and other community organizations in order to increase their capacity to provide such programming. Rather, they will be able to use a program that has already been thoroughly evaluated and adapt it, as needed, for their newcomer clients.

Further research should be conducted to examine the complex relationship between newcomer food security, dietary acculturation and the causal and mitigating factors involved. Nutrition programs have the potential to help mitigate the negative dietary transition that is undergone by many newcomers to Canada, but there are many other initiatives that could also help to mitigate this, such as strategies to increase local production of world foods, better employment and language supports to reduce poverty rates, as well as government policy that prioritizes health promotion and social support programs for newcomers. More research is needed to determine the long-term effects that these changes could have on newcomer health and wellbeing.

Recent federal and provincial initiatives have focused largely on meeting housing and employment-readiness programs, with little focus on health and wellness supports (Government of Canada, 2017; Province of Manitoba, 2014, 2017). With ongoing funding cuts to healthcare and community programs in Manitoba and settlement agencies and community programs often being under resourced at the best of times, initiatives such as *Growing Roots* are of increasing importance. The increase of collective capacity through collaboration, and resource sharing will play an important role in community development and the health and wellness of newcomer

families in Manitoba and beyond. This project has resulted in knowledge, resources, and models that can be used to develop newcomer food and nutrition programming across North America.

Limitations

This study had several limitations that should be considered when interpreting the findings. As with other action research studies, the results of this study are context-specific and cannot necessarily be generalized to other populations or programs and may not yield the same results in different settings. Rather, it is the hope that some of the findings may be deemed transferable to similar settings, and the initiatives may be adapted for relevance with other groups.

Another limitation of this study is that the primary researcher was also the nutrition program developer and facilitator, as well as the Network Chair. This is also considered a strength of the study as it enabled an in-depth perspective of the development and implementation process, crucial to the action research process. Although many steps were taken to mitigate the effect of any biases, it is still possible that some affected the findings of the research.

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APPENDIX A - Growing Roots Nutrition Program Curriculum

Module 1 – Food Safety

Objectives:

- *Participants should understand basic food safety principles*

Supplies:

- *Food Safety Handout*
- *Meat thermometer*
- *Chicken food model*
- *Photocopies of Recipes*

Helpful hints for this lesson:

Some newcomers have had limited experience with freezers, canned foods and ovens. Ask lots of questions (without making assumptions) to find out where people are at!

Recommended Recipes: Pita Pizzas, Greek Salad

1) Basic Food Safety (20-30 mins)

- a. Because we will be preparing food together, it's important for us to start off talking about food safety so that no one gets sick. This is also important for preparing food at home, or for others in the community.
- b. Food safety is important because if we don't handle, cook and store our food properly, it can make us sick. People often worry more about food safety here in Canada, because of how our food is produced. For example, our meat is often coming from farms where there are thousands of animals, and this makes it easier for illness and bacteria to spread.

OPTIONAL DISCUSSION: Where did your meat come from back home? Do you know where it comes from here?

- c. Many times when we are sick with symptoms like vomiting, or diarrhea we think that we have the flu – but it is actually because we ate some food that had harmful bacteria in it. This is called food poisoning. This bacteria often comes from raw meat, but may also be found on the skin of fruits, vegetables or other foods if not washed properly.
- d. Most of us will feel sick for a day or 2, and we will get better, but for young children, the elderly, or pregnant women, they can get very sick. Getting food poisoning while you are pregnant can be harmful for your baby.

- e. It is important to take steps to make sure we prepare our food properly so that we can avoid getting sick from harmful bacteria in food.
- f. In Canada, many people eat food from cans, because it is cheap, can be stored for a long time and does not require refrigeration.

DISCUSSION QUESTION: How many people have eaten canned food before coming to Canada? (probably not many, depending on country of origin)

- g. Some canned foods include beans, fruits, vegetables and meats. When buying canned foods, try to avoid expired, bulging or dented cans. Usually these may be signs that the food inside is not safe to eat.

Food Safety Handout:

- **Clean** – Wash your hands often, wash fruits and vegetables before you eat them in case they have come into contact with bacteria. Also clean counters, cutting boards, knives and utensils often, especially after contact with raw meat or raw eggs.
- **Separate** – Avoid using the same utensils/cutting boards for raw meats/veggies.
- **Cook** – Cook foods until they reach the proper temperature. Chicken and ground beef should be cooked until no pink is left, or about 74 degrees Celsius (165 degrees Fahrenheit). When checking meat, insert the thermometer into the thickest part of the meat (demonstrate with food model) and do not have the thermometer against the bone.
- **Storage** – Freeze or refrigerate cooked foods within 2 hours or as soon as possible to prevent bacteria from growing in it (2-hour rule). Avoid leaving raw meats or fish to thaw/defrost on the counter because this will allow bacteria to grow. Leave them to thaw in the refrigerator or a sink/container filled with ice-cold water.

2) **Recipes – Today we are making pizza and Greek salad!** *(Notes for Facilitator: It would be helpful to highlight quickly why store-bought pizza and salad dressing can be unhealthy, and what makes the salad so healthy)*

- a. Pizza is something that kids really like, but it can be very unhealthy when it comes from the restaurant or the grocery store.
- b. The salad we are making has lots of really healthy ingredients.
- c. In Canada, we often eat salads like this and we put dressing (like a sauce) on it. Buying these can be very unhealthy, so we will make our own – it's very easy!

We will go to the kitchen now, all wash our hands, and then go over today's recipes!

Teaching points in the kitchen...

- d. Using whole grains (i.e. whole grain flour for bread or pizza dough).
- e. No salt added canned vegetables. *Vegetables can be washed to remove excess salt from regular cans.*
- f. Making our sauces rather than buying at the store.
- g. If we are buying canned or jarred sauces, we should look at the label in order to choose options with less sodium/sugar.
- h. Limit or avoid processed meat on pizza, instead use ground beef made at home, left over chicken or vegetables.

References:

<https://www.foodsafety.gov/about/>

Module 2 – General Healthy Eating

Objectives for this lesson:

1. *Understand the importance of a healthy diet*
2. *Understand some general healthy eating strategies*

Supplies:

- *Why Healthy Eating is Important Handout*
- *MyPlate placemats or other 'healthy plate' visuals*
- *Paper plates and food models/cards*
- *Photocopies of recipes*

Suggested Recipes: Avocado egg salad sandwiches, Avocado Strawberry Spinach Salad

1. Why is eating healthy foods important? (10 mins)

Discussion: Why do you think eating healthy is important?

- a. Lower risk of many diseases - cancer, diabetes, heart disease, stroke, Alzheimer's disease.
- b. Mental health – we are happier, lower risk of depression.
- c. More energy.
- d. Better concentration.
- e. Child growth/oral health etc.

2. What is a healthy diet? (15 mins)

Discussion: What should we eat to be healthy? What do people eat in your culture to be healthy?

- a. **Whole Foods** – It's best to eat foods in their most natural form, rather than packaged foods that have many unhealthy ingredients added to them or have the most healthy parts taken away. For example, eat fruit instead of drinking juice, eat a chicken breast rather than processed lunch meat and real potatoes or beans rather than potato chips or bean chips. We will talk more about packaged foods in another lesson.
- b. **Plant-Based Foods** – One of the most important things we can do to eat healthy is to eat lots of plant foods!

- This includes fruits, vegetables, whole grains, legumes (beans, lentils...).
- About half of our food should be fruits and vegetables (**show ‘healthy plate’**)
- We also need to eat some grains for energy, like rice, breads or corn
- Small amounts of meat are healthy, like chicken, goat and fish. We should limit red meats like beef and pork.
- We will talk more about plant-based foods in another lesson.

Interesting Fact:

Goat is a popular meat in many African countries. It’s leaner than chicken breast and has 3 times the iron!

- b. **Homemade food** – The food we make at home for our families is often healthier than food from a restaurant or pre-packaged from the store because we can control and know what goes into it.
- c. **Eat a variety of foods** – Each food that we eat has different nutrients, so eat foods that are different types and colors to make sure you get all the nutrients you need.
- d. **Eat with others** – When we eat with family and friends we eat more slowly than when we are alone and watching TV, for example. Eating more slowly allows us to recognize when we are full, so we stop eating sooner.

Healthy Plate Activity: Healthy diets take many forms! (10 minutes)

1. Break participants into groups of 3-4 people
2. Give them a paper plate and a variety of food models/cards
3. Ask them to build a healthy plate that makes sense for them
4. Ask the groups to describe their healthy plate to the group

Helpful Hints....

Newcomer participants often have valuable traditional knowledge about food and health – take this opportunity to learn from them as well.

Example: In many cultures, bitter melon is eaten to help regulate blood sugar. Scientists have confirmed that bitter melon has insulin-like properties and many other health benefits!

References:

Tan, S. P., Kha, T. C., Parks, S. E., & Roach, P. D. (2016). Bitter melon (*Momordica charantia* L.) bioactive composition and health benefits: A review. *Food Reviews International*, 32(2), 181–202. <http://doi.org/10.1080/87559129.2015.1057843>

Canadian Nutrient File: Goat, roasted. <https://food-nutrition.canada.ca/cnf-fce/report-rapport.do>

Dietary Guidelines for the Brazilian Population, 2ed. Ministry of Health of Brazil

Module 3 – Plant-Based Foods

Objectives for this lesson:

3. *Understand health benefits of whole plant foods*
4. *Understand that half of what we eat should be fruits and vegetables (or pulses)*

Supplies:

- *Examples of grains (eg: white rice, brown rice, whole wheat flour, white flour, quinoa, etc.)*
- *Canned Vegetables*
- *Magnetic ‘Healthy Plate’ example*
- *Foods or food models/pictures of fruits/vegetables*
- *Photocopies of recipes*

Helpful Hint:

Many people think frozen fruits and vegetables are less healthy – this is a good opportunity to bust that myth... AND broccoli cheddar soup is a delicious way to learn how to use frozen vegetables!

Recommended Recipe: Broccoli Cheddar Soup

Introduction:

- Plant-based foods are foods that come from plants, instead of animals.
- Foods that come from plants have lots of fibre, vitamins, minerals and other beneficial nutrients
- About half our plates should be fruits and vegetables (**show ‘healthy plate’ example**)

1. Why Eat Plant-based Foods? (5-10 min)

- a. **Fibre** – fibre is very important, it makes us feel full longer, it helps us to digest our food properly and it is also very good for our hearts. When we eat a lot of fat, cholesterol builds up in our blood, and fibre helps to get rid of it.
- b. **Vitamins and minerals** - Vitamins and minerals are substances in our food that our body needs. Each vitamin and mineral has different functions in our body so it is important to eat a variety of types and colours.
 - a. For example, leafy green vegetables like collard greens (sakuma wiki), spinach, and pumpkin leaves have a vitamin called folate. Folate is very important, especially if you are pregnant because it helps the baby grow properly. (this vitamin is so important that food producers in Canada have to fortify wheat with folate to make sure everyone is getting enough in their diets)

- a. Another example is that most orange and red fruits and vegetables have vitamin A, which helps our eyes stay healthy (carrots, pumpkin/ pumpkin leaves, tomatoes).

People who eat fruits and vegetables at least 5 times a day, have lower risks for developing cancer and other diseases

2. There are many ways to eat vegetables... (5-10 mins)

- Like steaming, boiling, roasting in the oven, or frying

Optional Discussion: How do you eat your vegetables?

- a. Fresh is often best (for taste and nutrition). When vegetables are fresh they have more nutrients. In the winter though, sometimes the fresh vegetables in the store may not be as nutritious anymore because they are imported and may have been on the shelf for a long time – in this case, frozen may be better.
- b. Frozen vegetables were frozen right after being picked - this helps to keep the nutrients inside the food. Frozen can also be very cheap, so it's a good option to save money. You can also buy or grow your own vegetables and freeze them to eat in the winter (usually you have to cook them first).
- c. Choosing canned vegetables can be more tricky. **(show canned vegetables)**
 - i. Often, they contain salt (sodium) and other preservatives to make the food last longer. Eating too much salt can cause high blood pressure, which is bad for your heart. Other canned foods that often have a lot of salt are sauces and soups.

3. Whole grains (5 minutes)

- c. Whole grains like brown rice, whole wheat flour and oats are healthy options
- d. They contain more fibre than white rice, white flour etc
- e. Aim for half of your grains to be whole grains **(pass around grain examples)**

Teaching points for kitchen:

- Frozen vegetables are healthy/cheap and great for soup
- Choose whole grain/whole wheat bread (look at packaging)
- Soup can be frozen in small containers and thawed/reheated for quick meals

Module 4 – Packaged Foods & Label Reading

Objectives for this lesson:

- *Participants will understand that home-cooked meals made with fresh ingredients are better than processed/packaged foods.*
- *Participants will understand the basic components of a nutrition label.*

Supplies:

- *Nutrition Label handout (various languages if needed)*
- *Nutrition Label posters*
- *Food packages (boxes, cans...)*
- *1 tsp measuring spoon*

Recommended Recipes: *Chicken Fingers and fries with chopped raw vegetables (ie. carrot sticks)*

Processed/packaged foods

- b. Foods are normally healthiest in their most natural form.
 - c. We have a lot of processed foods in Canada, and this is why many Canadians are unhealthy. Many newcomers become unhealthy after living here for a short time, especially if they eat a lot of processed foods.
 - d. Many foods that are processed (*show examples*) have things added to them, like lots of sugar, salt, fat and chemicals to preserve them. These things can make the food unhealthy so it is best to eat these less often and try to make your own foods more often.
 - e. Some examples of highly processed foods include: processed lunch meats (contain cancer-causing chemicals), many breakfast cereals (contain lots of sugar) and frozen dinners (contain salt, fat and chemicals) and juice (contains sugar and does not have the healthy fiber from the fruits/vegetables).
 - f. This is why cooking is so important. If you make your own food instead of buying processed/packaged foods, you will eat much healthier. Example, you can make your own rice instead of buying packaged rice with other ingredients added or eat fresh fruit instead of juice.
 - g. Some packaged foods are better than others. Today we will talk about how we can tell by reading the nutrition label on the food packages.
- 3. What to look for on food packages** (*pass around food packages and translated food label handouts*).

- a. There are 2 main things that we want to look at on the food packages:
 - The nutrition label
 - The ingredient list

4. Nutrition Labels

- a. There is a lot of information on a nutrition label and it can be hard to understand, especially if you don't speak or read much English, but we will start learning this today and keep talking about it a little bit each week.
- b. There are a few important things to look for on a label in order to choose the healthier option. We will focus on the most important things to look for like TRANS FAT, SUGAR, SALT and FIBRE. For those who don't read English yet, these are the most important words on the label to learn.
- c. **Serving size** – This is the most important part to look at – it tells you what the portion size is. For example, if one serving size is 15 chips and the label says one serving contains 10 grams of fat, it means there are 10 grams of fat in 15 chips. So if you eat 30 chips (which may be more likely), you are eating two serving sizes which will give you 20 grams of fat.
- d. **Calories** – This is how much energy you are getting from a serving of the food. This does not tell you whether the food is healthy or not so just because it gives you energy – does not mean it is healthy.
- e. **Percent Daily Value** – 5% or less is 'low' and 15% or more is 'high'. If a food product has 5% or less for a nutrient, it means that food is low in the nutrient. If it has 15% or more, then it is high in the nutrient. Try to choose foods that have 5% or less of sugar and salt and foods with 15% or more fibre.
- f. **Fat** – We need some fat in our diet but there is no agreed upon amount that we should eat per day. Saturated and trans fats are the 'less' healthy fats so we want less of these in our foods. Trans fat is very bad for our health – it's best not to eat foods with ANY trans fat.
- g. **Sodium** – Sodium is another word for 'salt'. We should eat no more than 1500 mg of salt, or 2/3 of a tsp. The best way to eat the right amount of salt is to make your own food, because packaged food has a lot of salt. You can also choose 'low-sodium' or 'no salt added' foods instead of the regular options.
- h. **Sugar** – The less sugar the better – we will talk more about sugar in another lesson.
- i. **Fibre** – the amount of fibre is one of the only numbers on here that we want to be high. For foods made of grains, like bread or cereal, we want at least 2-3 grams of fibre (4-6 grams is better). Women should eat about 25 grams and men should eat about 38 grams per day. If you eat lots of fruits and vegetables and whole grains, this should be no problem.

These are the most important things to look at on a nutrition label. You can look at these to compare different foods and choose healthier options.

References:

American Heart Association: Dietary fats

<https://healthyforgood.heart.org/eat-smart/articles/dietary-fats>

Dietitians of Canada: Food Sources of Sodium (2016)

<https://www.dietitians.ca/Your-Health/Nutrition-A-Z/Minerals/Food-Sources-of-Sodium.aspx>

Dietitians of Canada: Healthy Eating Guidelines for Increasing your Fibre Intake

<https://www.dietitians.ca/Your-Health/Nutrition-A-Z/Fibre/Increasing-Your-Fibre-Intake.aspx>

Module 5 – Sugar

Objectives for this lesson:

- *Participants will understand the risks of consuming too much sugar.*
- *Participants will be able to identify high-sugar food/drinks.*
- *Participants will be able to identify some healthy alternatives for sugar-containing foods/drinks.*

Supplies

- *Nutrition Label example*
- *Canned/frozen fruits and vegetables*
- *Juice/pop containers*
- *Sugar handout*
- *Sugar Shocker Poster*

Suggested Recipes: *Chocolate zucchini muffins, Fruit Smoothies, Fruit Salad, Infused waters (orange, lemon, etc.).*

1. Sugar

- Sugar is something that occurs naturally in some foods, like milk and fruit (in small amounts), but other times it is added to food and drinks, like pop, baking, and many processed foods.
- Sugar comes in many forms – white sugar, brown sugar, honey, maple syrup, agave, high fructose corn syrup... etc.
- Eating too much sugar can cause many health problems such as (show handout):
 - Diabetes
 - Heart Disease
 - Cancer
 - Weight gain
 - Dental cavities
- Eating too much sugar is especially dangerous for children
 - Childhood obesity has become very common in Canada and many other countries – eating sugar contributes a lot to this .
 - Children are also now getting Type 2 Diabetes, a disease that 20-30 years ago, only adults got. Once they have diabetes, they will have it for the rest of their lives.
 - Children who eat a lot of sugar also tend to get more cavities (holes in their teeth (show picture)). This happens because the sugar damages the teeth, but

also sugar causes our mouths to produce more acid, which also damages our teeth.

- Young children, especially those younger than 1 year, should not be given juice or any other sugary food or beverage.
- It is recommended that adults and children consume no more than 24g of sugar per day. There is no agreement on a safe amount for children. 24 grams = 6 teaspoons (demo with sugar cubes)

2. ACTIVITY: How much sugar is in common food/drinks? (Show handout/poster/food packages)

- Can have people guess amount of sugar in foods using food packages and sugar cubes

3. Fruit vs Fruit juice

- b. Fruit has many nutrients that we need. Many fruits have lots of vitamin C, which is good for our immune system – it helps keep us healthy. Fruit also has a lot of fibre. We should try to eat fruit a couple times a day.
- c. Fruit juice has a lot of sugar, even if sugar has not been added. Some juices are better than others (show examples). Choose 100% juice instead of fruit punches and cocktails.
- d. It is better to eat the whole fruit, because the fibre helps your body to digest the sugar in the fruit more slowly. When you drink juice, a lot of sugar goes into your blood at the same time and it's hard on your body to get rid of it. If you often eat or drink a lot of sugar, you may develop health problems, like diabetes.
- e. We can look on the package to see how much sugar is in the food.
- f. Frozen fruits – great, cheaper alternative to fresh fruits. Choose fruits with no added sugar.
- g. Canned fruits: These can be good but may have sugar added to them. You can look at the can to see if it says “syrup” etc. to tell if there is added sugar. Choose fruits canned in water or their own juice, instead of syrup.

4. Healthy Tips:

- Eat fruit instead of drinking juice.
- Drink water or milk instead of juice, pop or other sugary drinks.
- If choosing juice, choose 100% fruit juice
- Add water to juice (e.g. half and half) to reduce sugar intake.
- Add fruit, herbs or cucumber to water to make it more interesting!
- As always – avoid processed/ready-made foods.
- Start with small changes – if you normally drink 2 cans of pop per day, try reducing it to 1 can per day.

References:

Heart and Stroke Foundation – Position Statement: Sugar, Heart Disease and Stroke (2014)
<https://www.heartandstroke.ca/-/media/pdf-files/canada/2017-position-statements/sugar-ps-eng.ashx>

World Health Organization – Sugars intake for adults and children (2015)
http://www.who.int/nutrition/publications/guidelines/sugars_intake/en/

Module 6 – Healthy Eating on a Budget

Objectives:

- *Participants will be aware of a few strategies to eat healthy with limited time and resources*

Supplies:

- *Menu planning handout (various languages)*
- *Brochures for where to buy/pick food in local area*

Suggested Recipes:

Today, we will talk about how we can eat healthy in Canada without spending a lot of money and time.

1. Discussion: Grocery shopping in Canada

There are many options here for buying groceries here...

Where do you buy food here?

Is buying food here different from buying food in your country?

- Do you shop more/less often?
- Shopping at larger grocery stores (like Superstore) is usually cheaper – small convenience stores are usually expensive.
- We can also buy fresh food from farmers' markets in the summer. These can be more expensive but the quality is good.

Eating healthy does not have to be expensive - if we do it right it's actually cheaper! Here are some tips...

2. Tips for eating healthy on budget

- **Plan** - Before you go shopping, plan what food you need for the week. You can plan to make a large batch of food, or plan what you will eat for each meal (whatever works for you). If we plan for healthy meals we will be less likely to eat out (saving us money), and we will waste less food (wasting food is the same as wasting money)
 - o **Did you know that almost half of the food that is produced is wasted – a lot of this is wasted after we buy it!**
 - o **Optional Discussion: Do you throw out a lot of food in Canada? Why? Can discuss ways to cut down on food waste**
- **Can talk about menu planning and give example handout**
- **Make a list** – Making a grocery list helps us to only buy the food that we need, so we save money and we also buy less 'extra' items.
- **Eat less meat** – Meat is more expensive than vegetables and pulses (beans, lentils). Make 1 or 2 days of the week 'meat-free days' and eat more pulses! Or if you normally eat meat at every meal, maybe cut down to eating meat at 2 meals per day.

- **Buy meats with less fat** – You get more meat for your money this way. Example: extra lean ground beef.
- **Drink water (from the tap)** – The tap water in Canadian cities is very safe and is almost free! Save money by using a refillable water bottle instead of buying disposable plastic bottles, or buying pop or juice.
- **Buy fruits and vegetables when they are in-season or buy frozen/canned** – In the winter, fruits and vegetables in Canada often come from far away, which means they will be more expensive. Frozen/canned fruits and vegetables are cheaper options, or you can even freeze your own during the summer for winter! **Does anyone do this?**
 - o **Look for free food preservation workshops in the summer/fall**
- **Limit eating pre-packaged ready-to-eat foods.** These often seem cheap, but you could make your own for much cheaper and you can make a large quantity that can be eaten for many meals.
- **Compare foods using the ‘unit price’ to see which one is cheaper.** If you are buying rice and there are many options and they are different sizes and prices, you can look at the price tag to see which one is cheaper. The price tag will list the price of 100 grams of the food – so it might say \$.25 per 100 grams. This means that 100 grams of the rice works out to 25 cents. Maybe another one is \$.30 (30 cents) per 100 grams, you know this one is more expensive. You can compare all the different packages of rice to choose the cheapest one. **We will talk more about this during the grocery store tour!**
- **Buy store brand foods** – brands like ‘no name’ or ‘President’s choice’ are often cheaper and have similar quality to brand name products. Check the label!
- **Don’t grocery shop when you are hungry!** You may end up buying foods that you don’t need that are less healthy.
- **Grow/pick your own food** – You can grow your own food in your yard or on your balcony. You can also pick your own food, which has been grown by others. (Give handouts for fruit share, CSAs, berry picking etc.). Growing your own food can be easy and can save you a lot of money especially in the summer time.

Module 7 - Grocery Store Tour Checklist

Start with perimeter of store – most of the healthy food is here!

Produce

- ☐ Any traditional vegetables found here?
- ☐ Organic vs non-organic.
- ☐ In-season vs not.
- ☐ Canadian vegetables often have less chemicals than ones imported from other countries and may be fresher.

Bulk Food

- ☐ Buying dry food in bulk can save you money (not always).
- ☐ Scoop into bag, place tie on bag and write number on it.
- ☐ Use unit price to compare foods (price per 100g).

Dairy/Eggs

- ☐ How to choose low-fat options.
- ☐ Compare labels (fat content, calcium...).
- ☐ Eggs – omega-3 eggs (fed flaxseed).
- ☐ Best before dates – milk might be ok to eat/drink up to a week past the date (can tell by smell/taste).
- ☐ If moldy (blue/white, fussy) – do not eat. Mold produces harmful toxins. Hard cheese, can cut off mold, soft cheese, and bread – throw out.
- ☐ Margarine is better than butter (made from vegetable oil) – look for non- hydrogenated (no trans-fat).

Meat

- ☐ Buying leaner meats = get more meat.
- ☐ Buying in bulk/freezing.
- ☐ Don't eat past the best before date.
- ☐ Processed meats and cancer.

Bakery

- ☐ Whole grains vs white.
- ☐ Comparing fibre content (look for 2 -4 g).

Oils

- ☐ Look for polyunsaturated fat content to compare oils.
- ☐ Omega-3 fats are polyunsaturated fats.

Canned Foods

- ☐ Often have high salt and sugar (this helps to preserve the foods).
- ☐ Severely dented cans, bulgy cans = don't eat.

Cereal

- ☐ Compare for sugar and fibre.

General

- ☐ Price tags
 - Reiterate use of unit price to compare foods (price per 100g).
 - Buying in groups/limited quantities.

APPENDIX B – Newcomer Nutrition Handouts



Why is Healthy Eating Important?

We grow strong

We have healthy teeth and gums

More energy

We are happier

Better concentration

IF WE EAT HEALTHY...

Cancer

Heart disease

Diabetes

Cavities

Alzheimer's disease

IF WE DON'T EAT HEALTHY...



Food Safety



CLEAN



SEPERATE



COOK



STORE



Nutrition Label Reading

Calories do not tell us how healthy a food is – we must look at the other nutrients

We need 25-38 grams per day



These are healthy, the higher the number the better

Nutrition Facts	
Serving Size 2/3 cup (56g)	
Servings Per Container: 5	
Amount Per Serving	
Calories 250	Calories from Fat 80
% Daily Value*	
Total Fat 9 g	15%
Saturated Fat 1.5 g	9%
Trans Fat 0 g	
Cholesterol 0 mg	0%
Sodium 10 mg	0%
Total Carbohydrate 39 g	13%
Dietary Fibre 2 g	7%
Sugars 17 g	
Protein 4 g	
Vitamin A 0% Vitamin C 0%	
Calcium 6% Iron 10%	

0 trans fat is best

Choose foods with less sodium

We should have less than 24 grams per day



% Daily Value

High

15%



% Daily Value

Low

5%





APPENDIX C – Nutrition Class Photos



Photo 1. Nutrition class - Fall 2015



Photo 2. Nutrition class - Spring 2016

APPENDIX D – Newcomer Food and Nutrition Network Photos



Photo 3. Network meeting/Focus group 2 - November 2016



Photo 4. Network meeting, June 2016