

Participatory Food Security Projects Phase I and II

Building food security in Nova Scotia:
Using a participatory process to collect evidence and
enhance the capacity of community groups to influence
policy

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The Nova Scotia Nutrition Council is a multidisciplinary advocacy group whose goal is to improve and maintain the nutritional health and well being of Nova Scotians through education, advocacy and collaboration.

“The views expressed herein are solely those of the authors and do not necessarily represent the official policy of Health Canada”

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EXECUTIVE SUMMARY

Food insecurity refers to a situation when an individual or household has limited or uncertain access to or availability of safe, nutritionally adequate, culturally or personally acceptable foods, or the limited ability to acquire such foods in a socially acceptable manner^{1,2}. With over 17% of Nova Scotians experiencing food insecurity³, it is evident that this is an urgent issue that must be addressed within this province. The goal of the Participatory Food Costing Projects was to explore the use of participatory approaches in evidence gathering to affect policy change to build food security in Nova Scotia.

Phase I: Recognizing the need to address the issue of food insecurity, the Nova Scotia Nutrition Council (NSNC) partnered with the Atlantic Health Promotion Research Centre (AHPRC) and Nova Scotia Family Resource Centres/Projects (FRC/Ps), funded by the Community Action Program for Children (CAPC) & Canada Prenatal Nutrition Program (CPNP), to form a group of core partners and to complete a participatory food costing project throughout Nova Scotia. The overall purpose of phase I was to examine the affordability of a nutritious diet in Nova Scotia while building capacity among FRC/Ps and their participants to conduct food costing and influence policy to build food security through the use of participatory research processes. Using the National Nutritious Food Basket (NNFB) as the primary tool to cost the foods, a total of 54 participants in 21 FRC/Ps partnered with the NSNC and AHPRC to conduct the food costing in 57 stores (43 randomly selected) throughout the province. Overall, the results of the food costing showed that it would cost \$572.90 to feed a family of four a basic nutritious diet in 2002. When this cost was put into the context of the cost of basic living expenses, this data showed that many Nova Scotians, especially those relying on income assistance (IA) or minimum wage work, cannot afford to buy the food they need to support their own or their family's health and well-being. In addition, it was found that the cost of the NNFB was significantly higher in rural areas and within stores classified as small (less than 15,000 sq.ft.) compared with those in urban areas and those classified as large (more than 30,000 sq.ft.), respectively.

Phase II: A crucial piece of research felt to be key to affecting policy to increase food security was capturing the actual, real life experiences of food insecure individuals in NS. In an effort to fill this knowledge gap, the NSNC, FRC/Ps and AHPRC decided to embark on phase II that consisted of a series of eight story-sharing workshops, two train-the-trainer workshops and six story-sharing workshops with women involved in FRC/Ps throughout Nova Scotia. The story dialogue methods, as outlined by Labonte & Feather (1996)⁴, guided the processes of these workshops. During these workshops, 56 participants

and staff came together to tell stories and analyze their experiences of dealing with food insecurity. The results of phase II revealed that participants felt there was an overall lack of support from their community and from the people around them, which compounded their food insecurity and had a negative impact on their lives. More specifically, they felt that: people who are food insecure are often judged harshly by society; organizational policies/practices do not always support the real needs of individuals who are food insecure; experiencing food insecurity can be very stressful, especially for caregivers and children; and many barriers exist that make it difficult to access the amount and quality of nutritious food needed to support an individual's and/or family's health and well-being. The stories and analyses that emerged through the workshops also highlighted that participants felt the main factors causing Nova Scotians to be food insecure were lack of income, especially in regard to inadequate IA and minimum wage rates, employee benefits, and the general lack of social supports.

CONCLUSIONS

Several key issues emerged from this research. First, poverty and inadequate incomes present major barriers to food security and have implications for health and social inclusion for many in Nova Scotia. The findings suggest that: wages are too low and actions are needed to address the growing issue of precarious employment; supports are needed for low-income families to support employment and promote access to educational and recreational opportunities; and comprehensive food policies, based on a food security lens, are needed to promote health and nutrition.

Second, other issues affect food access, such as transportation and trends in the food retail industry. These issues may significantly impact rural communities, in particular. With regard to food access, the findings suggest that: food needs to be made more accessible in rural areas through the development/enhancement of local food systems; alternative transportation strategies, particularly for rural communities, need to be explored to promote access to nutritious food; and more research is needed to examine pricing policies to ensure they are fair, equitable and non-discriminatory.

Finally, this research clearly indicated that food banks, the dominant response to assisting those in need, are not necessarily the best or only approach. Other strategies need to be explored, including community-based programs and policy development options.

RECOMMENDATIONS

The partners of the Participatory Food Costing Project – the Nova Scotia Nutrition Council, the Atlantic Health Promotion Research Centre (AHPRC) and Nova Scotia Family Resource Centres/Projects (FRC/Ps) funded by the Community Action Program for Children (CAPC) & Canada Prenatal Nutrition Program (CPNP) provide several recommendations.

We invite the government of Nova Scotia to take action and show strong leadership in working with the Departments of Health, Community Services, Agriculture, Transportation and Public Works, Justice, Human Resource Development, Education and Finance, as well as with district health authorities, federal and municipal governments, community groups engaged in action on food security and all citizens to address the critical issue of food insecurity that impedes the health and well-being of many Nova Scotians. Specifically, we recommend the follow actions:

- Work towards restructuring and strengthening Nova Scotia's social welfare and food systems policies to include innovative strategies and actions that:
 - Respect the right of all Nova Scotians to a nutritious diet.
 - Build capacity at individual, community and system levels to ensure guaranteed access to a sustainable food supply in Nova Scotia for the health of present and future generations.
 - Respect the inclusion of people affected by the issue of food insecurity.
- Under the leadership of the Office of Health Promotion:
 - Use the findings and tools of the Participatory Food Security Project to develop and fund a system to ensure that food costing is conducted on an ongoing basis.
 - Ensure the Healthy Eating Strategy component of the Nova Scotia Chronic Disease Prevention Strategy is properly resourced to allow for its effective implementation to address food security issues.
 - Conduct policy analyses to explore strategies to: protect the affordability of basic food staples; develop stable and secure employment options; address transportation issues and rural food access; and support food system trends that promote access to affordable food, protect the land and people who produce food and promote local economies.
 - Support the Sport and Recreation Division as it works with the Departments of Education and Community Services to develop supports that promote participation for those on IA in education and recreation opportunities.

- Under the leadership of the Department of Community Services:
 - Index personal allowance portion of IA rates to reflect the actual cost of a nutritious food basket based on age and gender.
 - Index shelter allowance to adequately reflect average rental housing costs.
 - Consider other costs of living such as education, transportation, childcare and clothing to support families in accessing employment.
 - Increase the number of subsidized day care spaces to reflect the number of children living in poverty in Nova Scotia.
 - Develop an affordable housing strategy for Nova Scotia and increase the number of affordable housing units.

- Under the leadership of the Departments of Finance and Labour & Environment develop other programs and supports for working families:
 - Further increase minimum wage rates to reflect the daily costs of living in Nova Scotia.

- Finally we invite all groups to examine the report and think about the results, their implications and how they, as individuals and organizations, can be part of the solutions.

PARTICIPATORY FOOD SECURITY PROJECT OVERVIEW

The Participatory Food Security Project: Phases I & II were conducted by the Nova Scotia Nutrition Council (NSNC) in partnership with Nova Scotia Family Resource Centres/Projects (FRC/Ps) funded by the Community Action Program for Children (CAPC) & Canada Prenatal Nutrition Program (CPNP), and the Atlantic Health Promotion Research Centre (AHPRC). Both Phases I and II involved individuals in local communities through partnerships with CAPC/CPNP FRC/Ps.

The Nova Scotia Nutrition Council (NSNC) is a multidisciplinary advocacy group whose goal is to improve and maintain the nutritional health and well-being of Nova Scotians through education, advocacy and collaboration.

PHASE I: PARTICIPATORY FOOD COSTING

Despite the fact that Canada still has one of the lowest food costs in the world⁵, many people are unable to afford a basic, nutritious diet. The purpose of phase I of this project was to examine the affordability of a nutritious food basket in Nova Scotia. A participatory process was used to conduct this research to build capacity to address issues of food insecurity through policy change aimed at building healthy social and economic policy. This participatory process has aimed to involve those most affected by the issues, as well as government and community groups that have the ability to impact the policy issues. In Phase I, people involved in family resource centres/projects (FRC/Ps) throughout Nova Scotia participated as researchers and were trained, using a train-the-trainer model, to be food costers in their communities.

Health Canada's *National Nutritious Food Basket (NNFB)* was validated for use in Nova Scotia and used in 43 grocery stores across the province to determine the cost of a nutritious diet in Nova Scotia and each district health authority (DHA). The NNFB includes a list of 66 foods that can be used to estimate the cost of a basic, nutritious diet. The cost of the NNFB was then factored into different financial scenarios to estimate the affordability of a nutritious diet for lower income households. The monthly costs for food, shelter and other expenses considered essential for a basic standard of living were compared to average monthly incomes. The results show that many families in the province, especially those working for minimum wage or supported by IA, do not have enough income to purchase a nutritious diet when other basic costs are considered.

PHASE II: STORY SHARING

Phase II involved a series of story sharing workshops, which were based on principles of the story dialogue method outlined by Labonte

and Feather (1996)⁴. A series of eight story sharing workshops were held with 54 women from 10 FRC/Ps around the province in the winter and spring of 2003. The two initial workshops used a train-the-trainer model to enable those interested to be involved in the facilitation of a subsequent workshop in their area.

The workshops involved individuals telling personal stories about their experiences, with food insecurity in this case, to a small group of people. These stories were then discussed and analyzed by group members with the aim of gaining key insights into facts/information expressed in the stories. This process of discussion and analysis was guided by a structured set of questions including: **what** was happening in the story, **why** was this happening, **so what** is the significance of this story and what has the group learned; and **now what** can we do to change or improve what is happening.

Through this process the group was able to identify key insights that emerged from the discussion, each of which were written on separate pieces of paper. Following the discussions, these key insights were grouped into common themes and titled to represent the contents of the insights by the participants. Specifically, the workshops aimed to explore the lived experiences of women involved in FRC/Ps throughout Nova Scotia who had experienced food insecurity, to identify the impact this situation has on their lives and to identify potential solutions to the issues facing those who are food insecure.

WHY WAS THE RESEARCH CONDUCTED?

In the late 1990s the NSNC and individuals in FRC/Ps throughout Nova Scotia recognized the need to come together and discuss strategies to address the growing issue of food insecurity in Nova Scotia. Both groups recognized that lack of income, or poverty, was having an increasingly negative affect on the ability of Nova Scotia citizens to access the amount and quality of food they needed to support their health.

Historically, the NSNC has been a key player in working to address food insecurity in the province⁶. Food costing by the NSNC in 1988 in 13 communities and subsequent advocacy efforts resulted in a slight increase to the food allowance portion of social assistance rates at the time⁶. However, over the next decade cuts to social programs, increasing unemployment and increasing poverty in Nova Scotia led the NSNC to identify food security as a priority area in 1999. From this, a workshop was held by the NSNC

Family Resource Centres/Projects (FRC/Ps) support and bring together diverse groups of families, including those who are living in low-income circumstances (i.e., >50% of CAP-C households had incomes <\$20,000 in 1997). FRC/Ps are affiliated with community action groups that already exist in Nova Scotia. These groups possess values and ways of working that are consistent with the underlying principles guiding this project.

in June 2000 in Antigonish, NS entitled “Building Food Security in NS.” A key outcome of this workshop was a strong recommendation to revive the 1988 food costing project, “How do the poor afford to eat?”⁶

In this context, the NSNC, in partnership with FRC/Ps and AHPRC hereinafter referred to as the core partners, embarked on phase I of the Participatory Food Security Project. The project was developed under the careful guidance of the NSNC Research Working Group. This group later reformed as the Provincial Steering Committee, including members from each of the core partners, as well as other key partners (e.g., Public Health, the Departments of Health and Community Services, and Health Canada).

WHAT DID THE RESEARCH INVOLVE?

The food costing aspect of the Participatory Food Security Project was conducted in 57 stores in communities throughout all district health authorities (DHAs) in Nova Scotia. Forty-three stores were selected using systematic random sampling in order to calculate the average cost of food for the province and each DHA. An additional 14 stores in areas close to participating FRC/Ps were added at the request of participating food costers. The data from the 14 additional stores were gathered for the interest of the participants and were not factored into statistical analyses of the data. Phase I involved 18 support people, a National Advisory Committee (NAC), a Project Steering Committee, FRC/P staff, public health nutritionists and dietetic interns.

The Atlantic Health Promotion Research Centre (AHPRC) was created to encourage, facilitate, promote and share health promotion research in the Atlantic Provinces. AHPRC is a collaborative effort of the three health science faculties at Dalhousie University (Medicine, Health Professions and Dentistry), Provincial Departments of Health in the Atlantic region and Health Canada. The centre has a strong focus on building health-related public policy and on moving research to action in Atlantic Canada.

As the project proceeded, the core partners recognized that a crucial piece of research, key to affecting policy to increase food security, would be capturing the real life experiences of individuals who are food insecure in Nova Scotia. To address this concern, the NSNC, FRC/Ps and AHPRC developed and undertook phase II of this project. A total of eight story sharing workshops took place in communities throughout Nova Scotia.

WHEN DID THE RESEARCH TAKE PLACE?

Phase I of the Participatory Food Security Project started in August 2000; however, funding was not received to support the project until October 2001. Food costing data was collected during the weeks of June 16th to 22nd and October 21st to 26th, 2002. All costing took place within a one-week period to ensure consistency across sale items and

to avoid variability in food prices. Spring and fall were chosen because these seasons represent the times of year with the least seasonal variability in food costs.

Phase II took place from October 2002 to October 2003, following the submission of a proposal to Health Canada for additional funding support. The initial planning meeting took place in February 2003, followed by two train-the-trainer workshops, which began in March 2003. The remaining six story sharing workshops were held during the months of April and May 2003.

WHO WAS INVOLVED IN THE RESEARCH?

A total of 54 participants in 21 FRC/Ps throughout the province partnered with the NSNC and AHPRC to conduct the food costing in their communities. In addition, the project involved 18 support people, a National Advisory Committee (NAC), a Project Steering Committee, FRC/P staff, public health nutritionists and dietetic interns.

A total of 56 participants, 14 trainers and 42 participants from FRC/Ps throughout the province partnered with the NSNC and AHPRC to complete the story sharing workshops. Many of those involved in story sharing had also participated as food costers or support people in phase I, although there were some new participants as well. In addition, dietetic interns and FRC/P employees were key participants in this project.

INTRODUCTION

LITERATURE REVIEW

Food security is defined as a “situation in which all people at all times can acquire safe, nutritionally adequate, and personally acceptable foods that are accessible in a manner that maintains human dignity” (p. 139)⁷. Food security also exists when people are able to earn a living wage by growing, producing, processing, handling, retailing and serving food, as well as when the quality of land, air and water are maintained and enhanced for future generations⁸. Another component of food security is food’s importance to community and cultural integrity⁸. Therefore by definition, food security is multifaceted and is related to the ability to access, purchase, grow, produce and enjoy food. If one of these elements is threatened, a person may be considered food insecure.

Food insecurity goes beyond just the feeling of hunger and refers to the limited or uncertain access to or availability of safe, nutritionally adequate, culturally or personally acceptable foods, or the limited ability to acquire such foods in a socially acceptable manner^{1,2}. Food insecurity can occur at the individual, household and community/population levels^{2,9}.

Food insecurity was first recognized as an issue in Canada in the 1980s, corresponding with the emergence of food banks and children’s feeding programs². The problem has been closely linked with poverty, the rise of child poverty, growing inequality, the restructuring of social programming and cuts to social spending^{2,10,11}. Food insecurity is also closely associated with changes in agricultural, food processing and retailing practices occurring within a globalizing economy¹². Current practices within our food system in Canada may not be sustainable and could threaten long-term availability and accessibility of foods, as well as the environment^{13,14}. Furthermore, the uncertainty regarding the safety of foods (e.g., the use of hormones and pesticides) may pose a general threat to food security. Food security has been conceptualized as a multifaceted concept consisting of two key areas of concern: anti-poverty and social justice, and sustainable food systems¹⁵. While many of these issues contribute to the problem of food insecurity, the present study focuses specifically on poverty as a major barrier to food security.

FOOD INSECURITY IN CANADA

Food prices in Canada are among the lowest in the world^{5,16}. The average Canadian spends about 10.5% of their annual earnings on food (or 14% of their disposable income⁵), compared to 14.7% in Japan, 23.9% in Mexico and upwards of 25% in some European countries¹⁶.

Note that direct comparisons are difficult due to differences in other factors, such as pricing protection for food staples and rent controls that may exist in some countries where a higher proportion of annual earnings are spent on food. Despite the low cost of food in Canada, our food distribution system makes retail food more expensive than necessary^{5,16}.

Additionally, the impact of food costs can vary among households. For instance, low income Canadians can spend up to 30% of their disposable income on food⁵, and many may not have enough income to purchase the food they need.

According to recent statistics from the National Population Health Study (NPHS) and Canadian Community Health Survey (CCHS), between 10.2%¹⁷ and 14%³ of Canadians, respectively, reported living in food insecure households. This means that they did not have enough money or worried about having enough money to buy the food they needed. In addition, NPHS statistics indicate that food insecurity is 10.2 times higher in the lowest third of standardized incomes compared to the highest third¹⁷. According to the CCHS, the situation is even worse in Nova Scotia. This survey found that 17%, or almost 160,000 Nova Scotians, experienced food insecurity in 2000/2001³.

The rate of food bank use is often used as an indicator of severe food insecurity. According to the Canadian Association of Food Banks (CAFB), 777,869 people in Canada, greater than the population of New Brunswick, used a food bank during the month of March 2003¹⁸. This figure is up 5.5% since 2002 and is an alarming 105.8% increase since 1989¹⁸. However, food bank utilization rates may actually significantly underestimate the true incidence of food insecurity. Indeed, research shows that less than one third of Canadians who report that they have experienced food insecurity have actually accessed a food bank or other charitable food organization^{17,19,20,21,22}. In Nova Scotia, 20,263 people visited food banks in March 2003¹⁸. This represents a 9.9% increase from March 2002 and a 25.2% increase from 1997¹⁸.

It is important to note that the available evidence most likely underestimates the actual prevalence and extent of the problem, as surveys miss the most vulnerable groups. Such groups include the homeless, aboriginals living off-reserve, those without telephones and those who are transient.

Poverty and Food Insecurity

Many factors contribute to food insecurity. Poverty is a major factor⁹; lower income Canadians must spend a much larger proportion of their

income on food. Harmful farming practices, unfair trade policies and increasing corporate control of our food system are also factors.

Canada has no official measure of poverty, but is unofficially defined by Low Income Cut-Offs (LICOs) for various family sizes and living situations (i.e., urban versus rural)²³. The LICOs are relative measures of poverty^{24,25}. That is, they compare low-income households to the rest of society and define an acceptable living compared to the norm²⁵. The LICOs are based on what the average Canadian family spends on food, clothing and shelter as a percentage of pre-tax income²³. If a family must spend 20% more of their income than the Canadian average on food, clothing, or shelter, they are living below the LICOs and are considered to be living in poverty²³. Thus, by definition poverty and food security are intimately connected.

Other measures of poverty use an absolute rather than a relative approach²⁴. Absolute measures of poverty imply a fixed standard of living based in subsistence or minimalism, and consider poverty without comparison to societal norms²⁵. The Fraser Institute's Basic Necessities Line is an absolute measure based on a subsistence income that would be sufficient to provide enough food, clothing and shelter for a family to survive²⁵. This measure is limited to physical necessities for survival and does not include the need for other items²⁵, such as school supplies, transportation or physical activity. Recently, the Market Basket Measure (MBM) was developed by Human Resources Development Canada, which is another tool used to determine absolute rather than relative poverty thresholds²⁵. However, the MBM differs from the Basic Necessities Line because it includes the need for transportation and other necessities, such as personal care items, household supplies and school supplies²⁵.

An essential difference between relative and absolute measures of poverty is the societal values on which they are based²⁵. The former measures the amount of money spent on basic necessities relative to societal norms, and therefore acknowledges the importance of equality and social inclusion²⁵. For instance, there is agreement that clothing is required, but a relative measure values clothes that not only keep one warm but also maintain one's dignity²⁵. Similarly, housing should be safe and acceptable. While absolute measures, such as the MBM, consist of items and resources considered necessary for functioning in Canadian society²⁴, it acknowledges and accepts that some Canadians will be socially excluded and isolated²⁵. Indeed, using the MBM rather than the LICOs to calculate poverty in Canada actually reduces the rate of poverty without any subsequent improvements in quality of life or standard of living²⁶.

With 19.6% of all Nova Scotians living within Census Metropolitan Areas (CMAs) and 17.7% of rural Nova Scotians outside CMAs living in poverty²⁷, many Nova Scotians are at risk for food insecurity due to inadequate incomes to meet basic needs. Some of the highest rates of poverty are seen among unattached non-elderly and elderly women, recent immigrants, visible minorities and youth. Our children are also at risk for food insecurity, with 38,000 (19.2%) living in poverty in 2001, representing a 19.3% increase from 1989²⁸. However, no group is more affected than women, as they are 50% more likely than men to be living below the LICOs²⁹. Current statistics show that one in six women live in poverty in this province²⁹. Within this group, lone mothers are the most vulnerable, with 67.3% of female lone-parents with children under 18 in Nova Scotia living in poverty in 1997³⁰, representing one of the highest rates of poverty in Canada. In a study by McIntyre et al., (2002) with a group of low income lone mothers with at least two children younger than 14 years of age living in Atlantic Canada, those in Nova Scotia were 3.3 times more likely to experience food insecurity than those in other Atlantic Provinces³¹. Statistics also show that almost 54% of children in lone mother households still live in poverty in Nova Scotia²⁸.

An analysis of two cycles (1994 and 1996) of the same cohort in the National Longitudinal Study of Children and Youth (NLSCY) found that 22.6% reported persistent hunger over the two cycles³². Families who reported hunger in 1996 but not two years earlier in the 1994 cycle were 5.8 times more likely to have had a new child added to the family and 5.6 times more likely to have had the father lose full-time work³². The families that moved into hunger between 1994 and 1996 had lost an average of \$2690 in annual household income³². On the other hand, families who moved out of hunger between 1994 and 1996 had added an average of \$3827 to their annual household income³², suggesting that it takes more to move out of hunger. Such families, which reported hunger in 1994 but not in 1996, were 2.7 times more likely to have experienced an increase in income³².

The same study also examined frequently hungry families (reporting hunger at least every few months) versus occasionally hungry families. Frequently hungry families were larger, included more siblings in the house, and were more likely to have one parent whose primary activity was to care for the family³². There was also a significant difference in mean annual income between frequently and occasionally hungry families³². The mean annual income of frequently hungry families was \$20,435, compared to \$30,795 among occasionally hungry families³², a difference of \$10,360³², suggesting the need for substantial increases in income for frequently hungry families.

Two key factors have played a critical role in perpetuating poverty and food insecurity in Nova Scotia: the weakening welfare system and low minimum wages. These trends have emerged in conjunction with the introduction of neo-liberal policies that promote increased influence of the market and decreased influence of government in Canadian society³³.

The weakening of Canada's welfare system has occurred over the past few decades. During this time, eligibility for programs such as IA and Employment Insurance have become increasingly restricted,^{1,28} and the amount of income support, such as that available through IA plans, have stagnated or decreased in recent years^{9,34}. In particular, the replacement of the Canada Assistance Program (CAP) with the Canada Health and Social Transfer has been seen as an event having significantly negative implications for income support programs^{10,35}. This trend has resulted in reduced federal funding for social programs and the elimination of national standards for social assistance programs in the provinces¹⁰. The removal of national standards means there are fewer restrictions in how the provinces should operate their social assistance programs, and they are no longer required to ensure eligibility on the basis of need alone or to provide assistance in accordance with the level of need¹⁰.

Social assistance programs in Nova Scotia underwent significant redesign in August 2001, becoming the Employment Support and IA Program³⁶. Although eligibility for IA in Nova Scotia continues to be based on ability to meet basic needs and/or special needs, there is evidence that the allowances are currently inadequate to meet basic needs³⁷. Changes were designed to make special needs allowances more accessible for single parents and persons with disabilities and provide greater rates of assistance over previous municipal rates³⁷. The program also changed from categorical (e.g., disabled, single parent, able-bodied employed) to non-categorical based on levels of employability. This change aimed to offer individual employment planning and account for those unable to participate in direct employment. A client handbook is also in development in order to assist recipients in understanding their rights and entitlements within the program. While some changes have been positive, a study exploring the impact of the overall changes to IA has revealed many concerns with the current policy and programs³⁷. In addition to the inadequacy of assistance rates, concerns include lack of cultural sensitivity, difficult relations between IA workers and recipients and emphasis on employability rather than support⁷.

Over the past few decades, minimum wages have also been kept at unacceptably low rates throughout Canada and Nova Scotia. Nova Scotia has one of the lowest minimum wage rates in the country at

\$6.25/hr³⁸. Taking into consideration the increasing cost of living and changes in the value of the dollar, the minimum wage, based on the rate in 2002 (\$6.00/hr), had actually decreased by about \$2.00/hr in Nova Scotia since 1976³⁹.

Poverty can influence food security in other ways, such as through access to transportation and food retail outlets. Often individuals who are food insecure do not have access to their own transportation and therefore must spend additional monies to travel to stores if public transportation is available, which is not always the case in rural areas. Limited access to transportation may, in turn, affect the number of times they can shop, how much money is available to buy food and how much they can buy in each trip (i.e., if they take a bus they may be unable to buy as much)^{40,41}. Furthermore, some studies suggest that food retail outlets are more commonly located in more affluent sub-urban neighbourhoods as opposed to lower income neighbourhoods^{5,42,43}, increasing the distance required to travel for food. Research also suggests that the cost of food is higher in retail outlets that are located in lower income neighbourhoods^{5,42,44}. Qualitative data from this region also indicates a tendency for food prices to increase around the time that IA cheques are received^{41,45}, suggesting potentially discriminatory policies practiced among some food retailers. A lack of other resources, such as childcare, shopping and/or cooking skills and equipment, have also been identified as barriers to achieving food security⁴⁰.

Food Insecurity and Health

The negative affects of food insecurity can be seen most clearly among those it directly affects. Within a family, the adults most often bear the majority of the burden of food insecurity. Although data is lacking with regard to the patterns of food insecurity in two parent households, in lone-mother families it has been well documented that the mother compromises her diet for the benefit of her children⁴¹.

Good nutrition is a prerequisite to health; therefore it is not surprising that food insecurity results in negative health outcomes. The short-term effects on health include increased risk of nutrient deficiencies, which has been most notably found to occur in the population of low-income, lone mothers experiencing food insecurity^{31,41}. The nature of the relationship between poverty and health is very complex due to the inter-relationship of other factors such as stress, socio-environmental factors and lifestyle. Although the etiology is unclear, obesity is more common among low income versus higher income groups. Similarly, some studies suggest that food insecurity is specifically linked with obesity and risk for other chronic disease; however these findings remain controversial. The risk for other chronic diseases, such as

cancer, heart disease, diabetes and hypertension, is higher among the poor compared with the more affluent^{46,47}.

Individuals in food insufficient households have been found to have much higher odds of rating their health as poor or fair, of having restricted activity, poor functional health, suffering from multiple chronic conditions and reporting having heart disease, diabetes, high blood pressure and having food allergies compared to those individuals who resided in food secure households²⁰. Even more concerning is the effect of food insecurity on the health of children. Growing up in poor a household and facing the experience of food insecurity can have negative implications for a child's physical and mental developments, as they are at increased risk for ill health, poor nutrition, and poor school readiness¹⁹. This situation can continue to compromise the health of individuals as they grow into adulthood⁴⁸.

Food insecurity not only affects an individual's physical well-being, but also psychological and social well-being. Stress and anxiety are among the first indicators of household food insecurity⁹. Results of the NPHS showed that individuals in food insufficient households were much more likely than those in food sufficient households to have reported major depression and mental distress²⁰. Food insecurity also creates feelings of being socially excluded from normal societal functioning^{49,50}. People who are food insecure have reported that they feel they are not full participants in society because they cannot access food in a socially acceptable manner⁵⁰.

Instead, in one of the richest countries in the world, many are forced to turn to strategies to access food that are not socially acceptable, such as using charitable food organizations. Frustration around the quality of food received from food banks often causes negative feelings, as well. Hamelin, Beaudry & Habicht (2002)⁵⁰ found that the food clients receive from food banks is often of questionable quality and is sometimes food that the client may not like to eat or know how to cook. Although the use of charitable food sources has dramatically increased over the years, accessing such facilities is not considered socially acceptable⁵⁰, adding to feelings of social exclusion and alienation among those who use food banks and similar charitable food organizations. As a result of this social exclusion, many individuals may harbour psychological distress and feelings of powerlessness, shame, inequity and frustration^{41,50,51}.

Taking this evidence into account, the potential for the direct effects of food insecurity to have serious societal costs is clear. Without access to acceptable sources of nutritious, adequate, safe food, the potential for individuals to realize goals and partake fully in community life is greatly diminished⁴⁹. As such, communities suffer from the lost participation of

residents. Also, the impact of food insecurity on an individual's physical, mental and social health and well-being has enormous implications for the increased burden on our health care system and increased expenditures of tax monies when considered at the population level⁴¹. With the long-term negative affects food insecurity poses to children, there is great risk to our future generations, and therefore, to the future of our country if food insecurity is left to persist.

STRATEGIES FOR ADDRESSING FOOD INSECURITY

Two key approaches have been used to understand and address food insecurity: an anti-poverty approach, which views poverty as the underlying issue that needs to be addressed, and a sustainable food systems approach, which views issues within the current system of food production, processing and retailing as the root problems¹⁵. The differing approaches to food security prescribe a different set of solutions and changes, which can often create conflict and controversy regarding how resources should be allocated for building food security^{15,52}. Regardless of the approach, many efforts have been and continue to be made across Canada to address the problem of food insecurity and hunger⁵². Quite often, a number of different strategies are employed within a community or even a single organization to work towards addressing food insecurity. These strategies have been organized along a continuum referred to as the Food Security Continuum^{14,53,54}. The Food Security Continuum is comprised of three stages: efficiency/short-term relief, substitution/capacity building; and redesign strategies.

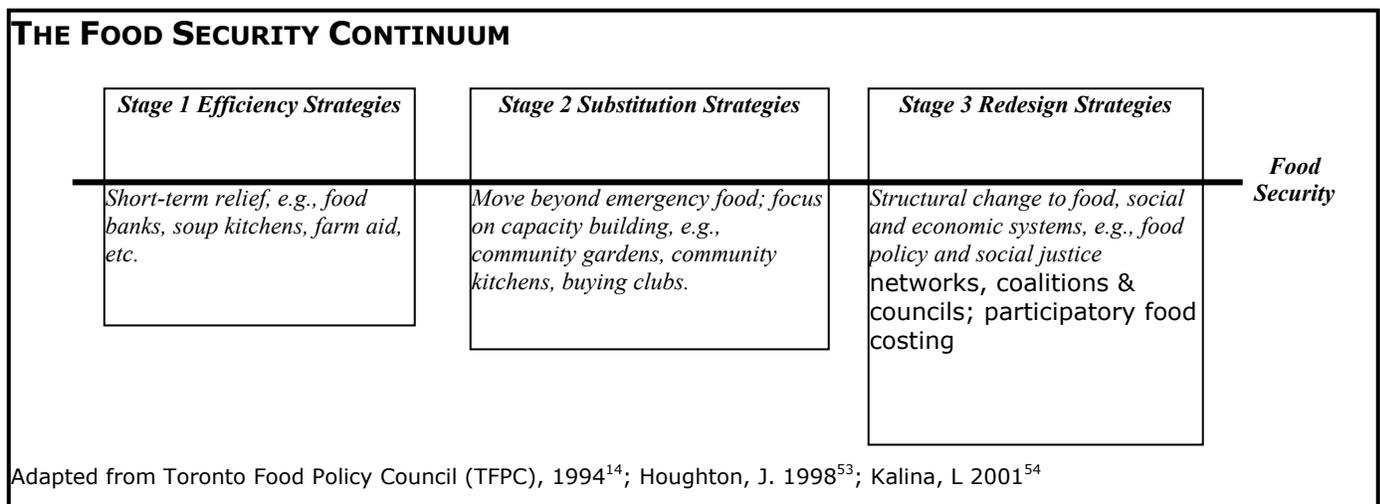


Figure 1. The Food Security Continuum

Actions that fall within the first stage of the continuum, efficiency strategies, offer temporary solutions to food insecurity. These strategies are commonly referred to as "Band-Aid" solutions because,

while they do offer short-term support, they do little to address the root causes of food insecurity or affect the problem in the long term. Common examples of short-term relief strategies are programs such as food banks, soup kitchens, children's feeding programs and relief aid for farmers⁵⁴.

Other strategies, referred to as substitution strategies, attempt to replace or act as substitutes for short-term strategies¹⁴. Substitution strategies may be limited in that they are often supported on a short term, project or ad hoc basis disallowing them to serve a systematic or sustainable role⁵⁵. However, such strategies also often attempt to build capacity among those individuals who are experiencing food insecurity to improve their situation through skill development, increased access to resources, increased awareness and community mobilization. One example would be to replace food banks with community kitchens and community gardens, or to offer them in tandem. Other examples of substitution actions and programs in Canada include food and agriculture-related job creation and training programs, participant managed food banks, co-op buying clubs and initiatives that support breast-feeding.

Redesign strategies involve a review or development of solutions for food security based on recognition of the structural causes of food insecurity¹⁴. Such strategies aim to affect policies that will result in long-term changes to address the root causes of food insecurity¹⁴. Actions at this level are often more costly and require a large amount of commitment from representatives of the entire food, health, social and economic sectors, as well as those who may be marginalized by these systems⁵⁴. However, actions at this level are likely to offer substantial, long-term improvements to the issues they are directed at affecting and are hoping to change⁵⁶. Despite the differences between anti-poverty and sustainable food systems approaches, there seems to be some consensus that in order to build food security, there must be movement along the continuum toward redesign strategies.

RESEARCH FRAMEWORK

Food insecurity occurs, in short, as a result of many issues within our food system, from the farm to the consumer. The present study approaches food security primarily from an anti-poverty perspective and focuses on issues facing consumers, namely the affordability of food. The key barrier to food security that this research focuses on is poverty and inequality as a result of inadequate wages and income and social supports. However, the approach used to guide this research recognizes that the sustainability of our food systems is also integral to building food security and that redesign strategies aimed at improving food systems are equally important and necessary as those aimed at

addressing the issue of poverty. This research was guided by several important underlying principles: participatory approaches, capacity building, social inclusion and food for all.

RESEARCH PRINCIPLES

Participatory Research

Using a participatory approach to research involves using processes to foster collaboration with those affected by the issue being studied⁵⁷ in this case, food insecurity. Participatory research is conducted for the purposes of education and taking action or affecting social change⁵⁷. Techniques and methods are used in all aspects of the research to facilitate participation and capacity building among those affected directly and indirectly by the issue. Participatory research also respects and builds upon the local knowledge and assets that already exist among the participating community.

In this case, the need for and purpose of the research emerged from the community, as some of the participants of FRC/Ps along with NSNC members were the catalyst for this initiative. Participants in food costing and story sharing were also involved in many aspects of the research, including data collection, data analysis, decision-making and report writing. Furthermore, the momentum built through collecting the evidence in the research has led to the submission of proposals and subsequent funding to continue. The communities involved in the food costing and story sharing have since been involved in initiating and conducting community dialogues regarding food insecurity and developing local strategies for addressing the issues. The dialogues represent the next step toward using the research to affect action and social change.

Capacity Building

Implicit in a participatory research approach is the notion of capacity building with those participating. Capacity building is an approach to the development of skills, organizational structures, resources and commitment to health improvement⁵⁸ that aims to bring people together to identify and mobilize on social and health issues that impact on their lived experiences⁵⁹. Capacity building can be thought of as a means *and* an end to building healthier communities. As a means, capacity building can be viewed as a part of participatory or empowerment processes⁵⁹. Not unrelated, capacity building can be the outcome of health promotion programs with strengthened individual and organizational capacities being considered an end in itself^{58,60,61}. Working with communities to identify and implement solutions to the issues that affect them may not only build capacity, but also prolong and multiply health gains for the longer term⁵⁸. Strengthening capacity

within a community is considered an investment in longer term success as it may increase the potential of the community to address not only a current problem, but issues faced in the future as well⁵⁸.

Social Inclusion

This research is also based on the principles of social inclusion. Social inclusion is a proactive human development approach that aims to reduce the barriers and risks that individuals or communities may face in achieving meaningful inclusion and participation in decision-making, developing social policy, employment and common cultural and social activities^{62,63}. Social inclusion is not about simply inviting people to the table or gaining their input, it is about seeking social justice, equity, valued recognition, human development and capacity building, and meaningful engagement^{62,63}.

One of the key strategies used to ensure inclusion in the Participatory Food Security Project was to provide support for any expenses faced in participating and to recognize contributions that individuals made through honoraria. Participants were provided with support throughout the projects in the form of reimbursement for childcare expenses and transportation. In addition, the cost of meetings, workshops, and meals and snacks were all covered through project funding.

Food Security for All

Finally, this research is based in the notion that food is a basic human right, as has been declared in many international declarations and covenants of which Canada has been a party^{10,64}. Therefore, to achieve food security and ensure all have access to safe, nutritious and affordable food, efforts must be taken to address the root causes of food insecurity.

FOOD COSTING AND FOOD INSECURITY

Given the myriad of issues related and contributing to food insecurity, conceptual and methodological challenges make it difficult to measure and monitor this phenomenon. Food costing is just one way to monitor food insecurity by measuring the cost of a nutritious diet and relating this to the cost of other expenses considered essential, such as shelter and clothing, to determine affordability. Using a validated tool such as the National Nutritious Food Basket (NNFB), food costing can provide a proxy measure of the affordability and accessibility of food⁶⁵. Food costing can be effective in determining which populations may be economically vulnerable to food insecurity⁶⁵. The information gained from food costing can then be used by policy and decision-makers to develop health, nutrition and social policies that reflect the cost of a nutritious diet⁶⁶.

Food costing studies, using standardized lists of foods, have been done throughout Canada as a basis for policy decisions for over half a century⁶⁶. The federal government first became involved in food costing in 1974^{66,67}. Agriculture and Agri-Food Canada developed standardized lists of foods that contribute to a nutritious diet – the Nutritious Food Basket (NFB), and later the Thrifty Nutritious Food Basket (TNFB) in 1989 – as tools for monitoring the cost of a nutritious diet⁶⁷. These food baskets were used by Agriculture and Agri-food Canada until 1995, when the practice was discontinued, to provide benchmark information for the cost of a nutritious diet in 18 cities across Canada^{66, 67}. The data has been widely used by health, nutrition and social service agencies for policy, planning and advocacy work by determining the costs of a healthy diet and setting food allowances for IA programs^{66, 67}.

In Nova Scotia, provincial food costing was conducted on a regular basis until 1985. In 1988, the NSNC conducted a provincial food costing and released “How the Poor Afford to Eat.” In 1997, Travers⁴² reported a case study where participants at one Nova Scotia family resource centre in a low-income area chose to conduct food costing in their community as part of a larger research project. These studies both resulted in advocacy and lobbying efforts, the former led to a slight increase in food allowances at the time, while the latter resulted in a change in grocery store policies in the participants’ community.

In 1997 a provincial food costing was conducted again using the Consumption Food Basket, which was based on the consumption patterns of Nova Scotians and was developed for the purpose of food costing. This new food basket was developed because it was recognized that the NFB and TNFB were outdated and no longer reflected current nutrition recommendations⁶⁸. Other user groups across Canada also identified the need for an up-to-date NFB and successfully advocated for a revision of the tool based on current nutrition recommendations and food purchasing patterns^{66,67}. Health Canada developed the updated NNFB in 1998⁶⁶. Although the NNFB was developed to monitor the cost of eating a nutritious diet, the federal government has not been keeping regular food costing data. In some provinces, health/nutrition professionals have taken on the responsibility for collection of food costing data. In Nova Scotia, a mandate or mechanism does not currently exist for collecting data on the cost of the NNFB. However, the NNFB is used to calculate the cost of food for the MBM²⁴. The NNFB is used to collect food costs on a monthly basis in 19 urban centres across Canada, including Halifax, Nova Scotia⁶⁹. While this data provide a good estimate of the food costs for Nova Scotia, it assumes that the cost of food does not vary within the province by region or community size⁶⁹. Therefore, further use of the NNFB to assess the cost of a basic, nutritious diet in Nova Scotia is needed.

The NNFB is a standard list of 66 basic foods that reflect the average purchasing patterns of Canadian households, meet Canadian nutrition recommendations and are palatable and economical. The NNFB does not constitute a recommended diet, but rather is a list of food that can be priced to determine the cost of a nutritious diet for different age and gender groups. These foods include a variety of economical choices from the four food groups found in Canada's Food Guide to Healthy Eating⁶⁶. Together, these 66 food items can be used to prepare a week's worth of meals and snacks that meet nutrient requirements for both adults and children⁶⁶. The NNFB includes foods from all four food groups; some are raw ingredients (flour, raw fruits and vegetables), others are convenience foods (hot dogs, canned fruit). The cost of condiments and spices is factored in, but overall costs are kept low by including sale priced items and excluding expensive items, such as prepared meals and convenience foods (i.e., frozen dinners), take out and restaurant foods, and items with little nutritional value (e.g., soft drinks, potato chips) or other items that are commonly purchased in grocery stores (e.g., toilet paper, cleaners, soap). In short, the basket is generally lower than the average Canadian would purchase to ensure a healthy diet.

STORIES OF FOOD INSECURITY

Real life stories can be a powerful way to convey the lived experiences of individuals and families. Stories provide a more in-depth, human picture than the quantitative data that is often used to describe complex issues facing society. The story sharing (or story dialogue) method offers way to explore lived experiences, while analyzing such experiences for contributing factors and causes, such as broad social, organizational, political and economic structures^{4,70}. Stories can play an important role in advocating for change, as they give voice to those who are most affected by an issue⁴. Furthermore, including the voice of vulnerable populations in the understanding of the impacts of broader social structures for human experience is essential for building our understanding of what can be done and identifying viable, long-term solutions⁷⁰.

The story sharing method allows participants, the people affected by a certain issue, to move through a reflective process and self-analysis of the problem⁴. This fits with the participatory and capacity building approaches to this research. Together, the information gained from both phases I and II of the Participatory Food Security Project will be a strong advocacy tool for the core partners and other concerned individuals to work towards affecting those policies that underlie the issue of food security in this province.

METHODS

The Participatory Food Security Project used a combination of research methods to collect quantitative and qualitative data on the affordability of a nutritious diet in Nova Scotia and issues related to food security.

The objectives of the research reported were:

- Determine the cost and affordability of a nutritious food basket in Nova Scotia,
- Explore the experience of food insecurity,
- Examine the potential causes of food insecurity, and
- Explore what can be done to address the causes.

This section will begin with an overview of a train-the-trainer method that was used in both phases of the research to build capacity in communities to conduct food costing and story sharing studies. Finally, the methods used for data collection and analysis in each phase will be outlined. Evaluative research has been conducted to assess the perceptions of those participants who were involved in this research regarding their experience in doing so. The research is also intended to assess the capacities that were built among the participants as a result of their participation. The two latter aspects of this research will be reported separately.

USING A TRAIN-THE-TRAINER MODEL

A model for food costing training was developed and piloted in March 2002 with Family Matters FRC in Annapolis Royal, Nova Scotia. On May 2, 2002, FRC/P participants and staff, public health nutritionists, NSNC representatives, and Health Canada program consultants from throughout the province met in Daysprings, Nova Scotia. The purpose of this planning meeting was to discuss expectations and roles, as well as to prepare for training and food costing that was to take place in the spring and fall of 2002. Discussions at the meeting and feedback from participants in the training workshop piloted at Family Matters FRC indicated a desire on the part of participants to use a train-the-trainer model for conducting the food costing training. Participants indicated that involving local FRC/Ps in training workshops held in their communities would serve to ensure their comfort level while receiving the food costing training. It was further suggested that training FRC/P staff and public health nutritionists along with participants would provide additional support to those doing the food costing. It was proposed that those individuals interested in helping deliver the training workshops participate in a train-the-trainer workshop. Following that, they would partner with the NSNC to conduct the food costing training for FRC/P participants in five different areas throughout each region of the province. In addition, those who volunteered to act as support people would be invited to attend one of the five training workshops to be trained in food costing methods along with the food

costers, so that they could act as a resource in their community to help support food costing. **Figure 2** illustrates the process used for the food costing training.

A total of 10 FRC/Ps staff and participants from across the province came together in Truro for a train-the-trainer workshop delivered by project staff, dietetic interns and the principal investigator on May 17, 2002. The process that had been developed and piloted with Family Matters FRC was modified and used to deliver the food costing training. The train-the-trainer workshop essentially modelled the training to be used in the subsequent workshops, with discussion of the purpose of each activity and tips for workshop facilitation. Five additional food costing training workshops facilitated by representatives from the NSNC and FRC/Ps were then held throughout the province during the last week of May and the first two weeks of June. In total, 47 food costers and 18 support people participated in the training. An additional seven people helped conduct food costing in their communities with a food coster who had been trained.

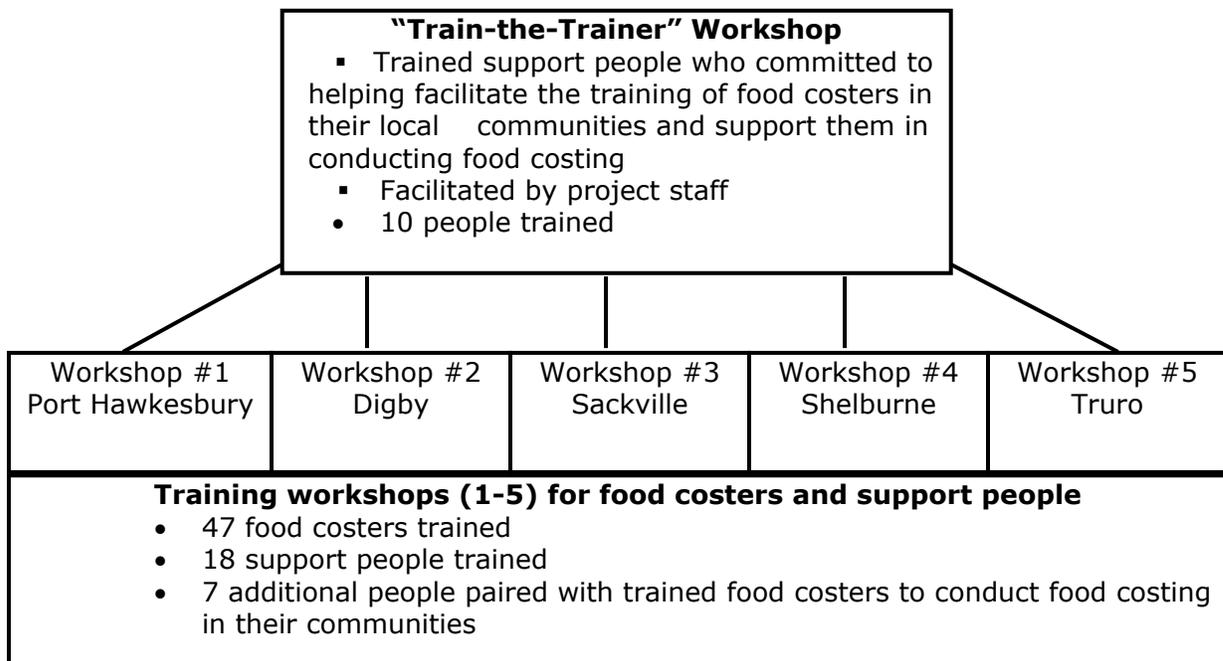


Figure 2. Training process for participatory food costing

The objectives of the food costing training workshops went beyond training in food costing methods. These workshops were also viewed as an opportunity to engage in dialogue about food security and policy, and to identify supports needed by participants to conduct the food costing. The activities in the workshops reflected these objectives.

Prior to attending the workshops, FRC/P participants were asked to complete a pre-workshop questionnaire (see Appendix B) to determine

their expectations for the workshop and their understanding of the terms “food security” and “policy.” During the workshops, participants were asked to draw a food secure community and to discuss the components. This exercise was intended to further facilitate a common understanding of the terms food security and policy. A reflective exercise was also used at the workshops to gather input from participants regarding how they needed to be supported to do food costing; how to use the results to influence policy; which decision makers should be involved; and what communities addressing the issue of food security would look like. As part of this exercise, participants identified the skills, knowledge and other capacities they considered to be important to participate in the project and to help build food security in their communities. The results of the reflective exercise have been used to describe how “capacity building” will be evaluated for the purpose of this project (see Appendix C).

In the second half of the workshop, participants were introduced to the food costing tool – the NNFB. Step-by-step instructions on in-store food pricing procedures were provided. Workshop participants then went to the local grocery store to allow for “hands on” experience using the food costing tool. At the grocery store, participants broke into small groups, each with a NSNC or FRC/P food costing trainer to help the group collect prices for the food basket (see Appendix D for food basket form). Following food costing, participants returned to the centre where instructions and worksheets were distributed. The sheets explained the calculations (or formulas) required to determine costs and instructions on how to calculate the cost of the food basket. Prices were gathered from each group and entered into a spreadsheet to calculate an average cost of the entire food basket. Time was then spent reflecting on the results and talking about what the findings meant for participants’ personal situations and for their communities. Following this, each participant was asked to complete a post-workshop questionnaire. The results of the pre- and post-workshop evaluations have been reported separately¹.

The success of the train-the-trainer model for the food costing workshop prompted the method to be adapted for phase II of the project, the story sharing. A workshop was developed by project staff in partnership with FRC/P staff and participants who indicated an interest in working on this. Project staff modelled the process to the participants with emphasis on the actual process, and participants were encouraged to ask questions about the process. Two train-the-trainer workshops were held, one in Sackville and one in Digby, with five and

¹ Available at www.nsnrc.ca

nine individuals trained, respectively. Figure 3 outlines the process used for the story sharing training.



Figure 3. Training process for participatory story sharing

A total of 56 participants, 14 trainers and 42 participants from FRC/Ps throughout the province partnered with the NSNC and AHPRC to complete the story sharing workshops. Many of those involved in the story sharing had also participated as food costers or support people in Phase I, although there were some new participants as well. In addition, dietetic interns and FRC/P employees were key participants in this project.

The train-the-trainer workshops were slightly different than the other story-sharing workshops in that the project staff modelled the process to the participants and more emphasis was put on the actual process, and participants were encouraged to ask questions about process. Following the train-the-trainer workshops, participants were given the opportunity to take part in organizing and facilitating the story-sharing workshops held in their respective communities; however, the participants were not required to do so. Roles assumed by the train-the-trainer participants in the story-sharing workshops included: assisting the project staff in recruiting people from their FRC/Ps to take part in the workshops, assisting in the organization of the workshops, assisting in facilitating a workshop and/or independently facilitating a workshop and taking full responsibility for organizing and carrying out a workshop.

Each training workshop was between four to five hours in length. Participants for these workshops were selected through the assistance of a story-sharing committee. Individuals who were involved in Phase I

were also informed by the project staff about the story-sharing workshops of phase II project and were invited to become involved.

PHASE I: FOOD COSTING METHODS

VALIDATION OF THE NNFB FOR USE IN NOVA SCOTIA

Health Canada's standardized survey tool, the *National Nutritious Food Basket 1998*⁷¹, was used to collect food-costing data in this study. Two focus groups were conducted with women associated with FRC/Ps to determine face validity of the NNFB (i.e., whether the food items in the NNFB reflected the eating patterns of Nova Scotians). Using the items and quantities included in the NNFB, a seven-day menu was developed. After the menu was presented, questions were asked to garner participant reaction. Specifically, participants were asked to reflect on whether they felt the menu would be acceptable to their family and to comment on why the menu was or was not acceptable. They were asked to be specific about any meal suggestions and snacks that would not be acceptable or to comment on any they felt were missing. Participants were asked to try to avoid commenting on individual likes and dislikes. The final action was to generate a shopping list based on the menus presented and to compare that list to participants' typical shopping lists. Overall, the menus and shopping lists were considered acceptable.

"...that is all that I buy." (Focus Group 2)

"Yes, I would buy everything on the menu." (Focus Group 1)

Issues of unacceptability identified were related to personal factors such as the inability to afford certain items and food allergies. It was noted in both focus groups that snack foods or treats such as cakes, cookies and chips were missing. While it is recognized that these foods are commonly consumed, they were excluded from the NNFB for reasons discussed previously.

GROCERY STORE SELECTION

A list of all Nova Scotia grocery stores² was generated using information from the Canadian Council of Grocery Distributors, contacting head offices of the major grocery store chains, as well as from <http://www.yellowpages.ca/> using "Nova Scotia" and "retail grocers" as the search terms. Members of the NSNC Research Working Group and partner FRC/Ps from across the province cross-checked the list by comparing it with their knowledge of existing grocery stores in their communities, and the lists from the major grocery store chains and yellow pages were used to develop a more complete list and

² Any retail store selling a line of dry grocery, canned goods, or non-food items, plus some perishable items (Canadian Grocer's Magazine, 1997/98)

accurate addresses. While convenience stores³ sometimes serve as a significant site for grocery purchases, it was not feasible to compare convenience store data with data from grocery stores because the availability of foods listed in the NNFB would be limited in convenience stores.

If it was unclear whether a listing was a grocery or convenience store, the store was phoned to determine if it was a convenience store, and, if so, it was omitted from the final list. In addition, warehouse type stores⁴ and those that require paid membership were excluded, as they would not have food items in the required sizes and would not be accessible to everyone if paid membership was required. A systematic random sampling strategy was used to select 44 grocery stores throughout Nova Scotia⁵. The sampling was based on the population in Nova Scotia, the total number of grocery stores and an allowance for five store refusals.

In addition to the 44 randomly selected grocery stores, 14 were added to the original list for a total of 58 stores. The 14 other grocery stores were identified through consultation with FRC/Ps as stores they were interested in and considered essential to include because of their location. Specifically, the additional 14 grocery stores were situated in low-income neighbourhoods or rural areas and had particular relevance to many of the participants' experiences. The purpose of the consultation with FRC/Ps was related to the participatory nature of the research and the focus on building capacity among FRC/P participants to affect change around food security issues. Ensuring that the research remained relevant to the project participants was essential to the participatory process, and FRC/Ps indicated that it was important to collect information from grocery stores in and around the participants' own communities. Only those randomly selected stores were used to determine the average cost of purchasing the NNFB for the province and by DHA.

ON SITE PRICE COLLECTION

Food costing data was collected on two separate occasions according to standardized methods in the spring and fall of 2002⁷¹. This collection was undertaken because these seasons represent the times of year with the least variability in food costs. Prior to both the spring and fall

³ Compact; drive-to store offering a limited line of high convenience items. Many sell gasoline and some sort of fast food, are under 2400 square feet in size and keep long hours (Canadian Grocer's Magazine, 1997/98)

⁴ A store with more than 1,500 items, and that stocks primarily dry grocery with some perishables, has a low margin and labour ratio, uses utilitarian fixtures, and emphasizes lower prices at the expense of customer service. (Canadian Grocer's Magazine, 1997/98)

⁵ Note that our actual calculated sample size is 44, but because of the sampling strategy adopted and the sampling interval chosen we ended up with 43 stores in total for costing.

food costing, a letter was faxed to the selected grocery stores that explained the project and invited the store's participation (see Appendix E). Following that, a member of the research team, requesting permission to conduct the food costing in their store, contacted grocery store managers. Only one store refused to participate, bringing the total number of randomly selected stores to 43. Each store was informed of the date and time that the food costing was expected to take place.

Food costers worked in pairs and were instructed to identify themselves to the manager when they arrived at each store. All food costers were provided with name badges to wear that identified the project and assured store managers of their legitimacy. Following the costing, a thank you letter was faxed to the participating grocery stores. A set of standardized guidelines for the in-store food pricing procedures based on the NNFB⁷¹ was provided to and followed by the food costers (see Appendix F). The guidelines helped to ensure that pricing was done consistently in the stores costed throughout the province. Food prices obtained from each store for each food item were recorded by the food costers on a food basket form and returned to the research team.

CALCULATING FOOD COSTS

A cost averaging spreadsheet, provided by the Ontario Ministry of Health, was adapted to reflect the NNFB and was used to manage data and facilitate price calculations. Prior to entering the data from the food costing forms into the spreadsheet, the recorded prices and evaluations were reviewed and checked to ensure accuracy. For example, if costers recorded a price for an item using a size that was not specified on the NNFB, the specified size price was crosschecked with the alternative using unit prices, calculations were made and prices adjusted accordingly. As well, when produce was priced per bunch or head the calculated, price per kilogram was double-checked for accuracy. Once the checked prices were entered into the spreadsheet, a second research assistant verified each calculation and spreadsheet entry. Any changes or revisions to calculations or prices entered were recorded and initialled by the research assistants.

If an item was missing, no value was entered to the spreadsheet. The cost averaging spreadsheet was designed to calculate the average price for missing items using the existing data from all other prices entered for that particular item. Purchase prices from each food item entered into the spreadsheet are automatically multiplied by a scalar to convert all prices to a common unit. The scaled price is then multiplied by a weight that represents the relevant weighting or contribution of that food within the overall food grouping.

The spreadsheet then automatically generates the weekly costs of the food basket for a reference family of four and 23 different age and gender groups. The reference family consists of a woman and a man between the age of 25 and 49, a 13-year-old boy, and a seven-year-old girl. The data from the spreadsheet can be used to determine the cost for families of different sizes and age and gender composition⁷¹. The cost for families smaller and larger than four people can be adjusted to account for economies of scale. The cost can be decreased by a factor of 5% to account for each person beyond a four-person household, and increased by a factor of 5% for each person less than a four-person household. Therefore, for a household of one the total would be increased by 15%, a family of two by 10%, and a family of three by 5%. Conversely, for a family of five the cost would be decreased by 5% and a family of six by 10%.

Monthly costs were obtained by multiplying the weekly cost of the NNFB by 4.33 corresponding to the number of weeks in a month. According to the NNFB guidelines, a 5% factor was also added to the cost of the food basket to cover miscellaneous food items used in meal preparation or those purchased in small quantities such as spices, condiments, coffee and tea⁷¹.

STATISTICAL ANALYSIS

The Statistical Package for the Social Sciences (SPSS), version 9.0 (SPSS, Inc., Chicago, IL) was used to assist with statistical analysis of the data, using a probability level of 5% (.05) as the level of statistical significance. Descriptive statistics were generated to determine the average cost of the NNFB for Nova Scotia, as well as the average cost for each DHA.

Throughout the project, several other questions arose that were of particular importance to FRC participants: 1) Is there a difference in the cost of food in small versus large stores, 2) is there a difference in food costs when shopping in urban and rural areas and 3) is there a difference in food prices when shopping in low versus high-income areas. Each of these questions was examined. ANOVA was used to test if the mean monthly cost of the NNFB differed significantly between stores classified by size. For the purpose of this project, stores smaller than 15,000 square feet were classified as grocery stores, those between 15,000 and 30,000 square feet as supermarkets, and those over 30,000 square feet as superstores. Potential relations between median annual family income by county and the mean annual cost of the NNFB by county were examined using Spearman's Rho Correlation coefficient.

Student's Independent t-tests were used to test if the mean monthly cost of the NNFB differed significantly between stores classified by DHA and as being located in an urban or rural area. A rural area was defined as towns and municipalities outside of the commuting zone of urban centres with a population of 10,000 people or less. Conversely, an urban area was defined as a community with a population of greater than 10,000 people.

CREATING COMPARATIVE SCENARIOS TO ESTIMATE AFFORDABILITY

In order to put the cost of a nutritious diet into context, scenarios were developed to compare food costs with household incomes to determine if such a diet is affordable. Scenarios were developed for the reference family of four (two parents, a boy 13 and a girl seven), a lone parent, female-headed household with two children (boy seven, girl four), and a single, unattached adult male. The scenarios consider the estimated income for the households using: the minimum wage in Nova Scotia at the time that this document was developed and for proposed increases, the average call centre wage and the IA rates with and without employment. To offer comparisons, a scenario was also developed based on the reference family earning the median income in Nova Scotia for a two-parent household with children under 18 (\$60,381 before tax), and an average family in Nova Scotia (two adult parents and 1.1 children, rounded down to one child) earning the average family income in Nova Scotia (\$46,523 before tax)⁷².

The estimated cost of basic household expenses, such as shelter, heat, transportation and clothing, were deducted from the estimated income to reveal the funds remaining for food and other expenses. Other expenses include those not included in the scenario, such as savings for unexpected expenses and emergencies, personal hygiene, household cleaners, laundry, prescriptions, dental, physical activity and recreation, education and home and/or life insurance. The scenarios were developed using standard estimates for income and expenditures; however it must be noted that they represent estimated scenarios and may not reflect the actual situations of the similar households to those presented. Income and expenditures can vary for many reasons, and it is difficult to account for all such variations.

The estimated incomes are based on after-tax income from wages, IA, child tax benefits and GST credits. Expenses deemed essential for a basic standard of living were identified from an examination of expenditure categories included in the Market Basket Measure⁶⁹ and the Survey of Family Expenditures⁷³. The net income for each scenario was calculated by taking the gross income for the earner in each scenario and deducting the rates for federal and provincial income

taxes, Canada Pension Plan (CPP) and Employment Insurance (EI) (see Appendix G for tax deductions).

IA in Nova Scotia provides a basic personal allowance of \$180 per month to each adult receiving assistance for food, toiletries, clothing, prescription fees, cleaning supplies, laundry and other items needed throughout the month. A shelter allowance is also provided and varies depending on family size. A family of one is entitled to \$235.00 per month or an additional \$300.00 incremental allowance up to \$535.00 monthly under certain circumstances, a family of two receives a maximum of \$550.00, and a family of three or more qualifies for a maximum shelter allowance of \$600.00. The shelter allowance is meant to cover all shelter expenses, including heat, lights, water, maintenance and so on. While these amounts are the maximum available to families, if a family should find accommodations for less than the allotted shelter allowance, the family receives their actual costs up to the maximum amount. Also, if the actual cost of accommodations is less than the allotted shelter allowance and there are additional costs for power/heat and water, then an additional amount for utilities can be included up to the maximum shelter allowance.

Those on IA who are able to and have found work can continue to receive IA and keep 30% of their earnings, as well as receive other supports for work-related expenses, such as monies for transportation and child-care. For example, a single employable male participating in an active employability plan is eligible to receive up to \$150 for transportation depending on the circumstances, such as access to public transit⁶. Other expenses may be provided through IA in order to support an individual in employment, such as work clothing or telephone. Only the allowances for transportation and child-care have been included here, as recipients may be unaware of other supports and/or the supports may be time limited or provided on a one-time only basis.

Additional supports are also provided for health related expenses. For instance, recipients may receive additional supports for special dietary requirements or any other expense related to a chronic health problem. However, because the scenarios were developed assuming typical circumstances, these possible supports were not included. It would be difficult to account for all possible variations. It should also be noted that such allowances are usually provided to cover a certain expense, and therefore would not add to the disposable income of the recipient.

It should be noted that other tax credits and reductions might be available for families, such as the Nova Scotia Low Income Tax

⁶ Note that in the scenario an allowance of \$65 was used to reflect the MBM estimates

Reduction. However, many such reductions and credits are only offered annually or one-time only and would not dramatically alter the monthly income for a family over the course of a year.

The Child Tax Benefits (CTB) and GST credit for each scenario were calculated using the online benefits calculator provided by the Canada Customs and Revenue Agency. This calculator provides an estimate for the amount of CTB that can be received based on household income, the number of children and child care expenses⁷. The CTB calculator estimates the basic credit for which all parents are eligible, the National Child Benefit Supplement (NCBS) for low-income families and the Nova Scotia Child Benefit (NSCB) provided to low-income families in Nova Scotia⁸. The GST credit calculator provides a quarterly estimate based on household composition and income. Income from GST credit presented in the scenarios is based on the quarterly estimate divided by three to provide a monthly credit rate. It should be noted that GST credits may not be rationed out over each month by individual households, but has been used for the purpose of estimating monthly incomes for the scenarios.

Estimated expenses are calculated for food, shelter, heat, hot water and power, childcare, transportation, basic telephone and clothing using various sources. Monthly household food expenses were calculated as the weekly food costs for each household member based on the individual's age and gender using the 2002 Nova Scotia food costing data reported here. Total weekly expenses were adjusted for family size and converted to monthly costs.

Expenses for shelter, transportation and clothing are based on those used in the Market Basket Measure (MBM)⁶⁹. The MBM estimates are based on a reference family of four similar to the reference family used here, except that the children are a girl of nine and a boy of 13⁷⁴. To account for differences in household size and composition, such as ages and the number of people, the Low Income Measure (LIM) equivalence scale is used to adjust estimated costs (see Hatfield, 2002⁷⁴ for a complete description of the LIM equivalence scale and methods for its application). The LIM equivalence scale was applied to the estimated expenses based on the MBM used in the scenarios here, with a factor of 85% applied to the three-person household (mother and two children) and 50% applied to the unattached male⁷⁴.

⁷ At www.ccr-aadrc.gc.ca/benefits

⁸ Families earning a net income below \$21,529 are eligible for the maximum basic benefit, as well as the CCTB, the NCBS, and any provincial, territorial or first nations benefits; families earning a net income between \$21,529 and \$33,487 are eligible for the maximum basic benefit of \$1169 annually; families earning a net income above \$33,487 are still eligible for part of the basic benefit. See www.nationalchildbenefit.ca.

The MBM shelter expenses for specific communities (i.e., Halifax/Sydney [urban] or rural) were used if the community was specified for the scenario. Otherwise, an average shelter expense was calculated by averaging the MBM estimates for five different community sizes in Nova Scotia (i.e., rural, <30,000, between 30,000-99,999, Halifax CMA and Sydney CA). The MBM shelter estimate represents an average cost based on the median rent for two- and three-bedroom apartments in each community size⁷⁴. The MBM also assumes that heat, water and electricity are included in the rent⁷⁴. However, according to the Government of Nova Scotia's *Cost of Living in Nova Scotia*⁹, rents appear to be much higher than the more conservative estimates of the MBM. For instance, the MBM estimate for the average of the median rent for two- and three-bedroom apartments for Halifax is \$686.75/month⁶⁹. Meanwhile, the *Cost of Living in Nova Scotia* estimate for a two-bedroom in Halifax is \$720.00/month and \$934.00/month for a three-bedroom, for an average over \$800.00. To address the discrepancy between the two estimates, it was decided that the more conservative estimate would be used, but that the assumption of included utilities (heat, water, electricity) would not be maintained. Instead, a conservative estimate of the cost of electric heat, power and water were included in the scenarios. In this way, the more conservative rental costs account for the possibility of accessing public housing or other social housing arrangements for low-income renters, while the addition of utility costs account for the discrepancy in rental estimates and the fact that there is a lack of affordable housing arrangements for low-income families in Nova Scotia^{75,76}. The cost of electric power, heat and hot water can vary based on the size of the apartment or house; the number of occupants; the age and gender of the occupants; and whether electric, oil or alternative heat is used. Costs for these expenses were approximated based on conservative estimates from Nova Scotia Power for a small, two bedroom residence with two occupants at \$1200/yr (\$100/mo), and for a mid-sized, three bedroom apartment at \$1500/yr (\$125/mo) (personal communication, August 8, 2003).

The transportation cost, also taken from the MBM estimates, is based on the cost of owning and operating a five-year old Chevy Cavalier⁷⁴. The operating costs include 1500 litres of regular gasoline, insurance and license fees, a tune up and two oil changes⁷⁴. The MBM also calculates transportation costs for urban areas based on a public transportation pass for two adults and one round trip taxi ride monthly⁷⁴. When a scenario presented specifies an urban community, the public transportation cost is used. However, for those scenarios calculated using average costs for the province, the cost of owning and

⁹ See <http://www.gov.ns.ca/cmns/overview/col.asp>, the Cost of Living in Nova Scotia housing costs are based on the Canadian Mortgage and Housing Corporation Survey, 2001.

operating a vehicle was used, as public transportation systems are only offered in Halifax and Sydney, Nova Scotia. Furthermore, the public transportation estimates of the MBM do not account for transporting children or transportation outside of public transit hours for those who may work in the evenings or on a shift schedule, and as a result were considered low.

The MBM estimates clothing costs, including footwear, using the clothing and footwear component of the Acceptable Level of Living (ALL) basket developed by Winnipeg Harvest and the Winnipeg Social Planning Council⁷⁴. Relative spatial indices were applied to these clothing and footwear costs to generate equivalent costs for other urban centres⁷⁴. The estimates are based on the urban centres only and are assumed consistent with other community sizes⁷⁴. The MBM considers the clothing estimates based on the ALL to be quite high and above the standard used for the MBM; as a result, it is exploring other mechanisms for estimating this cost⁷⁴. Within the scenarios presented here, it is recognized that the estimate may be high. However, the estimates may realistically capture costs for additional expenses, such as laundry, laundry supplies, and basic personal hygiene products (e.g., soap, shampoo, toothpaste, tooth brush) for a family of four.

Telephone expenses for each household were based on the monthly cost for basic touch-tone service in April 2002 after installation. The basic rate is \$25 plus \$3.75 in tax and does not include any additional services or long distance fees¹⁰.

Child-care expenses were based on the most recent provincial estimates for licensed child-care. According to the child-care funding report⁷⁷, a full day, full-fee space is \$21/day or \$6.05/day for a subsidized space for low-income families. Morning or afternoon care for school age children is reported at \$8/day. These rates are multiplied by 21.667 days to get an average monthly rate. Subsidized rates were used to calculate the monthly child-care fees for the minimum wage and IA scenarios.

PHASE II: STORY SHARING METHODS

STORY SHARING COMMITTEE

As per the participatory principles of this project, project staff partnered with FRC/Ps from around Nova Scotia to determine the most acceptable methods to collect the data and carry out the data collection process. To facilitate this, a committee was created that included participants and employees from FRC/Ps from around Nova Scotia and project staff. The purpose of the Story Sharing Committee was to

¹⁰ <http://www.gov.ns.ca/cmns/overview/col.asp>

provide feedback on the proposed data collection methods and tools and processes to be used, to assist the project staff in the coordination of the story sharing workshops and create a forum that facilitated participation for FRC/P participants and employees to provide meaningful input. Consistent with the methodology for the food costing phase, the committee decided that use of a train-the-trainer model to conduct the story sharing workshops would facilitate the data collection as well as foster the participatory nature of the project.

PROCESS AND TOOL DEVELOPMENT

A set of tools and processes to assist in data collection was developed based on the story dialogue method described by Labonte & Feather (1996)⁴ and documents from several other projects that utilized this research method^{78,79,80}. The initial drafts were reviewed by the Story Sharing Committee and revised based on their feedback. Following this, they underwent a second review. The final tools and processes (see Appendix H) included a short description of why we were doing story sharing workshops on food security, a brief outline of what the workshops would entail and a description of what a story teller would have to do and what could be included in the stories to be told at a workshop. Also, those who attended train-the-trainer sessions were provided with a description of the facilitator's role and some questions that could be asked during the structured dialogue (Appendix H).

THE STORY SHARING PROCESS

Two train-the-trainer workshops were held, one in Sackville and one in Digby, to model the story sharing workshops and provide training to those interested in helping facilitate story sharing workshops in their region. In total, 14 people participated in the training workshops. Subsequently, story-sharing workshops were held in six regions throughout the province: Dartmouth, Baddeck, Amherst, Sackville, Yarmouth and Bridgewater. Overall, 61 participants took part in this phase of the project and 47 in the actual story sharing workshops. It should be noted that seven of the trainers were unable to attend an actual story sharing. The research coordinator facilitated four of the workshops. Participants from the train-the-trainer workshops facilitated the remaining workshops.

Each workshop followed a process adapted from Labonte and Feather's (1996)⁴ structured dialogue method. Each workshop began with a welcome and introduction of the participants and project staff. A brief description of the food security projects was provided to give context to the story-sharing workshop. Following this, an icebreaker activity was used to establish ground rules and group norms for the workshop.

Prior to beginning the telling of stories, a member of the project staff obtained informed consent from the participants, which included consent to audiotape the proceedings. Due to the sensitivity of the stories that were to be told at the sessions, the project staff member emphasized the importance of maintaining anonymity within the participating group.

Participants were then given the opportunity to share their stories. Some participants came with prepared written stories, while others preferred to just tell their stories. Flexibility was used in this regard to accommodate the participants' preferences and literacy levels. During this process of story telling and discussion, participants and project staff were instructed to write down key insights that arose during the discussions. Each key insight was recorded on a separate piece of paper in sufficient detail to allow all to understand its meaning and context. A research assistant or participant was also responsible for taking notes on a flip chart during story telling and pursuant discussion.

Following story telling and discussion, the participants assisted with the initial analysis of the discussions. To begin this analysis, all of the sheets containing the key insights were taped to a large wall or set out in an area where everyone could see them. Participants were then asked to review all of the key insights and group them together into common themes. After the grouping of the key insights, the facilitator read each aloud and asked if the participants felt that all of the insights belonged together and if any changes should be made. Once changes were made, the facilitator asked the group to agree on a theme for each group of key insights. The participants then performed a second level of synthesis, which involved developing a narrative statement that represented the theme or grouping of key insights.

Finally, participants were asked to take part in an evaluation process. Participants were asked to choose from a series of pictures or images that were compiled by Community Education students¹¹ that best described their reactions to a list of questions. Participants gave their reactions verbally. In addition, participants were given the opportunity to fill out a more anonymous comment sheet. This evaluation tool was added following the train-the-trainer workshops, as concerns were raised about the anonymity of the evaluation process as initially proposed.

¹¹ Two Applied Human Nutrition students (one graduate and one undergraduate) from Mount Saint Vincent University's Nutrition Education in the Community class assisted in the development of the evaluation process for the Story Sharing as a requirement for the completion of their course.

DATA ANALYSIS

All of the workshops were audio-taped and transcribed verbatim. In addition to the analysis performed during the story sharing workshops, a research assistant conducted further analysis on the grouped key insights, flip chart notes and transcripts. The research assistant reviewed the notes, insights and transcripts and used the process of thematic analysis to draw out common patterns and ideas among the data. This allowed the research assistant to code the data to ensure better management of the emergent themes.

ETHICAL CONSIDERATIONS

This research received ethical approval from the Health Sciences Human Research Ethics Board at Dalhousie University, Halifax, NS.

Through all phases of this project, participants were provided with a description of the Participatory Food Security Projects and an overview of the purpose and objectives. Participants in the pre- and post-focus groups for phase I provided informed consent to participate in the focus group, including consent to audio-tape the focus group. Similarly, informed consent was provided by all participants of the story sharing workshops, once again including consent to audio-tape the workshop (see Appendix I for informed consent forms).

It should be noted that because the food costers were co-investigators and researchers who assisted with collecting data for this study, they were not considered "participants." That is, all food costers have been recognized for their contributions and listed as contributors to this research. On the other hand, those involved in the focus groups and story sharing workshops were considered "participants" because they shared their personal thoughts, experiences and feelings. Therefore, while their contributions to this research have been invaluable, every effort has been made to maintain their anonymity.

To maintain anonymity of those sharing their thoughts and experiences in the focus groups and story-sharing workshops, no names or identifying information about the research participants are reported. All audio-tapes and transcripts, as well as any forms related to participation in this research, are kept in the Food Security Projects office in secure filing cabinets.

Participants were informed of the sensitive and personal nature of the information that people may be sharing and were asked not to share this information outside of the research. In turn, participants were informed of the possible threats to confidentiality due to the possibility that one or more participants outside of the focus groups or workshops

could share information. Participants were told that within the focus group or workshop they did not have to share any information or answer any questions that they were not comfortable with and were told that they could withdraw from the focus group or workshop at any time.

All grocery stores selected for the food costing were contacted prior to conducting the costing and no grocery stores were costed until permission was received from the store manager. In addition, food costers were instructed to introduce themselves and make their presence known to the supervisors prior to collecting food costs. To protect the anonymity of the grocery stores involved, no names or identifying information are reported. Furthermore, the food costing data from all stores has been categorized and aggregated, and data has not been presented on any individual store.

Throughout all phases of this research, participation was supported through reimbursement for child-care and transportation. This was provided for those participating in any meetings, workshops or focus groups related to the projects. Additionally, food costers who assisted with collecting food costing data in the grocery stores, as well as the story sharing workshop facilitators, were provided with honoraria to compensate them for their time and contribution to the research.

RESEARCH FINDINGS

The findings have been organized according to the objectives (see page 29). First, the findings will be presented on the cost of a nutritious food basket, followed by a look at affordability through application of the food costing data to comparative scenarios. Next, the qualitative data will be presented to paint a picture of the experience of food insecurity for women involved in FRC/Ps throughout Nova Scotia, as well as some of the identified causes of food insecurity. Finally, the ideas that emerged through the research process for addressing food insecurity will be presented.

THE COST OF A NUTRITIOUS FOOD BASKET IN NOVA SCOTIA

Results indicate that it costs an average of \$572.90/month, or \$6874.80 per year, to feed a reference family of four a nutritious diet in Nova Scotia. The weekly and monthly cost of a nutritious food basket for 24 age and gender categories, including pregnant and lactating females from 13-49 years of age, is presented in Appendix J. Table 1 presents the provincial average, as well as variation across district health authorities (DHAs). Although there was no significant difference in mean monthly or weekly food cost by DHA, food costs fluctuated considerably around the province. The Colchester/East Hants area (DHA 4) had the lowest food prices at \$551.30/month, while the Guysborough/Antigonish Strait area (DHA 7) had the highest at \$599.51/month.

Table 1. Monthly and Weekly Cost of a Nutritious Food Basket for a Reference Family of Four in Nova Scotia by District Health Authority (2002)¹².

District Health Authority	#of Stores	Monthly Cost (\$)	Weekly Cost (\$)
1 Queens/Lunenburg	3	582.07 (527.42 - 627.09)	134.43 (105.44 - 163.42)
2 Digby/Yarmouth/Shelburne	5	578.27 (529.06 - 613.91)	133.55 (124.30 - 142.80)
3 Annapolis/Kings	4	570.48 (538.83 - 592.02)	131.75 (123.28 - 140.22)
4 Hants East/Colchester	4	551.30 (525.60 - 566.13)	127.32 (120.45 - 134.19)
5 Cumberland	3	576.10 (554.59 - 589.23)	133.05 (122.27 - 143.57)
6 Pictou	2	562.46 (560.86 - 564.05)	129.90 (125.23 - 134.57)
7 Guysborough/Antigonish	2	599.51 (576.32 - 622.70)	138.46 (70.41 - 206.50)
8 Victoria/Inverness	9	580.23 (519.73 - 640.19)	134.00 (126.88 - 141.12)
9 Halifax/West Hants	11	566.12 (531.10 - 633.41)	130.74 (126.08 - 135.41)
Provincial Average	43	572.90 (563.14 - 582.27)	132.31 (130.6 - 134.47)

¹² The figures presented represent the average weekly or monthly cost of a nutritious food basket, and those in brackets represent the range for both weekly and monthly costs in each of the Districts.

Table 2 presents the rural versus urban costs of the nutritious food basket. The cost of the NNFB was significantly higher in rural compared with urban areas¹³.

Table 2. Monthly Cost of a Nutritious Food Basket in Nova Scotia in Grocery Stores Classified as Rural and Urban.

Store Location	# of Stores	Monthly Cost (\$) ¹⁴
Rural	22	587.22 (a) (557.88 - 616.56)
Urban	21	558.85 (b) (532.42 - 585.28)

Table 3 examines the findings based on store size. It was found that the cost of a nutritious food basket was significantly higher in stores classified as small (<15,000 sq.ft.) compared with those classified as large (>30,000 sq.ft.) (\$593.28 and \$553.21, respectively, $p < 0.001$). It was noted that eight of the 20 large stores were actually over 50,000 square feet, with some as large as 85,000 square feet. The cost of the NNFB in these "mega" stores was analyzed separately but was not found to be significantly different from large stores, and therefore was not separated as a distinct category. No significant difference was found between the cost of a nutritious food basket between the small and medium stores or between the medium and large stores. However, the number of medium sized stores in this sample is very small.

Table 3. Monthly Cost of a Nutritious Food Basket in Nova Scotia in Grocery Stores Classified by Store Size.

Store Size	# of Stores	Monthly Cost (\$) ¹⁵
Small Store (<15,000 sq. feet)	20	593.28 (a) (519.73 - 640.19)
Medium Store (15,000-30,000 sq. feet)	3	565.45 (ab) (557.88 - 574.44)
Large Store (>30,000 sq. feet)	20	553.21 (b) (525.60- 580.39)

COMPARATIVE FOOD COST SCENARIOS

Scenarios were developed based on the reference family (two adults and two children, boy aged 13, girl aged seven), lone mother with two

¹³ Rural has been defined as towns and municipalities outside of the commuting zone of urban centres with a population of 10,000 people or less. Conversely, an urban area is defined as a community with a population of greater than 10,000 people.

¹⁴ Values followed by the same letter are not significantly different at $p < 0.05$; values followed by different letter are significantly different at $p < 0.002$. That is, there is a significant difference in the cost of the nutritious food basket in rural versus urban communities.

¹⁵ Values followed by the same letter are not significantly different at $p < 0.05$; values followed by different letter are significantly different at $p < 0.001$. That is, there is no significant difference between the cost between small and medium, or medium and large stores, but there is a significant difference between small and large stores.

children (boy aged seven, girl aged four), and single adult male. Wage scenarios are based on minimum wage for Nova Scotia, the average call centre wage and IA rates in Nova Scotia. Findings demonstrate that a nutritious diet may not be affordable for some households earning these sources of income and that such households may often find themselves unable to afford their basic expenses each month. Appendix K presents scenarios based on the Low Income Cut Offs (LICOs) for the households considered here. The results also show that the minimum wage and IA rates in Nova Scotia are well below the (LICOs), which are considered the income at which a family is living in poverty. Scenarios have also been developed based on the average family income and average family (two adults and one child) and the reference family earning the median income in Nova Scotia for a two-parent household with children under 18. Table 4 presents the comparative scenarios for the average family and the reference family and shows the potential financial impact of purchasing the NNFB. The findings reveal that the reference family earning the median income for a two-parent household with two children is earning enough to cover the basic diet with almost \$1000 remaining for all other expenses, including investments for the future. However, the average family earning the average family income in Nova Scotia has less than half of this income remaining after purchasing a the basic diet provided by the NNFB.

Table 4. Families earning average incomes in Nova Scotia

	Average Family (2 adults, 1 child) with avg. income	Reference family with avg. income for 2 parent household with children <18 yrs.
Monthly Net		
Wages	\$2199.44 ¹⁶	\$2738.78 ¹⁷
CTB	\$172.63	\$206.80
GST credit	\$45.50	\$35.53
Total	\$2417.57	\$2981.11
Basic Monthly Expenses		
Shelter	- \$522.00	- \$630.00
Power/heat/water	- \$100.00	- \$125.00
Telephone	- \$28.75	- \$28.75
Transportation	- \$293.18	- \$325.75
Childcare	- \$455.00	- \$173.33
Clothing, footwear, etc.	- \$172.00	- \$191.00
Funds remaining for food	\$846.64	\$1507.28
Cost of the NNFB	\$440.19	\$572.90
Funds remaining for other expenses¹⁸	\$406.45	\$934.38

¹⁶ Gross average family income is NS in 2001 - \$47,005 (Nova Scotia Dept. of Finance, 2003).

¹⁷ Gross median income for a two-parent household with children under 18 in NS in 2000 - \$60,381.

¹⁸ Other expenses might include savings for unexpected expenses and emergencies, personal hygiene, household cleaners, laundry, prescriptions, dental, physical activity and recreation, education and home and/or life insurance

MINIMUM AND LOW WAGE SCENARIOS

Table 5 presents the potential financial impact of purchasing the NNFB for a family earning the minimum wage in Nova Scotia at the time that this report was developed, the projected increase in minimum wage in April 2004, and the average call centre wage. Total income is based on one spouse working full-time (FT) and the other working part-time (PT). While it is possible that income could be higher if both parents worked full-time, many low-wage jobs are often considered "precarious" because they are not full-time, they are temporary or contractual, and they offer little or no benefits or opportunities for advancement. To account for the precarious nature of the low-wage workforce, only one full-time position was considered. The findings suggest that families relying on minimum wages are not earning enough to purchase a basic nutritious diet, even with the projected increase. Furthermore, families earning wages up to \$10/hour would still be struggling and would not have any funds remaining for other expenses or savings.

Table 5. Reference family earning different wages in Nova Scotia

Reference Family of 4 earning:	One PT, one FT minimum wage \$6.25/hr. (Oct., 2003)	One PT, one FT minimum wage at \$6.50/hr. (Apr., 2004)	One FT call centre average at \$9.95/hr	One PT, one FT call centre average \$9.95/hr
Monthly Net Income				
Wages	\$1093.27	\$1137.00	\$1161.22	\$1775.33
CTB	\$512.07	\$512.07	\$531.40	\$229.96
GST benefit	\$55.00	\$55.00	\$55.00	\$40.63
Total	\$1660.34	\$1704.07	\$1747.62	\$2045.92
Basic Monthly Expenses				
Shelter	- \$580.00	- \$580.00	- \$580.00	- \$580.00
Power/heat/water	- \$125.00	- \$125.00	- \$125.00	- \$125.00
Telephone	- \$28.75	- \$28.75	- \$28.75	- \$28.75
Transportation	- \$325.75	- \$325.75	- \$325.75	- \$325.75
Childcare	- \$173.33	- \$173.33	\$0	- \$173.33
Clothing, footwear, etc.	- \$191.00	- \$191.00	- \$191.00	- \$191.00
Funds remaining for food	\$236.51	\$280.24	\$497.12	\$622.09
Cost of the NNFB	\$572.90	\$572.90	\$572.90	\$572.90
Funds remaining for other expenses	- \$336.39	- \$292.66	- \$75.78	\$49.19

Table 6. Lone parent household earning the minimum wage

Lone Mother of 2 earning:	Full-time minimum wage at \$6.25/hr. (Oct., 2003)	Full-time minimum wage at \$6.50/hr. (Apr., 2004)	Full-time call centre average at \$9.95/hr
Monthly Net Income			
Wages	\$728.85	\$758.00	\$1161.22
CTB	\$512.07	\$512.07	\$512.07
GST benefit	\$55.00	\$55.00	\$55.00
Total	\$1295.92	\$1325.07	\$1728.29
Basic Monthly Expenses			
Shelter	- \$493.00	- \$493.00	- \$493.00
Power/heat/water	- \$100.00	- \$100.00	- \$100.00
Telephone	- \$28.75	- \$28.75	- \$28.75
Transportation	- \$276.88	- \$276.88	- \$276.88
Childcare	- \$304.41	- \$304.41	- \$304.41
Clothing, footwear, etc.	- \$162.35	- \$162.35	- \$162.35
Funds remaining for food	- \$69.47	- \$40.32	\$362.90
Cost of the NNFB	\$351.68	\$351.68	\$351.68
Funds remaining for other expenses	- \$421.15	- \$392.00	\$11.22

Table 6 presents the potential financial impact of purchasing the NNFB for a household consisting of a lone mother working for minimum wage or for the average call centre wage, and her two children; a boy of seven and a girl of four. The scenarios show the working mother could not manage on minimum wage and would likely be struggling even on the average call centre wage.

IA SCENARIOS

Table 7 presents the potential financial impact of purchasing the NNFB for the same reference family and lone parent household with two children relying on IA. The findings show that these families would likely be struggling to afford a basic nutritious diet and would have little or no funds remaining for other expenses or savings.

Table 8 presents the potential financial impact of purchasing the NNFB on an unattached employable male receiving IA. The findings show that this individual would not have enough to purchase a basic nutritious diet, nor to pay for other expenses or to attempt any savings.

Table 7. Households earning Income Assistance

	Reference Family		Lone parent Family	
	IA (no employment)	IA (1 pt job)	IA (no employment)	IA (pt job)
Monthly Net Income				
Personal Allowance	\$360.00	\$360.00	\$180.00	\$180.00
Shelter Allowance	\$600.00	\$600.00	\$593.00	\$593.00
Transportation Allowance	\$0	\$57.00	\$0	\$57.00
Childcare Allowance ¹⁹	\$0	\$0	\$0	\$304.41
Wages	\$0	\$118.19	\$0	\$118.90
CTB	\$531.40	\$531.40	\$531.40	\$531.40
GST Credit	\$55.00	\$55.00	\$55.00	\$55.00
Total	\$1546.40	\$1721.59	\$1359.40	\$1839.71
Basic Monthly Expenses				
Shelter	- \$580.00	- \$580.00	- \$493.00	- \$493.00
Power/heat/water	- \$125.00	- \$125.00	- \$100.00	- \$100.00
Telephone	- \$28.75	- \$28.75	- \$28.75	- \$28.75
Transportation	- \$325.75	- \$325.75	- \$276.88	- \$276.88
Childcare	- \$0	- \$0	- \$0	- \$304.41
Clothing, footwear, etc.	- \$191.00	- \$191.00	- \$162.35	- \$162.35
Funds remaining for food	\$295.90	\$471.09	\$298.42	\$474.32
Cost of the NNFB	\$572.90	\$572.90	\$351.68	\$351.68
Funds remaining for other expenses	- \$277.00	- \$101.81	- \$53.26	\$122.64

Table 8. Single employable male on IA in Nova Scotia

Unattached male	No employment Boarding house	No employment Own apartment	1 pt job Own apartment
Monthly Net Income			
Personal Allowance	\$180.00	\$180.00	\$180.00
Shelter Allowance	\$197.00 ²⁰	\$235.00 ²¹	\$235.00
Transportation Allowance	\$0	\$0	\$65.00
Wages	\$0	\$0	\$118.19
GST Credit	\$18.00	\$18.00	\$18.00
Total	\$395.00	\$433.00	\$616.19
Selected Monthly Expenses			
Shelter	\$197.00	- \$290.00	- \$290.00
Power/heat/water ²²	\$0	- \$62.50	- \$62.50
Telephone ²²	\$0	- \$28.75	- \$28.75
Transportation ²³	\$65.00	- \$65.00	- \$65.00
Clothing, footwear, etc. ²⁴	\$95.00	- \$95.00	- \$95.00
Funds remaining for food	\$38.00	-\$108.25	\$74.94
Cost of the NNFB	\$198.73	\$198.73	\$198.73
Funds remaining for other expenses	- \$160.73	- \$306.98	- \$123.79

¹⁹ Other allowances may be provided for work or health related expenses if related to an individual's employment plan or specific health and safety needs.

²⁰ Maximum allowable shelter allowance for a single person living in a boarding house.

²¹ Maximum allowable shelter allowance for a single person renting an apartment.

²² Estimated costs for this scenario are based on the MBM estimates for Nova Scotia, multiplied by a factor of 50%, which is the LIM equivalence scale for an unattached individual.

²³ Based on the MBM estimate for public transportation in Halifax, multiplied by a factor of 50%.

²⁴ While a single adult male who is not working may not realistically need to spend \$95 on clothing, even when it is removed the individual is still not making it.

SUMMARY OF FOOD COSTING FINDINGS

- The average cost a nutritious food basket for a reference family in Nova Scotia is \$572.90/month.
- The cost of a nutritious food basket is significantly greater in rural areas compared with urban areas.
- The cost is also significantly more in small grocery stores under 15,000 sq.ft. compared with large grocery stores over 30,000 sq.ft.
- Families earning minimum wages or relying on IA cannot afford a basic nutritious diet.
- Even families earning wages up to \$9.95/hr. may be struggling to afford a basic nutritious diet after considering the cost of other expenses.

THE EXPERIENCE OF FOOD INSECURITY

The real struggles, complexities and hardships that food insecurity brings can only truly be understood by living the reality. The stories shared by the story sharing workshop participants begin to paint a picture of the experience of being food insecure in Nova Scotia. Despite differences in the lives and experiences of the research participants, there were many common themes that emerged from the story sharing workshops. Through the process of talking about what it is like to live with food insecurity and analyzing the stories that were told, an overarching theme emerged suggesting an overall lack of supportive environments for those living with food insecurity in Nova Scotia.

“Like, hunger is the actual physical pain, but when I think of food security I think more of feeling self-assured and feeling, umm, safe and feeling that okay I am going to have enough money this month to feed my kids.”

Within this overarching theme, four distinct but interrelated themes emerged. The lack of supportive environments was experienced through: 1) judgement by others, 2) the realities of trying to get nutritious food, 3) organizational policies and 4) stress and its impact on self-esteem.

FEELING JUDGED

Most of the participants discussed the feeling that others judge them by their situation (i.e., low-income, poverty). Participants talked about how they felt that “people were looking down on me” and made “assumptions” about them, such as that they were “abusing the system.” Through the stories, it became evident that many of the organizations and institutions they encountered in society are perceived to hold negative judgements of individuals who are food insecure. Such organizations and institutions include food banks, community services and IA workers, and even the grocery stores where they purchase their food.

“Assumptions [are] made everywhere. People can't believe others are hungry in Nova Scotia. [Those that are hungry] get looked down on.”

Many Workshop participants suggested that insensitivity to the realities of food insecurity is rooted in the fact that it is hard for others to truly understand the hardships faced by those who experience food insecurity if they have not experienced this themselves. It became evident that people, specifically those who work directly with Nova Scotians who are food insecure, need to be better educated to the struggles and hardships experienced by Nova Scotians who are food insecure.

“It's a common mentality of a lot of people . . . that when you do present them with . . . 'this is what I live off of. Yes, my rent is

included. Yes, my power and everything is there.' They don't know how to believe it because they can't ever conceive being there in that position . . . People don't understand . . . you're never gonna understand what I'm going through . . . "

The perception that the sense of judgment may be more pronounced in smaller and rural communities than in larger urban centres also emerged from the workshops. In such communities, participants felt there may be less privacy and "people talk" about each other in smaller, rural communities. Some participants worried about who would see them if they sought assistance from a food bank or had to use a food voucher to purchase some food.

"If you want to speak out and say that you need help, then you always have to be thinking, you know . . . is my boss gonna be [around] or my friends, or you know . . . Because in a small town, everybody knows . . . "

THE REALITY OF TRYING TO GET NUTRITIOUS FOOD

Flexible food budgets

In the workshops, participants talked about the many challenges faced in living on a low income and trying to access food. The reality was often described as a "struggle" to get nutritious food. Most of the participants talked about the "flexibility of the food budget," a phenomenon often described by people with low or fixed incomes. This refers to the reality that the amount of money for food purchases is often compromised in order to ensure the rent is paid, as well as other bills such as the heat and lights.

"You have to pay the phone bill. And you have to pay your power bill. But the only . . . the only place you have control over [is the food budget] . . . "

"Higher gas prices and higher insurance premiums mean more money I have to spend on my car in order to get to my job. The money will have to come from my food budget."

Higher cost for nutritious foods

Participants also discussed the higher price of nutritious foods compared to less nutritious foods. Often the less nutritious foods were more filling, and for many the desire to avoid hunger, especially for their children, took precedence over the need for adequate nutrition.

"Most parents [living on low income] - their main goal is for their kids not to be hungry. You know, does it mean buying a bag of apples that they eat for a couple of days or the hotdogs they eat

for a week. And they're gonna be a lot fuller eating a hotdog, I go buy them."

Reflecting the data from the food costing, participants' stories confirmed issues related to food costs in rural areas. Participants felt that it was more difficult to get nutritious foods in smaller towns and particularly smaller stores.

"Availability and variety of affordable foods in rural areas is lacking."

Transportation Costs

The availability and cost of foods in rural areas was often confounded by transportation issues in getting to and from the grocery store, or accessing larger stores with more variety and lower prices. Transportation was not only an issue in rural areas, however, and was discussed by participants in larger communities and urban areas as well.

"And it's hard, too, because you budget your grocery shopping and you only have enough to get a cab home once a month . . . Like, you can't go and pick up fresh fruit and vegetables like two and three times a month, you have to go once a month cause that's the only time you have money enough for a cab. Other than that, you can't walk home with bags and bags . . . Once that fruit runs out you gotta take the bus and maybe go over and pick some things up. But, you might not have that option . . ."

Food Skills

Although not discussed in detail, the lack of skills to cook and prepare food was mentioned throughout the workshops, which ultimately could be a major barrier to food security for some. Some participants indicated that many people no longer have basic skills for cooking and preparing foods, particularly preparing food from scratch rather than pre-made or processed. It was felt that being able to cook and prepare foods on one's own was cheaper than buying prepared foods, but many, regardless of income or socioeconomic status, do not have these skills. It was also noted that the fast pace of living today can make it difficult to obtain or practice such skills. Gardening skills were not discussed, although at least one participant reported growing a garden to supplement her families' groceries.

ORGANIZATIONAL POLICIES

Worry and discontent was voiced throughout each workshop around some of the organizations that were supposed to be supporting those who experience food insecurity. Many suggested that some policies and

practices of these organizations are not structured to meet the true needs of the individuals they serve. The two main organizations that were discussed were food banks and the IA Program of the Nova Scotia Department of Community Services.

Food Bank Policies

Stories related to accessing charitable food organizations, such as food banks, as a means to cope with food insecurity were very common throughout the workshops. Although it was recognized that food banks play an important role in combating hunger, it was also suggested that in many cases, food banks in this province are not meeting the true needs of people who are food insecure. Poor food quality and not receiving enough food to meet their families' needs were concerns of workshop participants.

"I usually get four [grocery] bags of food. There are three or four frozen items, hot dogs and cookies. It is rare to get meat or fish. Some fresh vegetables are available like onions, turnip and lettuce. The last time I brought lettuce home I peeled over half of it away to be able to eat it. Most often I throw out three to four cans because they are out of date or there are dents in the cans. In the past, I feel my family and myself, have had food poisoning, caused from the food from the food bank."

Discussions also revealed that some food banks' policies inhibited people from accessing them. Such policies often contributed to the feeling of being judged for their situation, as it was felt that the policies were implemented with the assumption that they were trying to abuse the system, rather than accepting that they truly needed the system. Sometimes policies were in place to limit the number of times you could receive assistance, prevent you from coming more than only a few times a year or force you to seek financial counselling if assistance was needed more frequently. The hours of operation also often prevented people from getting assistance, particularly if they were working, in school or had appointments to attend.

"There's no support after 11 o'clock in the morning . . . Like basically all food banks are only open at that time."

IA Policies

Discussions at the story sharing workshops indicated that many people who rely on IA in Nova Scotia do not feel supported by the assistance they receive. Participants discussed how the policies guiding the program are difficult to understand, which makes it hard to establish what benefits people might be eligible for. It is sometimes hard for people to access all the funds available without the help of an advocate.

Workshop participants felt that the assistance offered does not cover the basic expenses that Nova Scotian families face, and recognized that current rates do not even reach the low-income cut-off levels. Many participants discussed how policies of the IA program are often too strictly applied and do not account for individual circumstances or changes that people may experience in expenses. This often meant that the assistance they were receiving for certain bills was not even enough to cover that said bill.

"My allowance for fuel . . . on my cheque is a \$1000 a year. And my . . . electricity, which is, you know, my heat . . . In four months it was \$1500 and they [IA] give me a \$1000 a year, and that's the process. They can't give me any more than that. That's the rule. They can't give me any more than that."

Participants discussed the lack of support for medical expenses, medical necessities and emergencies. Concerns were also raised regarding the percentage of income you can keep from any earnings that you make through casual or part-time employment, the lack of sustained support for those moving into employment and off of IA and the elimination of child allowances in place of child tax benefits.

"Because the child tax benefit is supposed to compensate for what . . . When they raised child tax benefit, penny for penny they deducted it from social assistance . . . Penny for penny . . ."

STRESS AND EMOTIONAL IMPACT

Perhaps the most distressing theme to emerge from the workshops is how the lack of supportive environments for food insecurity often resulted in extreme stress, particularly for caregivers of families and children. This stress was created by the seemingly impossible struggle to meet one's needs and those of their family with limited resources and the inability to meet societal norms in regards to acquiring food. Some women who smoked indicated that smoking helps to cope with their stress and suppress their own appetite when food is low and they are concerned with providing enough food for their children. Participants discussed feelings of "anxiety," "depression" and "emotional stress."

"The most difficult situation I have had to face is the realism that I cannot afford to feed my family the foods that I know they need. Not just the foods they need for every day meals, but also for special foods for each of their individual developmental stages. At times I have become very depressed and angry with myself for having... children and not being able to properly maintain the type of life they so deserve. I've gone through stores with \$20 knowing that this is for two weeks . . . I would have never thought that I would be in such a predicament . . ."

Stress also evolved out of the judgement that participants perceived and the struggles that they experienced in dealing with the organizational policies they felt were there just to hold them down. Participants recounted stories of being denied assistance by the organizations intended to help them and the stress that ensued.

"So [IA] wouldn't help me. The food bank couldn't help me. And it was really stressful to have your friends bringing your food and your kid is like, 'why is everyone bringing us food' . . . So it was stressful."

The preceding quote also alludes to another source of stress related to food insecurity: the desire to protect children from the impact of food insecurity. Parents often manage this desire by sacrificing their own diet to ensure that their children have enough food and have nutritious food. Many of the participants talked about how they sacrificed their own nutrition in order to ensure their children had enough food and/or healthy food.

"I do suffer nutritionally, and I can see it sometimes in my eyes and my face gets sucked in cause I don't have enough fruit and stuff. Because you want to give it to your kid."

The participants also discussed the desire to prevent their children from knowing that there was even a problem.

"My other children now realize why we go to the food bank . . . My son is very embarrassed that his mom goes to the food bank . . . That we are poor."

Perhaps the most profound issue with regard to the stressful experience of food insecurity was the participants' discussions relating to the negative effect on self-esteem. Many of the participants discussed feelings of "shame" and "embarrassment" or the sense they had somehow failed because they should be "doing this on my own." Through the discussions, it also became evident that such feelings stemmed from other locations, particularly from the judgment that society appeared to render, as mentioned previously and from the seeming hopelessness of the situation.

"So for some of us who end up in a situation where we don't have enough to eat, we already know shame. Shame is so comfortable. It just fits like a jacket. So, you go somewhere and someone gives you a bit more, you take it. It fits. It feels normal."

"It's a given that you should have food. It's a basic staple in life. Everybody should have it . . . and if you don't you're somehow a failure."

EXAMINING THE CAUSES OF FOOD INSECURITY

The story sharing workshop process allowed participants to move through their stories to identify the problems (presented above) and examine what might be causing them. The goal was not necessarily to uncover all of the causes of food insecurity, as it is recognized that there are many. However, it was important to identify those issues that may be most immediately impacting on the experience of food insecurity for the participants of the story sharing workshops. Overall, through hearing about the real life stories of living with food insecurity, it became very clear that many policies are not working to build food security in Nova Scotia. Through the workshop process, two main policy areas were identified as barriers to achieving food security for the participants in this research:

- Inadequate incomes, and
- Lack of social supports.

INADEQUATE INCOMES

Many of the participants working for low wages indicated that they often feel disregarded and overlooked. Many indicated that food banks may not provide them with assistance or may not understand why they need assistance if they are working. They suggested that there is a societal assumption that those who work should be able to make ends meet.

"The working poor, uh . . . are not eating better than families on assistance . . . Just because we work doesn't mean we have money. Medication, transportation, clothing, lunches . . ."

Participants' stories revealed the precariousness of the low-wage workforce. Some of the participants were working for more than minimum wage and still struggled to put food on the table. Interestingly, a few participants worked, or knew people who worked in grocery stores, but were also food insecure. Many participants discussed the lack of supports and benefits when working for low wages, such as childcare, transportation, prescription coverage and dental care (among others). Many jobs were also part-time, casual, or temporary. In short, many felt that even working at a low wage was not enough to enable people to meet their basic needs.

"You know, they looked at me and thought well if you're not on welfare why wouldn't you have money? Hello! I'm not on welfare and that's why I don't have money. I work and I try to make [it] . . . but, I also have . . . lunches for the kids . . . I have to keep my vehicle going. If I don't have my vehicle I can't work. And then I'm going to be on welfare . . . "

LACK OF SOCIAL SUPPORTS

Another barrier to achieving food security that emerged from the story sharing workshops was the lack of social supports available to low income and food insecure individuals in Nova Scotia. It became clear that the participants want to improve their situation. However, many feel that there is little support for them to do so. In particular, programming in this regard was perceived as lacking and/or inadequate.

"But, even myself being on social assistance I have a big problem with them just giving you a cheque every month. They don't put on workshops. There's no, umm, support there."

"I guess I was angry because there were so many roadblocks and so many barriers to me moving through the system and coming out the other end . . . whole . . . and with what I wanted . . . It's all I wanted was support so that I could get to a point where I could support myself and my children. And with dignity . . . and what I got was not that."

ADDRESSING FOOD INSECURITY

At the end of each workshop, the participants came together to discuss what they think should be done to address the problems with and causes of food insecurity in Nova Scotia that they had identified. Figure 4 presents the key suggestions put forth by the participants of this research.

- Educate the public about the real lived experiences of insecurity in Nova Scotia in order to decrease the perceived judgement of people who are food insecure, which will then help to decrease the negative feelings and stress felt by the food insecure.
- Better educate and sensitize those who work with programs that aim to assist food insecure individuals to the issues faced by people who are food insecure.
- Involve more food bank clients in running the food bank, as this may better facilitate input from those who experience food insecurity and therefore may allow these facilities to better meet the needs of those who use them.

- Work to change policies to ensure that IA and minimum wage are adequate enough to support the health and well-being of those who rely on it.
- Work to change policies to ensure nutritious foods are more affordable to all Nova Scotians, particularly low-income individuals.
- Increase the number and quality of social supports available to people who are food insecure so they are better able to improve their situations.

Figure 4. Strategies for addressing barriers related to food insecurity

SUMMARY OF FINDINGS: PHASES I AND II

The findings of phase I, the participatory food costing, revealed that the average cost of the National Nutritious Food Basket (NNFB) in Nova Scotia for a reference family of four is \$572.90. This price varies in different regions of the province, revealing that the cost of the NNFB is significantly higher in rural areas than it is in urban areas. The cost is also significantly more in small grocery stores (<15,000 sq.ft.) than in large grocery stores (>30,000 sq.ft.), with no significant difference between the cost in medium sized stores (15,000-30,000 sq.ft.) and small or large stores.

When the cost of the NNFB for the reference family of four is included with other necessary expenses and compared to different income scenarios, it reveals that the NNFB may not be affordable for many families living on IA and low wages. Based on one part-time and one full-time job at minimum wage, the reference family would be short over \$300/month when the cost of shelter, transportation, child-care and clothing are considered. Even with projected increases in minimum wage for April 2004, the family would still be short by over \$250/month. Furthermore, based on the average call centre wage of \$9.95/hr, the family would still be struggling each month to barely break-even. A single-parent household living on IA or low wages and an unattached male on IA would face similar deficits in disposable income if they were to purchase a nutritious diet.

The findings of the story sharing workshops in phase II present the lived experience of food insecurity among women involved in family resource centres throughout Nova Scotia. The participants' stories confirmed much of what was revealed through food costing. In particular, food insecurity for the participants appeared to be the result of inadequate income but also of inadequate social supports.

The key theme emerging from the stories was an overall lack of supportive environments, which was experienced in several ways. In

particular, participants indicated they felt judged by others in society, including those working in the services and institutions intended to help them such as food banks. They also reported that despite their awareness and the messages to eat nutritious foods, there were many difficulties in doing so. Competing demands in their household budgets, the higher cost for more nutritious foods, transportation costs, and in some cases a lack of cooking skills presented challenges to a nutritious diet for which they had little support in addressing. The organizational policies of services and institutions intended to help appeared to work more against them than for them. The participants indicated that many policies prevented them from obtaining an adequate income, acquiring enough food, and supporting additional needs in the home. Finally, participants reported stress and anxiety as a result of the experience of food insecurity, as well as negative impacts on self-esteem. They worried about the impact of food insecurity on their children and reported guilt and depression because of their situation.

By moving through the story sharing process, the workshop participants were able to identify the key issues affecting their experience of food insecurity and reflect on what would help them with their situation. Some of the recommendations emerging from the workshops included raising awareness of food insecurity and the lived experience, involving those living with food insecurity in food banks and other services intended to help them, improving supports for those on IA, as well as those with minimum wages to help them remain and advance in the workforce, and work toward addressing policies that will make nutritious food more affordable.

DISCUSSION AND CONCLUSIONS

The aim of the Participatory Food Security Project was to use participatory research approaches to gather evidence to affect policy change to build food security in Nova Scotia. The results of the provincial food costing and story sharing workshops raise serious questions about the ability of many Nova Scotian citizens to afford a nutritious diet and the adequacy of current policies and programs to address the problem of food insecurity in Nova Scotia. The present state of food insecurity in Nova Scotia should be a major concern for governments and citizens alike.

Comparison of the data on the cost of the National Nutritious Food Basket (NNFB) in NS, gathered in phase I of this project, to income levels and expenditures to meet basic needs clearly show many groups in this province are unable to afford a basic nutritious diet. phase II provided a clearer understanding of what it was really like to live with food insecurity and how it affects the day-to-day lives of women who struggle to get enough nutritious food for themselves and their families. The participatory process used throughout this study allowed some of those who experience food insecurity in their daily lives to break their silence and tell their stories. Now the information gathered will allow all Nova Scotians to better understand the struggles faced by individuals and families affected by food insecurity. In addition, the combined findings of phases I and II and the partnerships built through the collection of this data using participatory research provide powerful tools for advocacy efforts to change and improve key public policies underlying the issue of food insecurity in this province.

The results of this study have highlighted several key issues impacting on food security in Nova Scotia. The following discussion first examines the communications and advocacy efforts that have resulted from the project so far. Following this, the methods used in this study are examined, as well as each of the key issues found to impact on food security in Nova Scotia in more detail: poverty and inadequate income, food access and food security programs. Policy and action recommendations conclude our report.

COMMUNICATIONS AND ADVOCACY EFFORTS

Importantly, the data collected through this research has been translated into evidence for informing policy. However, incorporation of principles of “food security for all” through a focus on the root causes of food insecurity, capacity building and social inclusion in the participatory research process has resulted in outcomes that extend well beyond the results and evidence presented here. This is the first time that food costing has been conducted using participatory research

on a provincial level. Previously Travers (1997) was able to demonstrate the effectiveness of using a community capacity building approach in her work with one family resource centre in advocacy and policy change at a local level. Building on the work of Travers (1997), this study used research processes that have enhanced community capacity to influence policy at both the local and provincial levels through partnerships with local FRC/Ps and approaches that aim to include all affected in the policy development process. Strategies for influencing policy have been identified⁵².

The participatory research process that was used to conduct this study has resulted in a growing commitment to address food insecurity in Nova Scotia. The processes used to collect data in both phases I and II resulted in the active and direct involvement of individuals who have experienced food insecurity first hand. Initially, participation was made possible through partnerships with 21 FRC/Ps. Following a partnership meeting in Daysprings, 10 FRC participants/staff committed to helping facilitate the food costing training and subsequently participated in a “train-the-trainer” workshop. With project staff, they helped train 47 FRC/P participants and 18 support persons in five training workshops throughout province; another seven people subsequently conducted food costing with individuals who had been trained. Phase II, the Story Sharing Workshops on food insecurity, involved two initial workshops that used a train-the-trainer model to enable those interested to be involved in the facilitation of a subsequent workshop in their area, and in total 54 women from ten FRC/Ps around the province were involved.

Partnerships with policy makers with the Nova Scotia Departments of Health & Community Services have resulted in commitment to using the evidence collected to inform policy through representation on the project steering committee. As well, there has been an expanding network of organizations committed to this work - the NSNC, AHPRC, CPNP Dietitians, staff and participants at FRC/Ps, Steering and National Advisory Committees (with members representing provincial and national geographical diversity and key organizations involved in food security work), public health nutritionists, universities, grocery industry, government, students and Atlantic Canadian Organic Regional Network. Together, the partners have supported specific advocacy and communications efforts, which are described in Table 9.

Table 9. Advocacy and communications efforts of the Participatory Food Security Project.

Date	Description of Activity
September 02	Information meeting with ministers of Health and Community Services and senior policy staff in NS
April 02	Presentation at National Health Promotion Conference, Bedford, NS
May 02	Presentation at Newfoundland and Labrador Dietetic Association Conference, Grand Falls, NF
June 02	Presentation at NSNC Annual Workshop, Bridgewater, NS
December 02	Presentation at Social Determinants of Health Conference, Toronto, ON
March 03	Establishment of Communications Working Group and communications workshop, Bedford, NS
May 03	1 st National Dialogue, Calgary, AB
May 03	Presentation at Dietitians of Canada Conference, Calgary, AB
May 03	Presentation at Canadian Public Health Association Conference, Calgary, AB
June 03	Provincial Dissemination Workshop, Dartmouth, NS
June 03	Presentation to Dartmouth Family Resource Centre Coordinators, Dartmouth, NS
July 03	Promise in Nova Scotia Progressive Conservative Party election platform (<i>PC Blueprint for building a better Nova Scotia</i>) to work with the project partners to implement recommendations of the Participatory Food Security Projects
September 03	Presentation to anti-poverty group in Truro, NS
October 03	Presentation to Public Health Services Districts 4&5, Truro, NS
October 03	Presentation to Nova Scotia Nutrition Council, Truro, NS
November 03	2 nd national dialogue, Charlottetown, PEI
November 03	Presentation to CPNP Atlantic group, Charlottetown, PEI
December 03	Communications workshop, Mount Saint Vincent University, Halifax, NS
December 03	Workshop with food producers in Truro, NS
December 03	Dialogue in Dartmouth, NS
January 04	Dialogue in Bridgewater, NS
July & Jan 04	Meeting with senior officials from Community Services in NS
August 03, January & March '04	Media interviews (11 total) in Nova Scotia
March 04	Media and communications workshop with FRC/P partners, Halifax, NS
March 04	Media launch of Participatory Food Security Projects, Halifax, NS
March 04	Resources allocated from Office of Health Promotion to do another cycle of food costing (2004-05), develop a sustainable model for food costing and policy analyses of key recommendations of Participatory Food Security Projects

This research has also resulted in Health Canada Canadian Diabetes Strategy funding being awarded for two projects to build on the work presented in this report. First, the CDS, Health Canada Atlantic Regional Office National Environmental Scan of Strategies for Influencing Policy was funded in January 2002. The National Office of

the Canadian Diabetes Strategy funded a National Project in January 2003, Enhancing the Capacity of Community Groups to Influence Policy, which included a series of community dialogues on food security and policy throughout the province and which are ongoing with the support of further funding.

The process of capacity building among community members and organizations for engaging in food security issues has clearly begun, and we have learned a great deal about what people in communities need to enable participation in policy change. Throughout each phase of the project, capacity for addressing food insecurity has been evaluated at multiple levels including focus groups and in-depth interviews with individuals who conducted food costing and participated in story sharing workshops, in-depth interviews and surveys with the National Advisory Committee, focus groups with the Research Working Group/Steering Committee and in-depth interviews with the Project Coordinator and Principal investigator. A tracking form has also been developed to monitor activities and outcomes occurring as a result of the projects. The evaluation of the capacity building and participatory processes used will be the focus of a separate report.

METHODOLOGY

As we reported, this study reports on the affordability of a nutritious diet in Nova Scotia, its impact on the lives of women and their families who have experienced food insecurity and its potential impact on all Nova Scotians. The remarkable consistency of the quantitative data on the affordability of a nutritious food basket with the qualitative data on the experience of food insecurity clearly shows that Nova Scotians earning low incomes, particularly those relying on IA and earning low wages, cannot afford to purchase a basic nutritious diet.

Conceptualizations of what constitutes a basic standard of living, or even basic needs, vary widely and are open to interpretation. Additionally, many assumptions must be made to assess income adequacy and the financial impact of purchasing a nutritious diet. To determine the cost of a nutritious diet in grocery stores throughout Nova Scotia in 2002, food prices were collected in June and October using the National Nutritious Food Basket (NNFB), which had been validated for use in Nova Scotia. Reports from the Fraser Institute⁸¹ have criticized the NNFB for not representing the lowest possible food costs required to meet nutritional needs. The 66 foods included on the NNFB are clearly conservative when one considers that this is based on the assumption that all meals are made from scratch and includes no pop or snack foods, no frozen dinners, no organic foods, no pet food

and no household items (e.g., cleaners, personal hygiene products, etc.) usually purchased with groceries.

Given that the actual cost of shelter varies depending on location within the province and between rural and urban areas, one could argue that the shelter estimates may not be representative of actual costs. The estimates provided by the MBM shelter data represent lower end rent assuming that heat and lights are included, and are substantially lower than the average cost of shelter estimates for Halifax and Dartmouth from Canadian Mortgage and Housing 2001²⁵, which do not include the additional cost of heat and lights. These estimates also do not account for the quality of the housing offered at this rate. Low-income neighbourhoods with low-rent units available are often located near heavy traffic corridors and/or industrial areas, and are designed poorly with inadequate access to transportation, grocery stores and outdoor spaces⁸². Some households may choose to pay higher rent in exchange for better quality, well maintained housing in a safe neighbourhood with access to shopping, schools and parks, as mentioned by one participant in the story sharing workshops. In the scenarios regarding the unattached male, the issue of housing quality must be considered. While a scenario was developed based on living in a boarding house, an equivalent was also developed based on a bachelor apartment. This was done in order to acknowledge the additional expense of living in better quality and more dignifying circumstances.

The clothing estimates provided by the current MBM are considered to be high because they represent "expenditures on clothing and footwear by the seventh decile of reference families, which is above the standard of consumption aimed at by the MBM"⁷⁴. However, even if the expenses for clothing were omitted, the lone parent earning minimum wage or receiving IA and both the reference family of four and single male receiving IA remains in a deficit. Clothing expenses may also be episodic, with high costs one month (e.g., beginning of winter), and lower or no costs in another month. Therefore, while clothing costs may not be factor throughout each month of a year, they may have a significant impact on food security during certain months. The impact may offset not only that monthly budget but could also affect the budget in following the month(s) if credit is used or other bills are put off to buy necessary clothing.

It should also be noted that many families, particularly those on IA, may not actually be driving a five-year old vehicle, such as the Chevy Cavalier, upon which the MBM estimates are based. However, even if the estimates for the cost of public transportation are used, the reference family and single parent family on IA without employment

²⁵ See <http://www.gov.ns.ca/cmns/overview/col.asp>

would still be struggling each month. Similarly, those on IA with employment may only just be making it each month if cost of public transportation rather than the five-year old Cavalier is factored into the scenario. Furthermore, it may also be that such families own much older cars, which could potentially have higher costs due to poorer gas mileage, upkeep and repairs.

Subsidized rates were used to calculate monthly child-care fees for the minimum wage and IA scenarios; however, such rates are not necessarily available, even to those with low incomes. In 2001 there were only 2600 subsidized spaces⁷⁷. Furthermore, the estimates presented here are based on licensed child-care and do not account for those who use private nannies or babysitters or those who cannot access such care (in 2001 there were only 11,098 spaces available and approximately 152,000 children in Nova Scotia less than 12 years of age⁷⁷).

Although we included special allowances for transportation and child-care currently available through IA, we have not included other allowances that may be available. Individuals on IA may be eligible for a various allowances and supports for work or health-related expenses or as part of an employability plan. However, participants in the story sharing workshops indicated that many IA recipients are unaware of additional supports that may be available to them. Many of the participants at the workshops also reported that their case workers do not usually inform them of what they may be eligible for and have little time to meet with them for individualized case planning. To address such problems, the Department of Community Services is currently developing the Employment Support and IA Client Handbook, which is intended to assist with ensuring all stakeholders within the system are aware of the facts and entitlements.

The expenditure estimates considered in our scenarios likely underestimate actual household costs and needs. Many expenses were omitted from our comparisons (e.g., snack foods, highly processed convenience foods, foods eaten away from home, toiletries, household and cleaning supplies, cable television, physical activity, recreational and educational opportunities, emergency savings, investments for education or retirement, student loan payments, life insurance, gifts). Expenditure estimates also do not accurately depict the real life situations for any one individual or household, but they clearly demonstrate that many Nova Scotians simply cannot afford to purchase a nutritious diet for themselves or their families.

The collection of qualitative data using an adapted story dialogue method⁴ worked well. Many, but not all, of the women who attended story sharing workshops had participated as food costers in phase I and

were involved in CAPC/CPNP Family Resource Centres/Projects (FRC/Ps) throughout the province. It is possible that their participation in either the food costing or FRC/Ps had an impact on how they viewed the issue of food insecurity, but likely this group of women would feel more supported in dealing with food insecurity compared with others who do not have these supports.

Other limitations of the sample included in this study should also be noted. We have only examined the impact of purchasing a nutritious food basket among families with children and a single employable male and have not included groups most at risk for food insecurity such as those with mental and physical disabilities, homeless, street youth and aboriginals living on reserves. Additionally, the story sharing workshops included only women and it is possible that food insecurity impacts differently on males.

We also did not measure the presence of food insecurity using a standardized instrument for either phase I or II but rather relied on identification of participants experiencing food insecurity by coordinators of FRC/Ps or self-disclosure. The participants experienced varying degrees of food insecurity, but it is impossible to quantitatively describe the level or extent of food insecurity present among this group of women. We also did not examine the impact of food insecurity on the lives of the children through their own words but relied on the description of this by the participating mothers. The stories shared by these women were thoughtful, genuine and candid and are therefore felt to be a true reflection of their lived experiences.

POVERTY AND INADEQUATE INCOME

This research has identified significant barriers to food security in Nova Scotia, most notably lack of transportation to access food, the high cost of nutritious foods versus less nutritious food and the need to put money towards other bills rather than buying food. Such barriers are similar to those highlighted by Berenbaum & Misskey (2003)⁴⁰ and McIntyre et al., (2001)⁴¹. Inadequate income seemed to be the primary factor underlying all of these barriers and has the most far-reaching affect on the amount and quality of food a person can afford. The findings of this research present a very clear issue; the cost of a nutritious diet is not affordable for many people in Nova Scotia due to inadequate incomes, either through the social welfare system or low-wage employment.

Recent population studies on levels of food insecurity across Canada also provide support for this conclusion. With 17% of Nova Scotians reporting income-related food insecurity on the recent Canadian

Community Health Survey³, Nova Scotians are among the Canadians most vulnerable to this phenomenon. Despite the accumulating evidence on the negative impacts of food insecurity and the fact that Canada produces enough food to meet the nutritional needs of all citizens, this study provides further evidence that many Nova Scotians face the harsh realities of food insecurity in their daily lives⁴⁰.

HEALTH IMPLICATIONS

The findings have serious implications for health and social costs in Nova Scotia. Not only does the nutritional^{41,48}, physical^{46,47,48} and mental^{49,50} health of an individual suffer as a result of food insecurity, but the detrimental impacts of chronic food insecurity at the household and societal levels on healthy child development, social inclusion and costs to our health and social systems are far-reaching^{41,49,50}.

Nourishing food is a most basic necessity that impacts directly on health and development. Our scenarios show that many households may find that they cannot cover their basic household expenses, including food. Moreover, consistent with the findings of McIntyre et al., (2001)⁴¹ and Tarasuk and MacLean (1990)⁸³, our qualitative data revealed that the food budget is the most flexible expense for a household. This means that between competing demands to pay for basics such as shelter, heat and food, food is most likely to be cut in order to pay the other bills. Therefore, households may not actually come out in the negative each month, as our scenarios suggest; rather the amount of money spent for food is likely to be cut. This means that on an inadequate income, the food that a household is able to purchase will not be sufficient to provide the basic nutritious diet to meet their needs. Ultimately, food and consequently nutritional health, is the primary area that is compromised to accommodate other basic needs.

Currently, food banks and other such programs that provide charitable food assistance are the primary strategy for addressing food insecurity in Nova Scotia. While caloric requirements may be met through assistance from emergency food programs, a household may still remain highly food insecure despite the assistance, because food from food banks is often compromised nutritionally, may lack essential nutrients, be high in fats, carbohydrates and salt, and low in fresh fruits and vegetables and dairy products⁹⁶. Furthermore, food banks may do little to address the stress and embarrassment associated with food insecurity. Given the questions concerning the adequacy of this approach and the potential for negative impacts on health and well-being of recipients,⁴⁸ other approaches to addressing food insecurity and hunger must be given serious attention in Nova Scotia.

SOCIAL EXCLUSION

The effects of food insecurity are much deeper than the impacts on physical, nutritional and mental health of an individual. Food is a central aspect of our society and the activities in which we partake. When an individual is food insecure, they lack the resources and ability to fully participate in these activities. In short, they become socially excluded^{40,41,50}. Story sharing workshops revealed that social exclusion in how we access food in our society resulted in negative feelings among those who are food insecure, such as shame and guilt. Such feelings appeared to stem from the seemingly endless number of barriers to achieving food security, particularly the judgement that was present, or perceived to be present, within society and those organizations that work closely with individuals who are food insecure. Other research confirms that feeling poor means feeling judged and degraded, dependent, guilty, isolated and despondent⁸⁴.

Inadequate income can also mean other expenses are unaffordable and that households are excluded from participation in activities and opportunities easily accessible to others. Consider other expenditures that are not made if a household must struggle to pay for "just the basics." There will be little or no money for toiletries and cleaning supplies. While such expenses may be covered through careful budgeting and attention to promotional sales, other costs may still remain elusive. Consider the cost of physical activity, recreational and educational opportunities. This includes extra-curricular athletic, social and artistic activities, trips to the museum, art gallery or sporting event and computer, Internet access, cable television or buying gifts for family and friends. When most of a household's income is absorbed by basic costs, opportunities for educational enrichment, physical activity, recreation and leisure may be unattainable, which can further disadvantage a household and exacerbate social exclusion.

Social exclusion has significant negative health implications⁶³. In particular, children in such households may have little hope of good health or increased social status if they are denied proper nutrition and opportunities for education, enrichment and recreation. A recent study conducted in Hamilton, Ontario randomized children of households on IA to subsidized child care/recreation or not (i.e., the parents financed and directed child care/recreation for their children), and found that the parents of the children in the subsidized child-care/recreation group experienced fewer nervous system, sleep and anxiety disorders; needed less child care, counselling, and food bank assistance and experienced higher economic and social adjustment⁸⁵. Similarly, there were some positive effects of participation in subsidized childcare and recreation for the children, particularly for children with behavioural problems⁸⁵. This demonstrates the significant impact that innovative

policies, such as increased social supports promoting inclusion, can have on low-income families, and ultimately health and social costs.

The disempowering effect of social exclusion results in the lost participation of many citizens in the daily functioning of our society, which can have significant negative implications for communities, provinces and countries.

LOW WAGES AND PRECARIOUS EMPLOYMENT

The congruency of the findings of the food costing and story sharing workshops clearly demonstrates that those earning low wages in Nova Scotia cannot afford to meet their basic needs. Minimum wage rates, even with the projected increase in April 2004, fall far below the low income cut off line, with a single person falling \$325 short of the low income cut off, or poverty line each month⁸⁶. Clearly current minimum wage rates in this province will not move a family out of poverty.

Perhaps most surprisingly, the scenarios show that not only is minimum wage inadequate, but earning the average call centre wage of \$9.95/hour may not be enough to ensure financial and food security. Scenarios show that this wage provides an income that would be nearly equivalent to the expenses for the households, indicating that basic expenses may be affordable, but there is very little disposable income for savings, participation in physical activity and recreation, or emergencies.

Interestingly, the argument is often made that a low minimum wage affects only a small number of people and that minimum wage earners are typically youth and students⁸⁷. However, in 2003 57% of minimum wage workers in Nova Scotia were over 19 and 63% were women⁸⁷. Low minimum wages also keep other wages low⁸⁷. Not only would an increase in minimum wage lead to increases in all wages, but evidence suggests that this would also lead to increases in productivity, worker morale and economic activity⁸⁷. However, in Nova Scotia it appears that the opposite situation is actually occurring. The real incomes of most Nova Scotians have fallen and inequality has risen, even as the economy has grown in recent years. Disposable income in Nova Scotia has dropped by 8% (-\$3000) on average, compared to increases in provinces such as Ontario (4%, +\$1800) and Alberta (5%, +\$2100)²⁹. Any gains in income have been among the wealthiest, increasing the gap between the rich and the poor²⁹. In Nova Scotia, middle and low-income households have seen the biggest drop in disposable income²⁹. The richest 20% of Nova Scotians average \$70,000 disposable, after-tax income, compared to the poorest 20% who average \$8,205 disposable, after-tax income²⁹.

While many jobs have been created in Nova Scotia in recent years, not all of them ensure an adequate income, as revealed by the call centre scenario. Many of the participants in story sharing workshops discussed the quality of the jobs that are available. Many jobs, even if they pay higher than minimum wage, may only be part-time, casual or temporary and may not offer benefits. Full-time, permanent jobs are becoming less and less common⁸⁸.

From 2001-2002 the growth in part-time jobs in Canada was three times higher than growth in full-time jobs⁸⁸. Only 57% of minimum wage earners worked part-time in 2003⁸⁷. Employment and labour laws are based on full-time employment so part-time workers are often left without job security, benefits, and the ability to negotiate⁸⁹. Most workers in such precarious jobs have low earnings and live in low-income households⁹⁰.

In 2000, 25% of the waged workforce in Nova Scotia worked for less than \$8.10/hr, which is barely \$2.00 more than minimum wage⁸⁷. Given the findings from the call centre scenario based on a wage of \$9.95/hr, this suggests that at least 25% of the waged workforce may be struggling to meet their basic needs. The market picture shows that having a job is not necessarily enough to ensure food security. There are major barriers to staying employed in low-wage unstable jobs, including the cost of child-care and transportation, and limited access to benefits, employment insurance and advancement.

Consistent with this, McIntyre et al.'s analysis of families who reported persistent hunger over the two cycles of the same cohort in the NLSCY showed that the families that reported child hunger in 1996 but not in 1994 had lost an average of \$2690 in annual household income, while families who had moved out of hunger between 1994 and 1996 had added an average of \$3827 to their annual household income³². Families that reported hunger in 1994 but not in 1996, were 2.7 times more likely to have experienced an increase in income³². Importantly, this suggests that progressive employment policies, including indexing the minimum wage to the cost of living, can have a huge impact on helping Nova Scotians meet their basic needs.

LACK OF SOCIAL SUPPORTS

Employment Supports

Interestingly, the scenarios indicate that families who are on IA and who make use of the employment support policies of the Nova Scotia Department of Community Services, although not necessarily in the black or even breaking even each month, may be faring better relative to those families working full-time for low wages and not receiving IA. This suggests that the supports provided through IA for individuals

entering the workforce provide a significant contribution to household income and could play an important role in building household food security.

The Employment Support and IA program allows those on IA to keep a portion (30%) of their wages from part-time or casual work. Additional supports are also provided for work-related expenses, such as allowances for transportation, child-care and clothing. However, individuals working full-time in low wage jobs do not receive such supports. In Nova Scotia, there are limited subsidized daycare spots and no fully subsidized child-care, and there are no transportation supports and limited low-cost public transportation systems. In short, low-wage workers either working full-time or moving into full-time employment (and perhaps off of social assistance) have very few supports. However, the findings presented here suggest that providing supports for child-care, transportation, clothing and other work-related expenses could contribute to greater household food security.

The overarching theme of the story sharing workshops with food insecure women was a lack of supportive environments, with many participants discussing the lack of social supports for working families. While the supports provided through the Employment Support and IA program suggest some positive implications for food security, it is important to note that based on the scenario that has included back to work supports, families may still be struggling and will likely not be making ends meet. Participants in story sharing workshops suggested raising the 30% portion of the earned income that a person can keep. Allowing workers to keep a greater proportion of their earned income may provide an increased incentive to work and increased financial security, including greater access to an adequate nutritious diet.

Affordable Housing

As the most inflexible and substantial expense, the cost of shelter has the biggest impact on the money available to purchase a nutritious diet. Indeed, access to safe, affordable housing is a key social determinant of health⁹¹. A “reasonable” monthly rent is assumed to account for no more than 30% of income, yet a recent report shows that 25% of households in the Halifax Regional Municipality pay more than 30% of their income on housing⁷⁶. Ten percent of all Nova Scotians pay more than 50% of their income on housing, with 62.5% of these households being renters⁷⁶. Even the more conservative MBM estimates for shelter used in this study account for as much as 37-45% of income for those relying solely on IA, and about 38% for lone parents earning minimum wage. In 1993, federal funding for social housing stopped; in HRM only 36 new units have been built since 1986⁷⁶, and waiting lists for affordable social housing are growing⁷⁶. In

fact, public housing arrangements are not common in NS; only 10% of IA recipients actually live in public housing⁷⁶. Often lower cost private housing units are in dire need of repair, are not safe⁷⁵ and both lower cost private and public housing units may be poorly located relative to amenities and green space⁸².

The lack of adequate, affordable housing for low-income citizens is viewed as a crisis throughout the country⁹². Implications of this growing housing crisis in NS are substantial, with 20% of lone-parent female headed households in HRM paying over 50% of their income for shelter, putting them at significant risk of homelessness⁷⁶. While this issue is beyond the scope of this report, it has a critical impact on the purchasing power for adequate nutritious food for Nova Scotians with low-income, and substantially compromises their ability to meet their own nutritional needs and provide food and nutrition to their developing children.

Supports for Childcare

The findings of this study also point to the lack of supports for adequate child-care for working families, particularly low-income earners in Nova Scotia. The Nova Scotia Child Poverty Report Card²⁸ indicates that about 38,000 children in Nova Scotia live in poverty, and yet as of 2001 there were only 2600 subsidized child-care spaces⁷⁷. Clearly this is grossly inadequate to meet the needs low-income families already in the workforce or trying to integrate into the workforce. The number of spaces may be even fewer, given recent daycare closures. In Nova Scotia, support for child-care is meagre and among the lowest in the country. Monies allocated to regulated child-care are only \$91/child in Nova Scotia²⁸. In comparison, allocation per child in Quebec is \$980 and the Canadian average is \$386²⁸.

In regard to the issues of poverty and inadequate incomes in Nova Scotia, the findings suggest that:

- Strategies used to address food insecurity must address inadequate income and the related barriers, the high cost of nutritious versus less nutritious food and the need to put money towards bills rather than buying food.
- Given the known health and social costs of food insecurity, nutritious food must be made more accessible to all citizens.
- Governments and society in general must begin to realize the negative repercussions of food insecurity and its impact on social exclusion.
- Innovative policies that support opportunities for increased access to nutritious food, education and recreation are needed for low-income families
- Progressive employment policies that support indexing the minimum wage to the cost of living are needed.
- Progressive employment policies that address the growing issue of precarious employment are also needed to ensure Nova Scotians are able to meet their basic needs.
- Additional supports are needed for working families.
- A comprehensive, affordable housing strategy is needed.
- Low-income families must have access to quality affordable child-care and improved low-cost transportation networks.

FOOD ACCESS ISSUES

Having sufficient access to nutritious food depends on many factors, including civic planning, food retailer policies, income, transportation and agricultural policy⁹³. Our findings suggest significant food access issues in Nova Scotia.

RURAL FOOD ACCESS

This study shows that significant food access issues exist in Nova Scotia, particularly for those living in rural communities. Findings show that the cost of a nutritious diet was significantly higher in rural stores than in urban stores and in small compared with larger stores. This suggests that a nutritious diet will be more expensive for those living in rural communities and indicates a significant barrier to food security for rural Nova Scotians.

Barriers to food security in rural Nova Scotia are indicative of a food security problem for the whole province because, depending on the definition of “rural” that is used, roughly 60% to 75% of Nova Scotians live in rural areas⁹⁴. The rates of poverty and unemployment are higher in rural Nova Scotia than in urban areas as well, indicating further economic barriers to food security in addition to the barriers of store size and location⁹⁴.

TRANSPORTATION

Findings from both the story sharing and food costing data indicate transportation is a major barrier to food access in Nova Scotia. Many low-income Nova Scotians may not have a car and rely on public transportation, taxis or walking. The issue can be worsened in rural areas, given that rural communities in Nova Scotia lack any public transportation systems. Therefore, rural households without a personal vehicle – likely the most economically disadvantaged homes – may have little choice in where they can do their grocery shopping. Their most convenient option will likely be the local smaller grocery or convenience store, which is more likely to have higher food prices.

FOOD RETAIL TRENDS

The categories of store sizes used for this study (<15,000, 15,000-30,000 and >30,000 square feet for small, medium and large stores, respectively) are based on categories used in previous research⁶⁸. While mid-sized stores were not significantly more or less expensive than small or large stores, the small number of mid-sized stores revealed a disturbing trend. A random sample of stores in Nova Scotia produced only three mid-sized stores of 43, compared to 20 small and 20 large stores. Along with the fact that many of the larger stores were actually over 50,000 sq.ft (and up to 85,000 sq.ft), this reflects trends in the food retail industry to build larger all-in-one style grocery stores – or “mega” stores.

While the price difference was not significant between medium and large or large and mega stores, the growing number of mega stores, coupled with so few mid-sized stores suggests further food security issues for rural communities and smaller towns in Nova Scotia, as the mid-sized grocery stores are replaced by mega stores, which may more often be located in urban or sub-urban areas. The disappearance of mid-sized stores and growth of large format grocery stores may present a significant barrier to food security for those without reliable transportation. Some would need to travel further distances to access larger, lower cost food retail outlets.

Another food retail trend is to locate in more affluent or suburban areas, leaving “food deserts” in lower income areas. Although this trend is more prominent in the United States⁵, there is some evidence that it occurs in some Canadian cities, as well⁴³. Story sharing participants also suggested that food retail outlets may charge more when they are located in lower income areas and/or raise the prices at the time of the month when IA cheques are issued. Other research has indicated similar issues with regard to higher prices⁴² and increased prices when cheques are issued⁴⁵, however more systematic research is needed to investigate these issues further.

The access issues emerging relate to barriers created to accessing mainstream food retail outlets. However, it is important to note that other alternative food systems and structures may exist or can be developed in order to increase access to nutritious food. This will be discussed further in the following section.

In regard to food access issues in the Nova Scotia, the findings suggest that:

- Nutritious food must be made more accessible in rural areas of Nova Scotia.
- Local food systems must be developed/enhanced in Nova Scotia to maintain the social and economic fabric of rural life and to support rural communities and those involved in food production and processing.
- Alternative transportation strategies, particularly for rural communities, need to be explored to promote access to nutritious food.
- Actions need to be taken to ensure access to nutritious foods in all Nova Scotian communities.
- More research is needed to examine pricing policies to ensure they are fair, equitable and non-discriminatory.

FOOD BANKS ARE NOT THE ANSWER

In order to augment the household food supply, lower income households are increasingly making use of emergency food programs, such as food banks and soup kitchens¹⁸. Data from phase II of this study support these findings. Unfortunately, research suggests that the food provided by food banks is often lacking in nutritional quality^{95,96}, and consistent with our findings, shows that use of emergency food programs can be stigmatizing and degrading^{45,97-98}. In addition, use of such programs does not remedy the tremendous stress, anxiety and negative impact on self-esteem reported by many food insecure households. Our story sharing data suggest that dealing with the consequences of using food banks, such as judgement, policies that inhibit access and poor quality food, can actually compound the stress

experienced. Moreover, food banks in NS and elsewhere are increasingly struggling to meet the increasing demand for their assistance, being forced to turn people away, rationing the food going to each household, therefore providing only enough food for a few days, limiting the number of times a household can seek assistance, or closing their doors all together^{18,99}.

It was very clear from the story sharing workshops that food banks are not the answer to solving the problem of food insecurity. This is also well documented in the literature on food insecurity^{10,11,14,18,45,49,64,96-98}. While food banks offer immediate assistance to those in need, they do little to affect long-term, sustainable change by addressing the root causes of food insecurity. Other broader changes are needed to address food insecurity using strategies that move along the continuum of food security presented in Figure 1 (see page 23) of this report^{14,53,54}. The findings of this research support this argument by highlighting the negative emotional as well as nutritional and health implications of food bank use.

Furthermore, it has been argued that food banks offer a “depoliticization” of the issues of hunger and food insecurity in Canada^{10,11}. That is, by providing emergency relief through public donations, food banks act to fill in a gap where government social programming is failing and make it appear as though the issue is being dealt with^{10,11}. However, this research confirms that the issue has not been fully addressed, with significant implications for health and social costs.

We are not making the argument that food bank operations should be ceased. On the contrary, despite the inadequacies of a charitable food bank system, it is clear that they currently serve a very important role in our society. However, other strategies for addressing food security are urgently needed. For instance, this research points to several policy issues that contribute significantly to food insecurity, such as inadequate wages and IA rates, lack of employment standards to ensure more stable jobs, lack of social supports for housing, transportation and child-care and unregulated food retail practices that may contribute to higher food costs for some consumers. Changes at organizational and public policy levels could have a greater impact than food banks on building food security. Additionally, other community-based strategies could be implemented to address food security that go beyond efficiency, or short-term relief, strategies.

The Food Security Continuum (see page 23) offers a range of strategies for addressing food security, suggesting approaches that could offer a substitute to efficiency strategies like food banks^{14,53,54}. Such strategies include programs such as community gardens and community kitchens. Interestingly, involvement in this type of programming did not come

out of the story sharing workshops. Other qualitative explorations of food security have found some involvement in such programs, as well as engagement in gardening, hunting and fishing (albeit in small numbers) in order to augment the household food supply^{40,50,100}. While gardening was a strategy used by at least one participant in this study, hunting and fishing were not mentioned. Furthermore, several participants discussed their own and others lack of cooking and food preparation skills, as well as the time to develop or use these skills. This suggests that there is room for the development of more community-based substitution programs to assist families in procuring more food at a low cost and building skills to produce some of their own food, as well as programming to develop cooking and food preparation skills, particularly among younger people.

Moving along the food security continuum, possibilities also exist for community-based programs that augment the food supply, build capacity for producing food and challenge existing food systems, offering more of a redesign approach. Such strategies might envision ways to recreate food production and distribution systems in order to make nutritious food more accessible¹⁰¹. Food programs based on alternative food systems have been developing in communities and regions across Canada¹⁰¹ and make use of urban food production and alternative marketing to increase localization of food systems and create awareness, education and public participation¹⁰¹. There is also often an aim to decrease transportation costs associated with food prices, provide employment opportunities, increase green space and develop community cohesiveness¹⁰¹.

Toronto Foodshare provides an excellent example of the use of such approaches. This umbrella organization aims to build capacity and affect change on issues related to food and health, food and agriculture and food and social justice. It oversees many programs related to food policy, urban agriculture, school nutrition and others¹⁰². One of their key programs is the Good Food Box, a multifaceted program that delivers boxes of fresh produce to 3500 households in Toronto, ON¹⁰². Although the program started as a specific strategy for helping low-income families access low-cost nutritious food, it is now universally accessible in an attempt to move away from a charity model¹⁰². It has created employment positions for unemployed, underemployed and unemployable individuals, including women on welfare, street youth, and people with mental health issues¹⁰². All employees and volunteers (usually individuals who need food assistance) are provided with a cooked lunch and a good food box¹⁰². The program also supports 40 farmers in Ontario, buying directly from them at fair rates on a continuous basis¹⁰².

The good food box program model has been adopted in many communities. In Nova Scotia, the Department of Community Services in Hants County purchases Good Food Boxes from a local organic farmer and provides the food boxes to IA recipients. Community-based programs can offer an essential link between the social justice and environmental/agricultural issues related to food security, addressing issues often raised in regard to uniting these two areas of food security work^{15,52}. Such programs also have the capacity to increase access to nutritious food for low-income families and offer an alternative to food banks or traditional food retail structures that as the evidence in this research indicates, do not necessarily meet the food needs of many Nova Scotian households.

In regard to food security programming and food bank issues, the findings suggest that:

- School-based programming on cooking, other food preparations skills and home economics need to be developed and enhanced.
- Alternatives to food banks and mainstream food retail should be explored, such as good food box programs and community gardens.
- Community-based programs could be enhanced and supported to better address food insecurity in a more comprehensive way.
- Linkages need to be developed between those working on social justice elements of food security and those working on environmental/ agricultural elements.

CONCLUSIONS

The cost of a nutritious diet in Nova Scotia – \$572.90 – is clearly out of reach for many Nova Scotian citizens due to inadequate income in relation to expenses to meet their basic needs. Unless a family knows how to budget for nutritious foods, the cost could be much greater; however, stories from the women who participated in phase II indicated that they were already being very resourceful in terms of stretching their food dollar.

This study also identified additional obstacles to food security in Nova Scotia, such as transportation to access food, the high cost of nutritious foods versus less nutritious food and the need to put money towards other bills instead of buying food. This research also suggests that the issue of access to nutritious foods is particularly a problem in rural areas. Scenarios and data from the story sharing workshops suggest that current policies and programs used to address the problem of food insecurity in Nova Scotia are inadequate. Moreover, the current strategy for specifically addressing the issue of food insecurity in the

province through volunteer charitable food assistance is inadequate, and alternative approaches need to be explored and supported.

RECOMMENDATIONS

The partners of the Participatory Food Costing Project – the Nova Scotia Nutrition Council, the Atlantic Health Promotion Research Centre (AHPRC) and Nova Scotia Family Resource Centres/Projects (FRC/Ps) funded by the Community Action Program for Children (CAPC) & Canada Prenatal Nutrition Program (CPNP) offer several recommendations.

We invite the Government of Nova Scotia to take action and show strong leadership in working across the Departments of Health, Community Services, Agriculture, Transportation, Justice, Human Resource Development, Education and Finance, as well as with district health authorities, the federal and municipal governments, community groups engaged in action on food security and all citizens to address the critical issue of food insecurity that impedes the health and well-being of many Nova Scotians. Specifically, we recommend the following actions:

- Work toward restructuring and strengthening Nova Scotia’s social welfare and food systems policies to include innovative strategies and actions that:
 - Respect the right of all Nova Scotians to a nutritious diet
 - Build capacity at individual, community and system levels to ensure guaranteed access to a sustainable food supply in Nova Scotia for the health of present and future generations
 - Respect the inclusion of people affected by the issue of food insecurity.

- Under the leadership of the Office of Health Promotion:
 - Use the findings and tools of the Participatory Food Security Project to develop and fund a system to ensure that food costing is conducted on an ongoing basis.
 - Ensure the Healthy Eating Strategy component of the Nova Scotia Chronic Disease Prevention Strategy is properly resourced to allow for its effective implementation to address food security issues,
 - Conduct policy analyses to explore strategies to: protect the affordability of basic food staples; develop stable and secure employment options; address transportation issues and rural food access; and support food system trends that promote

- access to affordable food, protect the land and people who produce food, and promote local economies
- Support the Sport and Recreation Division to work with Departments of Education and Community Services to develop supports that promote participation for those on IA in education and recreation opportunities.
- Under the leadership of the Department of Community Services:
 - Index personal allowance portion of IA rates to reflect the actual cost of a nutritious food basket based on age and gender
 - Index shelter allowance to adequately reflect average rental housing costs
 - Consider other costs of living such as education, transportation, child-care and clothing to support families in accessing employment
 - Increase the number of subsidized day care spaces to reflect the number of children living in poverty in Nova Scotia
 - Develop an affordable housing strategy for Nova Scotia and increase the number of affordable housing units.
 - Under the leadership of the Departments of Finance and Labour & Environment develop other programs and supports for working families.
 - Further increase minimum wage rates to reflect the daily costs of living in Nova Scotia.
 - Finally we invite all groups to examine the report and think about the results, their implications and how they, as individuals and organizations, can be part of the solutions.

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