

Determinants of Healthy Eating in Aboriginal Peoples in Canada

The Current State of Knowledge and Research Gaps

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ABSTRACT

Aboriginal peoples are the original inhabitants of Canada. These many diverse peoples have distinct languages, cultures, religious beliefs and political systems. The current dietary practices of Aboriginal peoples pose significant health risks. Interventions to improve the nutritional status of Aboriginal peoples must reflect the realities of how people make food choices and therefore should be informed by an understanding of contemporary patterns of food procurement, preparation and distribution. Most of the literature documenting the health of Aboriginal peoples is primarily epidemiologic, and there is limited discussion of the determinants that contribute to health status. The majority of studies examining dietary intake in Aboriginal communities do not aim to study the determinants of food intake per se even though many describe differences in food intake across sex, age groups, seasons and sometimes communities, and may describe factors that could have an effect on food consumption (e.g., employment status, level of education, household size, presence of a hunter/trapper/fisher, occupation, main source of income). For these reasons, there are many gaps in knowledge pertaining to the determinants of healthy eating in Aboriginal peoples that must be filled. Given the diversity of Aboriginal peoples, research to address the gaps should take place at both the national level and at a more local level. Research would be important for each of Inuit, Métis and First Nations.

MeSH terms: Canada; diet; food habits; Indians, North American; Inuit; nutrition

Aboriginal peoples occupied the area now called Canada before the arrival of Europeans, and they have cultures and histories that make them distinctive within Canadian society. In the past, they subsisted by extracting and processing foods from the land and water using hunting, trapping, fishing, gathering and agriculture in different combinations. The tremendously diverse diet was, in general, high in animal protein and low in fat and carbohydrates, and provided adequate amounts of energy and micronutrients for health.¹⁻³ The contemporary diet has, to varying degrees, replaced traditional foods with market foods, many of which are of low nutritional quality. Traditional foods are those culturally accepted foods available from local natural resources that constitute the food systems of Aboriginal peoples. The concept of food system includes sociocultural meanings, acquisition and processing techniques, use, composition and nutritional consequences for the people using the food. Positive nutritional status might be possible to maintain when traditional food use is diminished if economic circumstances are favourable, a variety of high-quality, non-traditional foods is available, and education in the use of good-quality traditional food alternatives is on hand.^{4,5}

The three groups of Aboriginal peoples defined in the Canadian Constitution are Indian, Métis and Inuit (the term First Nation now commonly replaces the word Indian).⁶ Inuit live predominantly in Nunavut, the coastline areas of the Northwest Territories, Northern Quebec (Nunavik) and Labrador. They are culturally and linguistically distinct from First Nations and Métis. Métis is used broadly to describe people with mixed First Nations and European ancestry.⁶

The health of Aboriginal peoples is worse than that of Canadians, in general, for almost every health status measure and condition.⁷ There is considerable evidence that many health problems experienced by Aboriginal peoples are related to diet; they include anemia, dental caries, obesity, heart disease and diabetes.²⁻⁴ Although many health issues appear related to poor diet, dietary intake data in Aboriginal populations are limited in scope, with a narrow geographic and subject focus and including only a few Aboriginal communities. Most of the literature documenting

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the health of Aboriginal peoples is primarily epidemiologic, and there is limited discussion of the determinants that contribute to health status. Urban-living Aboriginal people are under-represented in many studies, as are First Nations living off-reserve, Métis, and women and children.^{8,9}

To effectively promote and support healthy eating in Aboriginal peoples, there is a need for a more comprehensive understanding of the many factors that influence eating behaviour, including deeper understanding of their interactions. This article is intended to provide an overview of the state of knowledge and research gaps in the determinants of healthy eating, including consumption of traditional food as related to Aboriginal peoples. For many Aboriginal groups, healthy eating is based on the premise of the consumption of traditional food, which, in addition to contributing to nutrition, is an important indicator of cultural expression, an anchor to culture and personal well-being, an essential agent to promote holistic health and culture, and the direct link between the environment and human health.¹⁰ The focus of the article will be predominantly Inuit and First Nations living on-reserve and in remote or northern communities, although the literature pertaining to other groups will also be included.

METHODS AND LITERATURE SEARCH

A literature search was completed using the term “aboriginal” and MeSH synonyms for that term (Inuit, Indians North American) combined with the term “Canada” and with “food” or “nutrition”. The strategy was repeated in medical and sociological databases (PubMed, MEDLINE, HealthSTAR, CINAHL, Sociological Abstracts; Bibliography of Native North Americans; International Bibliography of the Social Sciences; Proquest Digital Dissertations). For international comparisons, the same strategy and search engines were used but the terms United States, Australia and New Zealand were used in place of Canada. The search strategy was restricted to literature written in the English language and published from January 1990 to December 2003, and key publications published January to April 2004, although pertinent older material

was included. Website searches (e.g., National Aboriginal Health Organization, Indian and Northern Affairs Canada) provided grey literature, as did citations in articles, grey literature and books. The most salient information relating to understanding the determinants of healthy eating and gaps in knowledge are presented herein.

Summary of the literature on the determinants of healthy eating

Partly because of the substitution of traditional foods with market foods, the current diet of Aboriginal peoples is often low in iron, folacin, calcium, vitamin D, vitamin A, fibre, fruit and vegetables; high fat and sugar intakes are commonly reported.¹¹⁻¹⁸ A better understanding of the determinants of traditional food use in relation to market food use is required to know how to modify the determinants in a way that would result in better dietary patterns for Aboriginal peoples. The transition from traditional to market food has been a multidimensional, dynamic and complex course, and the decision-making process about consuming traditional or market food, as discussed later, is made at multiple levels of influence: societal, individual, socio-economic (food insecurity) and environmental, all which may overlap and interact. In the discussion that follows, environmental influence refers to the physical environment.

Societal Level Influence

Culture is broadly defined as the values, beliefs, attitudes and practices accepted by members of a group or community. It determines, in part, what foods are acceptable and preferable, the amount and combinations of foods to eat, when and how to eat, and the foods considered ideal or improper.¹⁹ Aboriginal people may describe their traditional food quite specifically, for example, as Inuit or Dene food, as the case may be, demonstrating its strong link to cultural identity.²⁰ Of importance to understanding the role that culture plays in determining food choice in Aboriginal communities is that the activities required to procure traditional food are not merely a way of obtaining food but, rather, a mode of production that sustains social relationships and distinctive cultural characteristics. This is because the consumption of traditional foods is more than

just about eating; it is the endpoint of a series of culturally meaningful processes involved in the harvesting, processing, distribution and preparation of these foods. For many Aboriginal peoples, these processes require the continued enactment of culturally important ways of behaving, which emphasize cooperation, sharing and generosity.²⁰⁻²⁵

In some Aboriginal communities, the cultural preference for body size may influence eating behaviour and food choice. A study in Ojibway-Cree in northern Ontario showed a preference for large body size, particularly among older adults who perhaps had memories of the association between thinness and infectious diseases, such as tuberculosis.²⁶ In Cree communities in northern Quebec, having extra weight is considered a sign of robustness and strength.²⁷ In contrast, First Nations and Métis girls and women living in or near to urban centres in Manitoba prefer thin body sizes and may use dieting to lose weight.²⁸ Urban American Indian women in the United States engage in unhealthy weight-control practices, such as binge eating, skipping meals, fasting and purging.²⁹ Many American Indian children have body dissatisfaction, concerns about high weight, unhealthy weight control practices and eating disorders.³⁰⁻³³ The varying preferences for body size among Aboriginal peoples may be based in traditional cultural values; alternatively, as culture is not static but changes over time in response to social dynamics, one cannot ignore the adoption of non-Aboriginal perspectives of body size.

Individual

Food selection is often governed by sensory characteristics.³⁴ Although taste preference is personal, it is influenced by the cultural group to which one belongs. Taste preference for traditional food has been documented for Aboriginal peoples. Inuit consume *igunaaq* (fermented seal meat), which has a distinctive and strong flavour; appreciation of *igunaaq* is considered an important and sophisticated feature of Inuit taste.³⁵ Inuvialuit, Inuit who live in the Western Arctic, mention the good taste and texture of traditional foods, such as caribou, as reasons for eating it.³⁶ Among the Nuxalk First Nation, the frequency of consumption of many traditional foods is

associated with taste appreciation; however, the relation between taste preference and food choice is not always evident. Lack of species availability and time for harvesting may explain why not all traditional foods with highly desired tastes are consumed frequently.³⁷ In Mohawk children, food preference ratings do not always translate into consumption of those preferred foods: although children may prefer certain traditional foods, they seldom eat them.³⁸ A study of the eating habits of Cree children found that even though children consumed a preponderance of store-bought food, the majority expressed a preference for traditional food.³⁹

For many Aboriginal peoples, cultural identity will inform personal knowledge, attitudes and beliefs about food and food choice. The eating of traditional food is often associated with feelings of good health, whereas the eating of “non-traditional food” is considered by some Aboriginal peoples as polluting or weakening.^{21,24,25,40} Food choices based on Aboriginal cultural values may not be congruent with Western scientific constructs regarding the nutritional value of food.^{24,25} The cultural worldview held by some Aboriginal peoples that traditional food by its very nature is health-promoting makes it difficult for them to understand why they must avoid certain store-bought foods to maintain health. Among the Inuit of northern Labrador, for example, all traditional foods are considered “good”, and “nutritional balance” is perceived as consuming different parts of an animal, and alternating the diet between fish, land mammals, seal and birds. Perhaps because of this ideology it is puzzling to these Inuit that store food may not contribute to health.²⁵ The Cree of northern Quebec also find the categories of healthy and unhealthy as related to store-bought food to be confusing because Cree food, by its very nature, is good to eat.²⁴

In northern and remote communities, age and sex differences in food consumption have been noted.^{15,17,37,41-45} Sex differences in the amount of traditional food consumed may be due, in part, to differences in body size and energy expenditure between men and women. Children tend to consume less traditional food than adults, and young adults consume less traditional food than middle-aged adults, who

in turn consume less traditional food than elders. The age disparity in traditional food consumption implies inter-generational differences in taste preference and suggests that younger generations are losing the knowledge of harvesting and preparing their traditional foods.

Food Insecurity

Aboriginal families are over-represented among those experiencing hunger in Canada.⁴⁶ As a result of the pervasiveness of poverty in many Aboriginal communities, income and food costs may be more potent determinants of food selection than considerations of the healthfulness, social desirability and taste of food.³⁴ Food insecurity is commonplace, meaning that the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain.⁴⁷ In the 1998/1999 National Population Health Survey, the prevalence of food insecurity among Aboriginal respondents living off reserve was 27.0%, and 24.1% had a compromised diet, meaning that they did not have enough food to eat or that they could not eat the quality or variety of foods they wanted to because of lack of money.⁴⁸ It has been documented that low-income First Nations women in Winnipeg are not able to choose food on the basis of its health attributes because of the constraints of food insecurity.⁴⁹ Differing degrees of food insecurity, from anxiety to hunger, exist among Inuit, including hunger in children.¹⁸

Some Aboriginal communities use food-sharing networks as a strategy against food insecurity. Community freezers and other forms of community sharing enable food-insecure individuals living on reserves or in remote regions to consume traditional foods.^{50,51} These systems of food reciprocity and obligation do not always buffer against food insecurity in urban centres.⁴⁹

In remote and northern communities, the high cost, poor quality, lack of variety and lack of availability of perishable foods are barriers to the purchase of fresh fruits and vegetables.^{18,52} The cost of market food is high as a result of transport costs, and the limited availability of nutritious foods is due, in part, to spoilage.^{52,53} In remote regions, where a single store may serve the community, the individual store manager's

stock management practices, and personal beliefs and attitudes about stocking healthful foods may be major determinants of the availability of nutritious foods.⁵⁴

Physical Environmental

Modification of the physical environment (e.g., hydroelectric dams, deforestation, climate change) and contamination of the physical environment have resulted in reduced availability of traditional animal and plant species.^{40,55,56} When species decline or become contaminated, recommendations are often made to limit or cease their consumption. In response to advisories, Aboriginal peoples may switch to hunting or fishing different species, reduce intake or maintain the status quo.⁵⁷ Concern over food contamination or species diminishment may be insufficient, in and of itself, to cause reduced intake of a food species given the pragmatic consideration that market food, in many cases, is an expensive or unpalatable substitute for traditional food. Identifiable local sources of contamination may cause greater disruption of normal dietary patterns than contamination from distant sources. The communication style for conveying risk information about contaminants and the cultural context within which risk is interpreted may also be decisive factors in how community members respond to advisories.^{20,58}

KNOWLEDGE GAPS IN THE LITERATURE

To effectively promote and support healthy eating, there is a need for a more comprehensive understanding of the many factors influencing eating behaviours, and their complexity and interactions. Some important gaps in understanding are described below.

Beliefs about food

More study is required of the relation between individual beliefs about food and food intake. Most studies in Aboriginal communities that examine the health ratings of traditional and store-bought food do not evaluate whether the health rating of a food corresponds to its frequency in the diet.

Hedonic qualities

The sensory properties of food consumed by Aboriginal peoples have seldom been

studied as a determinant of food intake, despite evidence that sensory properties are important reasons why traditional food is culturally palatable and why market food is consumed. The hedonic quality of traditional and market food as it relates to food choice needs further investigation.

Food insecurity

There are many issues relating to food insecurity that have not been studied. Scales for measuring food insecurity have not been validated in Aboriginal populations in Canada, therefore, commonly used food insecurity questions may need to be adapted to accommodate First Nations, Métis and Inuit languages, cultural perceptions and unique life experiences.⁴⁷ In small communities, it is not clear how much influence store policies or store managers have in determining the types of food available for sale, or how food pricing influences food choice. Information is required about how food insecurity affects food selection, given traditions of obligation, sharing and reciprocity that are inherent to many Aboriginal peoples' cultures.

Body image

Considering that there are few studies about body image, weight concerns and dieting practices in Aboriginal adults and children, community-based studies of body image concepts would be valuable for developing dietary interventions. This information is relevant because initiatives to prevent obesity may not be effective if obesity is viewed as a positive physical attribute. On the other hand, if thinness is desired, care must be taken to avoid increasing concerns about weight, body dissatisfaction and the adoption of unhealthy eating patterns. For a given community, it would be important to know whether obesity is viewed as a positive or negative physical attribute, self-perception of body size, and whether dieting or food intake behaviours are related to body size perception.⁵⁹

Physical environment health discourse

Concern about the safety of traditional food or the diminishment of food species may result in a change in diet; however, little has been reported about how knowledge of the existence of contaminants in local food or discourse about species

decline alters dietary intake. To ensure that dietary modifications are counterbalanced by selection of healthy food alternatives, a better understanding of how environmental health discourse influences food choice is required, as well as quantification of any resulting dietary changes. The health impacts of such dietary changes could be significant, given that traditional foods contribute to both nutritional benefits and contaminant exposure.⁴

Interactions among determinants

Individual, social, physical environmental and socio-economic factors interact in complex and changing ways to influence food choice. For example, individuals may use knowledge about the health properties of foods when they make choices, but knowledge alone is insufficient to affect food choices unless it can overcome counteracting psychosocial, behavioral and environmental barriers.^{60,61} The issue of the interaction of the determinants of healthy eating at different levels of influence should be examined to see how that interaction modifies food access and choice.

CONCLUSION

Current dietary practices of some Aboriginal peoples pose significant health risks and diminish the quality of life. It is therefore critical to obtain information on the factors that relate to determinants of food choice and food access. There are few comprehensive studies documenting the determinants of healthy eating in Aboriginal communities; therefore, there are many gaps in knowledge pertaining to them. In view of the enormous diversity of Aboriginal peoples, research to address the gaps should take place at both the national level and a more local level. Research would be important for each of Inuit, Métis and First Nations.

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