

Food Security as a Determinant of Health

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In developed societies, **food insecurity** is defined as "the inability to acquire or consume an adequate diet quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so" (Davis and Tarasuk, 1994). Food insecurity includes problems in obtaining nutritionally adequate and safe foods due to a lack of money to purchase them, or the limited availability of these foods in geographically isolated communities (Campbell, 1991; Travers, 1996).

Food insecurity is dynamic in nature and defined by a sequence of events and experiences. These vary among different groups. For poor families, people first feel anxious about running out of food. At the next stage, they begin to compromise on the quality of the foods they eat by choosing less expensive options. As resources get scarcer, food insecure people feel hungry because they are unable to purchase enough food to satisfy their needs. At the most severe stage, food insecurity is experienced as not eating at all. There are negative psychological, social and physical consequences across this continuum (Tarasuk, 2002).

Current Situation

- The 1998/99 National Population Health Survey (NPHS) revealed food insecurity among 10.2% of Canadian households, representing 3 million people (including 678,000 children). The most severely food insecure represented 4.1% of households, and 338,000 children (Rainville and Brink, 2001; Che and Chen, 2001).
- In the NPHS, the odds of reporting food insecurity increased with declining income and reliance on social assistance. Prevalence was greatest among lone mothers with children (Che and Chen, 2001).
- In the 1994 National Longitudinal Survey on Children and Youth (NLSCY), families headed by single-mothers were eight times more likely to report that their children were hungry, compared to other families. Children from families receiving welfare were 13 times more likely to experience hunger than non-welfare families (McIntyre, Connor and Walsh, 2000).

- In the 1996 NLSCY, persons of Aboriginal descent living off-reserve were four times more likely to report hunger than other respondents (McIntyre, Walsh and Connor, 2001)
- In a recent study of food insecurity and hunger among 141 low-income lone mothers with children in Atlantic Canada, 96.5% experienced food insecurity over the past year (McIntyre, Glanville, Officer, Anderson, Raine and Dayle, 2002).

Factors that Affect the Issue

Food insecurity is largely the result of low income and financial insecurity. Disturbing and increasing levels of food insecurity is one outcome of growing poverty and inequities in Canada, resulting from economic recessions in the 1980s and 1990s, combined with reduced social spending by both the federal and provincial/ territorial governments (Riches, 1997; Tarasuk, 2001a).

According to the 1996 NLSCY, 54% of all hungry families received their main income from employment, and families whose incomes included social assistance had

greater than an eight-fold risk for child hunger. This suggests that current minimum working wages and levels of social assistance are insufficient to ensure food security, particularly among lone mothers and those off-reserve families of Aboriginal ancestry. Financial insecurity can be exacerbated by other factors such as poor or fair health reported by the mother, and a higher total number of siblings in the household (McIntyre, Walsh and Connor, 2001).

Poor people run out of money for food because the grocery budget is flexible, unlike fixed payments such as rent and power bills. Many factors can tip a vulnerable individual or family into hunger. These include increases in rent and energy costs, another mouth to feed, job loss, and health problems. According to studies by McIntyre and her colleagues, family income must increase by \$3,827 in order for a family to leave the hunger state, but a loss of only \$2,690 could tip a family into hunger. This shows how fragile food insecure families are and how easily their situation can change and slip them into the hunger state in any given month or year (McIntyre, Walsh and Connor, 2001).

McIntyre's studies with lone parents show that getting out of hunger depends on one change only—when mother gets a full-time job and the family's income rises accordingly. Unfortunately, the lack of quality affordable day care and of access to free study loans may deter lone parents from returning to school or from taking on full-time work.

Effect of Food Security on Health

People with low incomes are less likely than those with higher incomes to get the nutrients they need for good health and less likely to enjoy diets that are consistent with healthy eating in Canada. In food insecure households, the degree of inadequate nutrient intake varies with how much family members are required to cut back on the quality and quantity of food they buy and eat (Tarasuk, 2002). In the 1998-99 NPHS, 22% of food insecure Canadians sought food from charitable sources. Almost half reduced the quality of their foods, and about one-quarter skipped meals or ate less (Rainville and Brink, 2001).

Canadians who are food insecure are more likely than food secure people to report that their health is poor or fair. They are also more likely to have multiple chronic conditions, including heart disease, diabetes, high blood pressure and food allergies (Che and Chen, 2001; Tarasuk, 2002). Food insecurity may also affect the management of chronic diseases that require diet changes. For example, studies in the United States have shown that adults in food insecure households with diabetes had more doctor visits than diabetics in food secure households (Nelson et al, 2001).

There are psychological and social consequences as well as physical ones across the continuum of hunger severity. These include social exclusion and mental health problems, such as distress and depression in both children and adults (Tarasuk, 2002).

There have been some studies linking chronic food insecurity to the prevalence of overweight or obesity, but the relationship is not well established. In the 1998-99 NPHS, people in food-insecure households had significantly higher odds of obesity even when age, sex, and household income were taken into account (Che and Chen, 2001). Conflicting results emerged when this question was further explored through a detailed examination of data from the larger, 1996-97 cycle of NPHS (Vozoris and Tarasuk, 2003). No association between under- or overweight and household food insecurity was found for women, but there was a significantly decreased odds of overweight among men in food insecure households.

Implications for Policy, Practice and Research

Food security is a central issue in the call for domestic action in Canada's Action Plan for Food Security (Agriculture and Agri-Food Canada, 1998). There are no universal national programs available to nutritionally vulnerable populations. Canada's Prenatal Nutrition Program provides limited food supplements and counselling for poor pregnant mothers; however access to CPNP-funded supports is not a matter of entitlement for low-income pregnant mothers, and whatever support is offered only extends for a short while after childbirth.

The most common response for community food insecurity is the food bank. It is generally conceded that food banks and food delivery programs are stop-gap measures, offering important immediate assistance but not yielding sustainable solutions.

Communities across the country have also initiated a host of ad hoc local food programs including meals and snacks for school children in an effort to alleviate food insecurity. Most provide free or subsidized food, although some initiatives focus on enhancing food shopping and preparation skills (e.g., community kitchens, targeted education programs) or on alternative methods of obtaining food (e.g., community gardens, farmers' markets, field-to-table programs, 'good food' boxes). There is concern about the effectiveness of such community-based programs (McIntyre, 2002; Tarasuk 2001a).

Eradicating food insecurity and hunger in a country as rich as Canada is a necessary and attainable goal. The role of the health sector in this reform is largely one of collaborator, knowledge broker and advocate because most of the solutions lie outside of the formal health system. Sustainable solutions require a commitment to economic and social policy reform, not just to stop-gap measures such as food banks or targeted, short-term nutrition support programs. These include:

- increasing incomes from minimum wage and social assistance to a level that covers basic needs and short-term additional costs in the case of illness or other circumstances that drive up fixed household costs
- protecting employment insurance policies, especially for Canadians in insecure jobs
- protecting and enhancing prescription drug coverage, especially for Canadians with low wages and fixed incomes (e.g., seniors, people on social assistance)
- protecting the affordability of healthy foods, particularly food staples
- increased access to affordable housing so that more money is left for food
- increased access to day care, education and training opportunities, and employment support programs, especially for lone parents.

Research priorities include:

- the implementation of a monitoring system for hunger and food insecurity to determine progress, deterioration or shifts among those affected
- examining the impact of specific policy changes by the federal, provincial and territorial governments on the prevalence and severity of food insecurity in Canada.

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